



Circle of Seasons Block Rotation and Pennsylvania Academic Standards Alignment

2018-2019

Circle of Seasons Block Rotation and Pennsylvania Academic Standards Alignment

The following pages include block topic guides for each grade and the Pennsylvania Academic Standards introduced in each block. Although standards may not re-listed, standards introduced during one block are reinforced and integrated into following blocks as well. This applies to standards across grade levels. Standards prescribed for second grade that are introduced in first grade are covered again and deepened in second grade. Cross-curricular integration is

carried throughout year. Daily Mathematics and Language Arts is incorporated throughout all blocks regardless of content topic.

Teachers can access the Standards Aligned System on pdesa.org for research-based resources and to reference the state academic standards. The Standards Aligned System (SAS), developed by the Pennsylvania Department of Education, is a comprehensive, researched-based resource to improve student achievement. SAS identifies six elements that impact student achievement: Standards, Assessments, Curriculum Framework, Instruction, Materials & Resources, and Safe and Supportive Schools.

Student achievement is evaluated by a combination of formal assessment and authentic assessment. Teachers maintain, and in upper grades collaboratively maintain, student portfolios including Main Lesson Books, paintings, drawings, projects, and performance evaluations demonstrating achievement and progress.

Kindergarten

I. Fall/ Day of Courage

Standard - 15.2.2.I

Identify rules within the school and community.

Standard - 15.2.2.K

With prompting and support, explain the importance of social connections such as friends and family.

Standard - 15.2.2.L

With prompting and support, ask and answer questions about criteria for success at home and school.

Standard - CC.1.2.K.A

With prompting and support, identify the main idea and retell key details of text.

Standard - CC.1.2.K.B

With prompting and support, answer questions about key details in a text.

Standard - CC.1.2.K.C

With prompting and support, make a connection between two individual, events, ideas, or pieces of information in a text.

Standard - CC.1.2.K.J

Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

Standard - CC.1.2.K.L

Actively engage in group reading activities with purpose and understanding.

Standard - CC.2.1.K.A.1

Know number names and write and recite the count sequence.

Standard - CC.2.1.K.A.2

Apply one-to-one correspondence to count the number of objects.

Standard - CC.2.1.K.A.3

Apply the concept of magnitude to compare numbers and quantities.

Standard - 3.1.K.A5

Observe and describe structures and behaviors of a variety of common animals.

Standard - 3.1.K.C2

Describe changes animals and plants undergo throughout the seasons.

Standard - 3.1.K.C3

CONSTANCY AND CHANGE Describe changes that occur as a result of climate.

Standard - 3.2.1.A1

Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.

Standard - 15.1.2.F

Ask and answer questions about items you or your family own.

II. Fall/ Harvest

Standard - CC.1.3.K.A

With prompting and support, retell familiar stories including key details.

Standard - CC.1.3.K.B

Answer questions about key details in a text.

Standard - CC.1.3.K.C

With prompting and support, identify characters, settings, and major events in a story.

Standard - CC.1.2.K.A

With prompting and support, identify the main idea and retell key details of text.

Standard - CC.1.2.K.B

With prompting and support, answer questions about key details in a text.

Standard - CC.1.2.K.C

With prompting and support, make a connection between two individual, events, ideas, or pieces of information in a text.

Standard - CC.1.2.K.J

Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

Standard - CC.1.2.K.L

Actively engage in group reading activities with purpose and understanding.

Standard - CC.2.1.K.A.1

Know number names and write and recite the count sequence.

Standard - CC.2.1.K.A.2

Apply one-to-one correspondence to count the number of objects.

Standard - CC.2.1.K.A.3

Apply the concept of magnitude to compare numbers and quantities.

Standard - 3.1.K.A5

Observe and describe structures and behaviors of a variety of common animals.

Standard - 3.1.K.C2

Describe changes animals and plants undergo throughout the seasons.

Standard - 3.1.K.C3

CONSTANCY AND CHANGE Describe changes that occur as a result of climate.

Standard - 3.2.1.A1

Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.

III. Fall/ Lantern Walk

Standard - CC.1.1.K.A

Utilize book handling skills.

Standard - CC.1.2.K.K

Determine or clarify the meaning of unknown or multiple meaning words and phrases based upon grade level reading and content.

Standard - CC.1.3.K.A

With prompting and support, retell familiar stories including key details.

Standard - CC.1.3.K.B

Answer questions about key details in a text.

Standard - CC.1.3.K.C

With prompting and support, identify characters, settings, and major events in a story.

Standard - CC.1.2.K.A

With prompting and support, identify the main idea and retell key details of text.

Standard - CC.1.2.K.B

With prompting and support, answer questions about key details in a text.

Standard - CC.1.2.K.C

With prompting and support, make a connection between two individual, events, ideas, or pieces of information in a text.

Standard - CC.1.2.K.J

Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

Standard - CC.1.2.K.L

Actively engage in group reading activities with purpose and understanding.

Standard - CC.2.1.K.A.1

Know number names and write and recite the count sequence.

Standard - CC.2.1.K.A.2

Apply one-to-one correspondence to count the number of objects.

Standard - CC.2.1.K.A.3

Apply the concept of magnitude to compare numbers and quantities.

Standard - 3.1.K.A5

Observe and describe structures and behaviors of a variety of common animals.

Standard - 3.1.K.C2

Describe changes animals and plants undergo throughout the seasons.

Standard - 3.1.K.C3

CONSTANCY AND CHANGE Describe changes that occur as a result of climate.

Standard - 3.2.1.A1

Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.

Standard - 3.2.1.A3

Identify how heating, melting, cooling, etc., may cause changes in properties of materials.

Standard - 3.2.1.A4

Observe and describe what happens when substances are heated or cooled. Distinguish between changes that are reversible (melting, freezing) and not reversible (e.g. baking a cake, burning fuel).

Standard - 3.2.2.A3

Demonstrate how heating and cooling may cause changes in the properties of materials.

Standard - 3.2.2.A4

Experiment and explain what happens when two or more substances are combined (e.g. mixing, dissolving, and separated (e.g. filtering, evaporation)).

Standard - 3.2.K.B3

Describe how temperature can affect the body.

Standard - 3.2.K.B6, 3.2.1.B6

ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Standard - 3.3.K.A1

Distinguish between three types of earth materials – rock, soil, and sand.

Standard - 3.3.K.A4

Identify sources of water for human consumption and use.

IV. Winter Spiral

Standard - CC.1.3.K.F

Ask and answer questions about unknown words in a text.

Standard - CC.1.1.K.A

Utilize book handling skills.

Standard - CC.1.2.K.K

Determine or clarify the meaning of unknown or multiple meaning words and phrases based upon grade level reading and content.

Standard - CC.1.3.K.A

With prompting and support, retell familiar stories including key details.

Standard - CC.1.3.K.B

Answer questions about key details in a text.

Standard - CC.1.3.K.C

With prompting and support, identify characters, settings, and major events in a story.

Standard - CC.1.2.K.A

With prompting and support, identify the main idea and retell key details of text.

Standard - CC.1.2.K.B

With prompting and support, answer questions about key details in a text.

Standard - CC.1.2.K.C

With prompting and support, make a connection between two individual, events, ideas, or pieces of information in a text.

Standard - CC.1.2.K.J

Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

Standard - CC.1.2.K.L

Actively engage in group reading activities with purpose and understanding.

Standard - CC.2.1.K.A.1

Know number names and write and recite the count sequence.

Standard - CC.2.1.K.A.2

Apply one-to-one correspondence to count the number of objects.

Standard - CC.2.1.K.A.3

Apply the concept of magnitude to compare numbers and quantities.

Standard - 3.1.K.A5

Observe and describe structures and behaviors of a variety of common animals.

Standard - 3.1.K.C2

Describe changes animals and plants undergo throughout the seasons.

Standard - 3.1.K.C3

CONSTANCY AND CHANGE Describe changes that occur as a result of climate.

Standard - 3.2.1.A1

Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.

Standard - 3.2.1.A3

Identify how heating, melting, cooling, etc., may cause changes in properties of materials.

Standard - 3.2.1.A4

Observe and describe what happens when substances are heated or cooled. Distinguish between changes that are reversible (melting, freezing) and not reversible (e.g. baking a cake, burning fuel).

Standard - 3.2.2.A3

Demonstrate how heating and cooling may cause changes in the properties of materials.

Standard - 3.2.2.A4

Experiment and explain what happens when two or more substances are combined (e.g. mixing, dissolving, and separated (e.g. filtering, evaporation).

Standard - 3.2.K.B3

Describe how temperature can affect the body.

Standard - 3.2.K.B6

ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Standard - 3.3.K.A1

Distinguish between three types of earth materials – rock, soil, and sand.

Standard - 3.3.K.A4

Identify sources of water for human consumption and use.

V. Winter, New Year, and Light Returning

Standard - CC.1.3.K.F

Ask and answer questions about unknown words in a text.

Standard - CC.1.1.K.A

Utilize book handling skills.

Standard - CC.1.2.K.K

Determine or clarify the meaning of unknown or multiple meaning words and phrases based upon grade level reading and content.

Standard - CC.1.3.K.A

With prompting and support, retell familiar stories including key details.

Standard - CC.1.3.K.B

Answer questions about key details in a text.

Standard - CC.1.3.K.C

With prompting and support, identify characters, settings, and major events in a story.

Standard - CC.1.2.K.A

With prompting and support, identify the main idea and retell key details of text.

Standard - CC.1.2.K.B

With prompting and support, answer questions about key details in a text.

Standard - CC.1.2.K.C

With prompting and support, make a connection between two individual, events, ideas, or pieces of information in a text.

Standard - CC.1.2.K.J

Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

Standard - CC.1.2.K.L

Actively engage in group reading activities with purpose and understanding.

Standard - CC.2.1.K.A.1

Know number names and write and recite the count sequence.

Standard - CC.2.1.K.A.2

Apply one-to-one correspondence to count the number of objects.

Standard - CC.2.1.K.A.3

Apply the concept of magnitude to compare numbers and quantities.

Standard - 3.1.K.A5

Observe and describe structures and behaviors of a variety of common animals.

Standard - 3.2.K.A1

Identify and classify objects by observable properties of matter. Compare different kinds of materials and discuss their uses.

Standard - 3.2.4.A1

Identify and classify objects based on their observable and measurable physical properties. Compare and contrast solids, liquids, and gases based on their properties.

Standard - 3.2.1.A1

Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.

Standard - 3.2.1.A1

Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.

Standard - 3.2.1.A3

Identify how heating, melting, cooling, etc., may cause changes in properties of materials.

Standard - 3.2.1.A4

Observe and describe what happens when substances are heated or cooled. Distinguish between changes that are reversible (melting, freezing) and not reversible (e.g. baking a cake, burning fuel).

Standard - 3.2.2.A3

Demonstrate how heating and cooling may cause changes in the properties of materials.

Standard - 3.2.2.A4

Experiment and explain what happens when two or more substances are combined (e.g. mixing, dissolving, and separated (e.g. filtering, evaporation)).

Standard - 3.2.K.B3

Describe how temperature can affect the body.

Standard - 3.2.K.B6

ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Standard - 3.3.K.A1

Distinguish between three types of earth materials – rock, soil, and sand.

Standard - 3.3.K.A4

Identify sources of water for human consumption and use.

Standard - 3.2.1.A3

Identify how heating, melting, cooling, etc., may cause changes in properties of materials.

Standard - 3.2.1.A4

Observe and describe what happens when substances are heated or cooled. Distinguish between changes that are reversible (melting, freezing) and not reversible (e.g. baking a cake, burning fuel).

Standard - 3.2.2.A3

Demonstrate how heating and cooling may cause changes in the properties of materials.

Standard - 3.2.2.A4

Experiment and explain what happens when two or more substances are combined (e.g. mixing, dissolving, and separated (e.g. filtering, evaporation)).

Standard - 3.2.K.B3

Describe how temperature can affect the body.

Standard - 3.2.K.B6

ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Standard - 3.3.K.A1

Distinguish between three types of earth materials – rock, soil, and sand.

Standard - 3.3.K.A4

Identify sources of water for human consumption and use.

VI. Winter/ King Winter Be Gone

Standard - CC.1.3.K.F

Ask and answer questions about unknown words in a text.

Standard - CC.1.1.K.A

Utilize book handling skills.

Standard - CC.1.2.K.K

Determine or clarify the meaning of unknown or multiple meaning words and phrases based upon grade level reading and content.

Standard - CC.1.3.K.A

With prompting and support, retell familiar stories including key details.

Standard - CC.1.3.K.B

Answer questions about key details in a text.

Standard - CC.1.3.K.C

With prompting and support, identify characters, settings, and major events in a story.

Standard - CC.1.2.K.A

With prompting and support, identify the main idea and retell key details of text.

Standard - CC.1.2.K.B

With prompting and support, answer questions about key details in a text.

Standard - CC.1.2.K.C

With prompting and support, make a connection between two individual, events, ideas, or pieces of information in a text.

Standard - CC.1.2.K.J

Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

Standard - CC.1.2.K.L

Actively engage in group reading activities with purpose and understanding.

Standard - CC.2.1.K.A.1

Know number names and write and recite the count sequence.

Standard - CC.2.1.K.A.2

Apply one-to-one correspondence to count the number of objects.

Standard - CC.2.1.K.A.3

Apply the concept of magnitude to compare numbers and quantities.

Standard - 3.1.K.A5

Observe and describe structures and behaviors of a variety of common animals.

Standard - 3.1.K.C2

Describe changes animals and plants undergo throughout the seasons.

Standard - 3.1.K.C3

CONSTANCY AND CHANGE Describe changes that occur as a result of climate.

Standard - 3.2.K.A3

Describe the way matter can change.

Standard - 3.2.1.A1

Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.

Standard - 3.2.1.A3

Identify how heating, melting, cooling, etc., may cause changes in properties of materials.

Standard - 3.2.1.A4

Observe and describe what happens when substances are heated or cooled. Distinguish between changes that are reversible (melting, freezing) and not reversible (e.g. baking a cake, burning fuel).

Standard - 3.2.2.A3

Demonstrate how heating and cooling may cause changes in the properties of materials.

Standard - 3.2.2.A4

Experiment and explain what happens when two or more substances are combined (e.g. mixing, dissolving, and separated (e.g. filtering, evaporation).

Standard - 3.2.K.B3

Describe how temperature can affect the body.

Standard - 3.2.K.B6

ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Standard - 3.3.K.A1

Distinguish between three types of earth materials – rock, soil, and sand.

Standard - 3.3.K.A4

Identify sources of water for human consumption and use.

VII. Spring is Coming

Standard - CC.2.4.K.A.4

Classify objects and count the number of objects in each category.

Standard - CC.1.3.K.F

Ask and answer questions about unknown words in a text.

Standard - CC.1.1.K.A

Utilize book handling skills.

Standard - CC.1.2.K.K

Determine or clarify the meaning of unknown or multiple meaning words and phrases based upon grade level reading and content.

Standard - CC.1.3.K.A

With prompting and support, retell familiar stories including key details.

Standard - CC.1.3.K.B

Answer questions about key details in a text.

Standard - CC.1.3.K.C

With prompting and support, identify characters, settings, and major events in a story.

Standard - CC.1.2.K.A

With prompting and support, identify the main idea and retell key details of text.

Standard - CC.1.2.K.B

With prompting and support, answer questions about key details in a text.

Standard - CC.1.2.K.C

With prompting and support, make a connection between two individual, events, ideas, or pieces of information in a text.

Standard - CC.1.2.K.J

Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

Standard - CC.1.2.K.L

Actively engage in group reading activities with purpose and understanding.

Standard - CC.2.1.K.A.1

Know number names and write and recite the count sequence.

Standard - CC.2.1.K.A.2

Apply one-to-one correspondence to count the number of objects.

Standard - CC.2.1.K.A.3

Apply the concept of magnitude to compare numbers and quantities.

Standard - 3.1.K.A5

Observe and describe structures and behaviors of a variety of common animals.

Standard - 3.1.K.C2

Describe changes animals and plants undergo throughout the seasons.

Standard - 3.1.K.C3

CONSTANCY AND CHANGE Describe changes that occur as a result of climate.

Standard - 3.2.1.A1

Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.

Standard - 3.2.1.A3

Identify how heating, melting, cooling, etc., may cause changes in properties of materials.

Standard - 3.2.1.A4

Observe and describe what happens when substances are heated or cooled. Distinguish between changes that are reversible (melting, freezing) and not reversible (e.g. baking a cake, burning fuel).

Standard - 3.2.2.A3

Demonstrate how heating and cooling may cause changes in the properties of materials.

Standard - 3.2.2.A4

Experiment and explain what happens when two or more substances are combined (e.g. mixing, dissolving, and separated (e.g. filtering, evaporation)).

Standard - 3.2.K.B3

Describe how temperature can affect the body.

Standard - 3.2.K.B6

ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Standard - 3.3.K.A1

Distinguish between three types of earth materials – rock, soil, and sand.

Standard - 3.3.K.A4

Identify sources of water for human consumption and use.

VIII. Spring Showers and Flowers

Standard - CC.1.3.K.H

Compare and contrast the adventures and experiences of characters in familiar stories.

Standard - CC.2.4.K.A.4

Classify objects and count the number of objects in each category.

Standard - CC.1.3.K.F

Ask and answer questions about unknown words in a text.

Standard - CC.1.1.K.A

Utilize book handling skills.

Standard - CC.1.2.K.K

Determine or clarify the meaning of unknown or multiple meaning words and phrases based upon grade level reading and content.

Standard - CC.1.3.K.A

With prompting and support, retell familiar stories including key details.

Standard - CC.1.3.K.B

Answer questions about key details in a text.

Standard - CC.1.3.K.C

With prompting and support, identify characters, settings, and major events in a story.

Standard - CC.1.2.K.A

With prompting and support, identify the main idea and retell key details of text.

Standard - CC.1.2.K.B

With prompting and support, answer questions about key details in a text.

Standard - CC.1.2.K.C

With prompting and support, make a connection between two individual, events, ideas, or pieces of information in a text.

Standard - CC.1.2.K.J

Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

Standard - CC.1.2.K.L

Actively engage in group reading activities with purpose and understanding.

Standard - CC.2.1.K.A.1

Know number names and write and recite the count sequence.

Standard - CC.2.1.K.A.2

Apply one-to-one correspondence to count the number of objects.

Standard - CC.2.1.K.A.3

Apply the concept of magnitude to compare numbers and quantities.

Standard - 3.1.K.A5

Observe and describe structures and behaviors of a variety of common animals.

Standard - 3.1.K.B1

Observe and describe how young animals resemble their parents and other animals of the same kind.

Standard - 3.1.K.C2

Describe changes animals and plants undergo throughout the seasons.

Standard - 3.1.K.C3

CONSTANCY AND CHANGE Describe changes that occur as a result of climate.

Standard - 3.2.1.A1

Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.

Standard - 3.2.1.A3

Identify how heating, melting, cooling, etc., may cause changes in properties of materials.

Standard - 3.2.1.A4

Observe and describe what happens when substances are heated or cooled. Distinguish between changes that are reversible (melting, freezing) and not reversible (e.g. baking a cake, burning fuel).

Standard - 3.2.2.A3

Demonstrate how heating and cooling may cause changes in the properties of materials.

Standard - 3.2.2.A4

Experiment and explain what happens when two or more substances are combined (e.g. mixing, dissolving, and separated (e.g. filtering, evaporation)).

Standard - 3.2.K.B3

Describe how temperature can affect the body.

Standard - 3.2.K.B6

ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Standard - 3.3.K.A1

Distinguish between three types of earth materials – rock, soil, and sand.

Standard - 3.3.K.A4

Identify sources of water for human consumption and use.

IX. Spring/ Summer Planting

Standard - CC.1.2.K.E

Identify parts of a book (title, author) and parts of a text (beginning, end, details).

Standard - CC.1.2.K.F

With prompting and support, ask and answer questions about unknown words in a text.

Standard - CC.1.3.K.G

Make connections between the illustrations and the text in a story (read or read aloud).

Standard - CC.1.3.K.I

Determine or clarify the meaning of unknown or multiple meaning words and phrases based upon grade level reading and content.

Standard - CC.1.3.K.H

Compare and contrast the adventures and experiences of characters in familiar stories.

Standard - CC.2.4.K.A.4

Classify objects and count the number of objects in each category.

Standard - CC.1.3.K.F

Ask and answer questions about unknown words in a text.

Standard - CC.1.1.K.A

Utilize book handling skills.

Standard - CC.1.2.K.K

Determine or clarify the meaning of unknown or multiple meaning words and phrases based upon grade level reading and content.

Standard - CC.1.3.K.A

With prompting and support, retell familiar stories including key details.

Standard - CC.1.3.K.B

Answer questions about key details in a text.

Standard - CC.1.3.K.C

With prompting and support, identify characters, settings, and major events in a story.

Standard - CC.1.2.K.A

With prompting and support, identify the main idea and retell key details of text.

Standard - CC.1.2.K.B

With prompting and support, answer questions about key details in a text.

Standard - CC.1.2.K.C

With prompting and support, make a connection between two individual, events, ideas, or pieces of information in a text.

Standard - CC.1.2.K.J

Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

Standard - CC.1.2.K.L

Actively engage in group reading activities with purpose and understanding.

Standard - CC.2.1.K.A.1

Know number names and write and recite the count sequence.

Standard - CC.2.1.K.A.2

Apply one-to-one correspondence to count the number of objects.

Standard - CC.2.1.K.A.3

Apply the concept of magnitude to compare numbers and quantities.

Standard - 3.1.K.A1

Identify the similarities and differences of living and non-living things.

Standard - 3.1.K.A3

Observe, compare, and describe stages of life cycles for plants and/or animals.

Standard - 3.1.K.A5

Observe and describe structures and behaviors of a variety of common animals.

Standard - 3.1.1.A1

Categorize living and nonliving things by external characteristics.

Standard - 3.1.1.A5

Identify and describe plant parts and their function.

Standard - 3.1.2.A3

Identify similarities and differences in the life cycles of plants and animals.

Standard - 3.1.1.B1

Grow plants from seed and describe how they grow and change. Compare to adult plants.

Standard - 3.1.K.C2

Describe changes animals and plants undergo throughout the seasons.

Standard - 3.1.K.C3

CONSTANCY AND CHANGE Describe changes that occur as a result of climate.

Standard - 3.1.1.C3

CONSTANCY AND CHANGE Describe changes that occur as a result of habitat.

Standard - 3.2.1.A1

Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.

Standard - 3.2.1.A3

Identify how heating, melting, cooling, etc., may cause changes in properties of materials.

Standard - 3.2.1.A4

Observe and describe what happens when substances are heated or cooled. Distinguish between changes that are reversible (melting, freezing) and not reversible (e.g. baking a cake, burning fuel).

Standard - 3.2.2.A3

Demonstrate how heating and cooling may cause changes in the properties of materials.

Standard - 3.2.2.A4

Experiment and explain what happens when two or more substances are combined (e.g. mixing, dissolving, and separated (e.g. filtering, evaporation)).

Standard - 3.2.K.B3

Describe how temperature can affect the body.

Standard - 3.2.K.B6

ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Standard - 3.3.K.A1

Distinguish between three types of earth materials – rock, soil, and sand.

Standard - 3.3.K.A4

Identify sources of water for human consumption and use.

Grade One

First Grade Block Rotations and Pennsylvania Academic Standards

I. Form Drawing

Standard - CC.2.3.1.A.1

Compose and distinguish between two- and three-dimensional shapes based on their attributes.

Standard - CC.1.2.1.A

Identify the main idea and retell key details of text.

Standard - CC.1.2.1.B

Ask and answer questions about key details in a text.

Standard - CC.1.2.1.C

Describe the connection between two individual, events, ideas, or pieces of information in a text.

Standard - CC.1.2.1.F

Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.

Standard - CC.1.2.1.G

Use the illustrations and details in a text to describe its key ideas.

Standard - CC.1.3.1.C

Describe characters, settings, and major events in a story, using key details.

Standard - CC.1.3.1.D

Identify who is telling the story at various points in a text.

Standard - CC.1.3.1.G

Use illustrations and details in a story to describe characters, setting, or events.

Standard - CC.1.3.1.H

Compare and contrast the adventures and experiences of characters in stories.

Standard - CC.1.5.1.A

Participate in collaborative conversations with peers and adults in small and larger groups.

Standard - CC.1.5.1.B

Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.

Standard - CC.1.5.1.C

Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.

Standard - CC.1.5.1.D

Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

Standard - CC.1.5.1.F

Add drawings or other visual displays when sharing aloud to clarify ideas, thoughts, and feelings.

Standard - CC.1.5.1.E

Produce complete sentences when appropriate to task and situation.

Standard - CC.1.5.1.G

Demonstrate command of the conventions of standard English when speaking based on grade 1 level and content.

Standard - 3.2.1.B5

Compare and contrast how light travels through different materials. Explore how mirrors and prisms can be used to redirect a light beam.

Standard - 3.2.3.B1

Explain how movement can be described in many ways.

II. Arithmetic

Standard - CC.2.1.K.A.1

Know number names and write and recite the count sequence.

Standard - CC.2.1.K.B.1

Use place value to compose and decompose numbers within 19.

Standard - CC.2.2.K.A.1

Extend concepts of putting together and taking apart to add and subtract within 10.

Standard - CC.2.1.1.B.1

Extend the counting sequence to read and write numerals to represent objects.

Standard - CC.2.3.2.A.1

Analyze and draw two- and three-dimensional shapes having specified attributes.

Standard - CC.2.3.K.A.1

Identify and describe two- and three-dimensional shapes.

Standard - CC.2.3.K.A.2

Analyze, compare, create, and compose two- and three-dimensional shapes.

III. Writing and Reading

Standard - CC.1.1.K.B

Demonstrate understanding of the organization and basic features of print. • Follow words left to right, top to bottom, and page by page. • Recognize that spoken words are represented in written language by specific sequences of letters. • Understand that words are separated by spaces in print. • Recognize and name all upper and lower case letters of the alphabet.

Standard - CC.1.3.K.D

Name the author and illustrator of a story and define the role of each in telling the story.

Standard - CC.1.1.1.B

Demonstrate understanding of the organization and basic features of print. • Recognize the distinguishing features of a sentence.

Standard - CC.1.2.K.G

Answers questions to describe the relationship between illustrations and the text in which they appear.

Standard - CC.1.1.1.C

Demonstrate understanding of spoken words, syllables, and sounds (phonemes). • Distinguish long from short vowel sounds in spoken single-syllable words. • Count, pronounce, blend, and segment syllables in spoken and written words. • Orally produce single-syllable words, including consonant blends and digraphs. • Isolate and pronounce initial, medial vowel, and final sounds

(phonemes) in spoken single-syllable words. • Add or substitute individual sounds (phonemes) in one-syllable words to make new words.

Standard - CC.1.2.1.J

Use words and phrases acquired through conversations, reading, and being read to, and responding to texts, including words that signal connections and relationships between the words and phrases.

Standard - CC.1.2.1.K

Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade level reading and content.

Standard - CC.1.3.1.A

Retell stories, including key details, and demonstrate understanding of their central message or lesson.

Standard - CC.1.3.1.B

Ask and answer questions about key details in a text.

Standard - CC.1.3.1.F

Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.

Standard - 15.1.2.B

Ask and answer questions about right and wrong (ethics) in the classroom.

Standard - CC.1.2.1.A

Standard - CC.1.2.1.B

Standard - CC.1.2.1.C

Standard - CC.1.2.1.F

Standard - CC.1.2.1.G

Standard - CC.1.3.1.C

Standard - CC.1.3.1.D

Standard - CC.1.3.1.G

Standard - CC.1.3.1.H

Standard - CC.1.5.1.A

Standard - CC.1.5.1.B

Standard - CC.1.5.1.C

Standard - CC.1.5.1.D

Standard - CC.1.5.1.F

Standard - CC.1.5.1.E

Standard - CC.1.5.1.G

VI. Form Drawing and Nature Stories

Standard - 3.1.1.A1

Categorize living and nonliving things by external characteristics.

Standard - 3.1.1.A2

Investigate the dependence of living things on the sun's energy, water, food/nutrients, air, living space, and shelter.

V. Arithmetic

Standard - CC.2.2.1.A.2

Understand and apply properties of operations and the relationship between addition and subtraction.

Standard - CC.2.3.1.A.2

Use the understanding of fractions to partition shapes into halves and quarters.

Standard - CC.2.4.1.A.1

Order lengths and measure them both indirectly and by repeating length units.

Standard - CC.2.3.2.A.2

Use the understanding of fractions to partition shapes into halves, quarters, and thirds.

VI. Writing and Reading

Standard - CC.1.1.K.C

Demonstrate understanding of spoken words, syllables, and sounds (phonemes). • Recognize and produce rhyming words. • Count, pronounce, blend, and segment syllables in spoken words. • Blend and segment onsets and rimes of single-syllable spoken words. • Isolate and pronounce the initial, medial vowel, and final sound (phonemes) in the three-phoneme (CVC) words.

Standard - CC.1.1.K.D

Know and apply grade level phonics and word analysis skills in decoding words. • Demonstrate basic knowledge of one-to one letter-sound correspondence. • Associate the long and short sounds with common spellings for the five major vowels. • Read grade level high-frequency sight words with automaticity. • Distinguish between similarly spelled words by identifying the sounds of the letters that differ.

Standard - CC.1.1.K.E

Read emergent-reader text with purpose and understanding.

Standard - CC.1.2.K.H

With prompting and support, identify the reasons an author gives to support points in a text.

Standard - CC.1.2.K.I

With prompting and support, identify basic similarities and differences between two texts (read or read aloud) on the same topic.

Standard - CC.1.1.1.D

Know and apply grade level phonics and word analysis skills in decoding words. • Identify common consonant digraphs, final-e, and common vowel teams. • Decode one and two-syllable words with common patterns. • Read grade level words with inflectional endings. • Read grade-appropriate irregularly spelled words.

Standard - CC.1.2.1.A

Standard - CC.1.2.1.B

Standard - CC.1.2.1.C

Standard - CC.1.2.1.F

Standard - CC.1.2.1.G

Standard - CC.1.3.1.C

Standard - CC.1.3.1.D

Standard - CC.1.3.1.G

Standard - CC.1.3.1.H

Standard - CC.1.5.1.A

Standard - CC.1.5.1.B

Standard - CC.1.5.1.C

Standard - CC.1.5.1.D

Standard - CC.1.5.1.F

Standard - CC.1.5.1.E

Standard - CC.1.5.1.G

VII. Arithmetic

Standard - CC.2.1.1.B.2

Use place value concepts to represent amounts of tens and ones and to compare two digit numbers.

Standard - CC.2.1.1.B.3

Use place value concepts and properties of operations to add and subtract within 100.

Standard - CC.2.2.2.A.3

Work with equal groups of objects to gain foundations for multiplication.

Standard - CC.2.2.3.A.1

Represent and solve problems involving multiplication and division.

Standard - CC.2.2.3.A.2

Understand properties of multiplication and the relationship between multiplication and division.

Standard - CC.2.4.K.A.1

Describe and compare attributes of length, area, weight, and capacity of everyday objects.

VIII. Form Drawing and Nature Study

Standard - 3.2.1.B1

Demonstrate various types of motion. Observe and describe how pushes and pulls change the motion of objects.

Standard - 3.3.2.A4

Explore and describe that water exists in solid (ice) and liquid (water) form. Explain and illustrate evaporation and condensation.

Standard - 3.2.1.B7

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
- Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.
- Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.
- Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

IX. Writing and Reading

Standard - CC.1.3.K.E

Recognize common types of text.

Standard - CC.1.1.1.E

Read with accuracy and fluency to support comprehension: • Read on-level text with purpose and understanding. • Read on-level text orally with accuracy, appropriate rate, and expression on successive readings. • Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Standard - CC.1.2.1.L

Read and comprehend literary non-fiction and informational text on grade level, reading independently and proficiently.

Standard - CC.1.2.1.A

Standard - CC.1.2.1.B

Standard - CC.1.2.1.C

Standard - CC.1.2.1.F

Standard - CC.1.2.1.G

Standard - CC.1.3.1.C

Standard - CC.1.3.1.D

Standard - CC.1.3.1.G

Standard - CC.1.3.1.H

Standard - CC.1.5.1.A

Standard - CC.1.5.1.B

Standard - CC.1.5.1.C

Standard - CC.1.5.1.D

Standard - CC.1.5.1.F

Standard - CC.1.5.1.E

Standard - CC.1.5.1.G

IX. Writing and Reading

Standard - CC.1.2.1.E

Use various text features and search tools to locate key facts or information in a text.

Standard - CC.1.3.1.K

Read and comprehend literature on grade level, reading independently and proficiently.

Standard - CC.1.4.1.A

Write informative/ explanatory texts to examine a topic and convey ideas and information.

Standard - CC.1.4.1.B

Identify and write about one specific topic.

Standard - CC.1.4.1.C

Develop the topic with two or more facts.

Standard - CC.1.4.1.D

Group information and provide some sense of closure.

Standard - CC.1.4.1.F

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling. • Capitalize dates and names of people. • Use end punctuation; use commas in

dates and words in series. • Spell words drawing on common spelling patterns, phonemic awareness and spelling conventions.

Standard - CC.1.4.1.E

Choose words and phrases for effect.

Standard - CC.1.4.1.G

Write opinion pieces on familiar topics.

Standard - CC.1.4.1.H

Form an opinion by choosing among given topics.

Standard - CC.1.4.1.I

Support the opinion with reasons related to the opinion.

Standard - CC.1.4.1.J

Create an organizational structure that includes reasons and provides some sense of closure.

Standard - CC.1.4.1.K

Use a variety of words and phrases.

Standard - CC.1.4.1.L

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.1.M

Write narratives to develop real or imagined experiences or events.

Standard - CC.1.4.1.N

Establish “who” and “what” the narrative will be about.

Standard - CC.1.4.1.O

Include thoughts and feelings to describe experiences and events

Standard - CC.1.4.1.P

Recount two or more appropriately sequenced events using temporal words to signal event order and provide some sense of closure.

Standard - CC.1.4.1.Q

Use a variety of words and phrases.

Standard - CC.1.4.1.R

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling. • Capitalize dates and names of people. • Use end punctuation; use commas in dates and words in series. • Spell words drawing on common spelling patterns, phonemic awareness and spelling conventions.

Standard - CC.1.4.1.T

With guidance and support from adults and peers, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.

Standard - CC.1.4.1.V

Participate in individual or shared research and writing projects.

Standard - CC.1.4.1.W

With guidance and support, recall information from experiences or gather information from provided sources to answer a question.

Standard - CC.1.4.1.X

Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

Standard - CC.1.2.1.A

Standard - CC.1.2.1.B

Standard - CC.1.2.1.C

Standard - CC.1.2.1.F

Standard - CC.1.2.1.G

Standard - CC.1.3.1.C

Standard - CC.1.3.1.D

Standard - CC.1.3.1.G

Standard - CC.1.3.1.H

Standard - CC.1.5.1.A

Standard - CC.1.5.1.B

Standard - CC.1.5.1.C

Standard - CC.1.5.1.D

Standard - CC.1.5.1.F

Standard - CC.1.5.1.E

Standard - CC.1.5.1.G

X. Class Play and Gardening

Standard - 3.3.1.A1

Observe, describe, and sort earth materials. Compare the composition of different soils.

Standard - 3.1.1.A5

Identify and describe plant parts and their function.

Standard - CC.1.2.1.A

Standard - CC.1.2.1.B

Standard - CC.1.2.1.C

Standard - CC.1.2.1.F

Standard - CC.1.2.1.G

Standard - CC.1.3.1.C

Standard - CC.1.3.1.D

Standard - CC.1.3.1.G

Standard - CC.1.3.1.H

Standard - CC.1.5.1.A

Standard - CC.1.5.1.B

Standard - CC.1.5.1.C

Standard - CC.1.5.1.D

Standard - CC.1.5.1.F

Standard - CC.1.5.1.E

Standard - CC.1.5.1.G

XI. Year-End Review

Review of standards covered over the course of the year.

Grade Two

Second Grade Main Lesson Block Rotation

I. Legends and Folklore of Heroic People from Around the World/L.A.

Standard - CC.1.3.1.E

Explain major differences between books that tell stories and books that give information, drawing on a wide reading or range of text types.

Standard - CC.1.1.2.D

Know and apply grade level phonics and word analysis skills in decoding words. • Distinguish long and short vowels when reading regularly spelled one-syllable words. • Decode two-syllable words with long vowels and words with common prefixes and suffixes. • Read grade level high-frequency sight words and words with inconsistent but common spelling-sound correspondences. • Read grade-appropriate irregularly spelled words.

Standard - CC.1.1.2.E

Read with accuracy and fluency to support comprehension: • Read on-level text with purpose and understanding. • Read on-level text orally with accuracy, appropriate rate, and expression on successive readings. • Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Standard - CC.1.2.2.B

Ask and answer questions such as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

Standard - CC.1.2.2.C

Describe the connection between a series of events, concepts, or steps in a procedure within a text.

Standard - CC.1.2.2.E

Use various text features and search tools to locate key facts or information in a text efficiently.

Standard - CC.1.2.2.F

Determine the meaning of words and phrases as they are used in grade level text including multiple-meaning words.

Standard - CC.1.2.2.G

Explain how graphic representations contribute to and clarify a text.

Standard - CC.1.2.2.H

Describe how reasons support specific points the author makes in a text.

Standard - CC.1.2.2.I

Compare and contrast the most important points presented by two texts on the same topic.

Standard - CC.1.2.2.J

Acquire and use grade-appropriate conversational, general academic, and domain-specific words and phrases.

Standard - CC.1.2.2.K

Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade level reading and content, choosing from a range of strategies and tools.

Standard - CC.1.2.2.L

Read and comprehend literary non-fiction and informational text on grade level, reading independently and proficiently.

Standard - CC.1.3.2.A

Recount stories and determine their central message, lesson, or moral.

Standard - CC.1.3.2.B

Ask and answer questions such as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

Standard - CC.1.3.2.C

Describe how characters in a story respond to major events and challenges.

Standard - CC.1.3.2.D

Acknowledge differences in the points of views of characters, including by speaking in a different voice for each character when reading dialogue aloud.

Standard - CC.1.3.2.E

Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.

Standard - CC.1.3.2.F

Describe how words and phrases supply rhythm and meaning in a story, poem, or song.

Standard - CC.1.3.2.G

Use information from illustrations and words, in print or digital text, to demonstrate understanding of characters, setting, or plot.

Standard - CC.1.3.2.H

Compare and contrast two or more versions of the same story by different authors or from different culture.

Standard - CC.1.3.2.I

Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade level reading and content, choosing from a range of strategies and tools.

Standard - CC.1.3.2.J

Acquire and use grade-appropriate conversational, general academic, and domain-specific words and phrases.

Standard - CC.1.3.2.K

Read and comprehend literature on grade level, reading independently and proficiently.

Standard - CC.1.5.2.A

Participate in collaborative conversations with peers and adults in small and larger groups.

Standard - CC.1.5.2.B

Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

Standard - CC.1.5.2.C

Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

Standard - CC.1.5.2.D

Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.

Standard - CC.1.5.2.F

Add drawings or other visual displays to presentations when appropriate to clarify ideas, thoughts, and feelings.

Standard - CC.1.5.2.E

Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Standard - CC.1.5.2.G

Demonstrate command of the conventions of standard English when speaking based on grade 2 level and content.

Standard - 3.4.3.C1

Recognize design is a creative process and everyone can design solutions to problems.

Standard - 3.4.3.C2

Explain why the design process requires creativity and consideration of all ideas.

Standard - 15.2.2.M

With prompting and support, explain the types of dispositions necessary for success in school and community. Reference Career Education and Work 13.3.3.A – B

Standard - 15.2.2.O

With prompting and support, ask and answer questions relating to differences among individuals.

Standard - 15.2.2.A

Ask and answer questions related to personal likes and dislikes of home and school responsibilities. Reference Career Education and Work 13.1.1.A - B

Standard - 15.2.5.A Identify personality and character traits about yourself as related to hobbies, activities, and interests. Reference Career Education and Work 13.1.5.A - B

Standard - 15.3.2.J

Reproduce active listening techniques modeled by familiar adults. Reference English Language

Arts CC.1.5.2.C

Standard - 15.3.2.K

Reference Student Interpersonal Skills 16.3.K.B

Standard - 15.3.2.L

Identify role models in various contexts (real vs. fiction).

Standard - 15.3.2.N

Identify positive work habits in the classroom.

Standard - 15.3.2.O

With prompting and support, ask and answer questions about various communication strategies used in diverse settings (classroom, home or social event).

Standard - 15.3.5.L

Identify traits (e.g., personal boundaries, confidence) that contribute to positive role models.

Standard - 15.8.2.F

Ask and answer questions about right and wrong (ethics) in the classroom.

Standard - 15.8.5.G

Discuss characteristics of good leaders.

Standard - 15.8.5.I

Identify communication skills necessary for success as a leader.

II. Arithmetic

Classification and Sorting

Standard - CC.2.3.3.A.1

Identify, compare, and classify shapes and their attributes.

Place Value and Higher Level Computation

Standard - CC.2.2.2.A.2

Use mental strategies to add and subtract within 20.

Standard - CC.2.1.2.B.1

Use place value concepts to represent amounts of tens and ones and to compare three digit numbers.

Standard - CC.2.1.2.B.2

Use place value concepts to read, write, and skip count to 1000.

Story Problems

Standard - CC.2.2.3.A.2

Understand properties of multiplication and the relationship between multiplication and division.

Times Tables Fluency 2's, 3's, 5's

Standard - CC.2.2.3.A.3

Demonstrate multiplication and division fluency.

Standard - CC.2.2.3.A.4

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

III. Form Drawing / Fables / Nature Study

Standard - CC.1.2.2.A

Identify the main idea of a multi-paragraph text as well as the focus of specific paragraphs within the text.

Standard - 3.2.2.B2

Explore and describe how different forms of energy cause changes. (e.g., sunlight, heat, wind)

Standard - 3.2.2.B6

ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Standard - 3.2.3.A1

Differentiate between properties of objects such as size, shape, and weight and properties of materials that make up the objects such as color, texture, and hardness.

Differentiate between the three states of matter, classifying a substance as a solid, liquid, or gas.

Standard - CC.1.4.2.A

Write informative/ explanatory texts to examine a topic and convey ideas and information clearly.

Standard - CC.1.4.2.B

Identify and introduce the topic.

Standard - CC.1.4.2.C

Develop the topic with facts and/or definitions

Standard - CC.1.4.2.D

Group information and provide a concluding statement or section.

Standard - CC.1.4.2.F

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling. • Capitalize proper nouns. • Use commas and apostrophes appropriately. • Spell words drawing on common spelling patterns. • Consult reference material as needed.

Standard - CC.1.4.2.E

Choose words and phrases for effect.

Standard - CC.1.4.2.G

Write opinion pieces on familiar topics or texts.

Standard - CC.1.4.2.H

Identify the topic and state an opinion.

Standard - CC.1.4.2.I

Support the opinion with reasons that include details connected to the opinion.

Standard - CC.1.4.2.J

Create an organizational structure that includes reasons and includes a concluding statement.

Standard - CC.1.4.2.K

Use a variety of words and phrases to appeal to the audience.

Standard - CC.1.4.2.L

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.2.M

Write narratives to develop real or imagined experiences or events.

Standard - CC.1.4.2.N

Establish a situation and introduce a narrator and/or characters.

Standard - CC.1.4.2.O

Include thoughts and feeling to describe experience and events to show the response of characters to situations.

Standard - CC.1.4.2.P

Organize a short sequence of events, using temporal words to signal event order; provide a sense of closure.

Standard - CC.1.4.2.Q

Choose words and phrases for effect

Standard - CC.1.4.2.R

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling. • Capitalize proper nouns. • Use commas and apostrophes appropriately. • Spell words drawing on common spelling patterns. • Consult reference material as needed.

Standard - 15.2.2.A

Ask and answer questions related to personal likes and dislikes of home and school responsibilities. Reference Career Education and Work 13.1.1.A - B

IV. Arithmetic

Story Problems and Problem Solving

Division

Standard - CC.2.2.3.A.2

Understand properties of multiplication and the relationship between multiplication and division.

Numbers 1-1000+

Standard - CC.2.1.2.B.3

Use place value understanding and properties of operations to add and subtract within 1000.

Standard - CC.2.2.2.A.1

Represent and solve problems involving addition and subtraction within 100.

Multiplication Times Tables 1, 2, 3, 5, 4, 10

Standard - CC.2.1.3.B.1

Apply place value understanding and properties of operations to perform multi-digit arithmetic.

Graphing

Standard - CC.2.4.1.A.4

Represent and interpret data using tables/charts

V. Legends and Folklore of Heroic People from Around the World/ L.A.

Phonics

Grammar: Punctuation, Nouns, Verbs, Adjectives

Standard - CC.1.3.1.E

Standard - CC.1.1.2.D

Standard - CC.1.1.2.E

Standard - CC.1.2.2.B

Standard - CC.1.2.2.C

Standard - CC.1.2.2.E

Standard - CC.1.2.2.F

Standard - CC.1.2.2.G

Standard - CC.1.2.2.H

Standard - CC.1.2.2.I

Standard - CC.1.2.2.J

Standard - CC.1.2.2.K
Standard - CC.1.2.2.L
Standard - CC.1.3.2.A
Standard - CC.1.3.2.B
Standard - CC.1.3.2.C
Standard - CC.1.3.2.D
Standard - CC.1.3.2.E
Standard - CC.1.3.2.F
Standard - CC.1.3.2.G
Standard - CC.1.3.2.H
Standard - CC.1.3.2.I
Standard - CC.1.3.2.J
Standard - CC.1.3.2.K
Standard - CC.1.5.2.A
Standard - CC.1.5.2.B
Standard - CC.1.5.2.C
Standard - CC.1.5.2.D
Standard - CC.1.5.2.F
Standard - CC.1.5.2.E
Standard - CC.1.5.2.G

VI. Arithmetic

Higher Level Computation

Place Value

Numbers beyond 1,000

Multiplication Times Tables 3, 4, 6, 7

Standard - CC.2.2.3.A.3

Demonstrate multiplication and division fluency.

Time to the hour and half hour

Standard - CC.2.4.1.A.2

Tell and write time to the nearest half hour using both analog and digital clocks.

VII. Form Drawing / Fables

Cursive Writing Forms

Self-contained Forms: Two and Three Dimensional Shapes

Standard - CC.2.3.4.A.3

Recognize symmetric shapes and draw lines of symmetry.

VIII. Legends and Folklore of Heroic People from Around the World/ L.A.

Phonics and Grammar

Standard - CC.1.3.1.E

Standard - CC.1.1.2.D

Standard - CC.1.1.2.E

Standard - CC.1.2.2.B
Standard - CC.1.2.2.C
Standard - CC.1.2.2.E
Standard - CC.1.2.2.F
Standard - CC.1.2.2.G
Standard - CC.1.2.2.H
Standard - CC.1.2.2.I
Standard - CC.1.2.2.J
Standard - CC.1.2.2.K
Standard - CC.1.2.2.L
Standard - CC.1.3.2.A
Standard - CC.1.3.2.B
Standard - CC.1.3.2.C
Standard - CC.1.3.2.D
Standard - CC.1.3.2.E
Standard - CC.1.3.2.F
Standard - CC.1.3.2.G
Standard - CC.1.3.2.H
Standard - CC.1.3.2.I
Standard - CC.1.3.2.J
Standard - CC.1.3.2.K
Standard - CC.1.5.2.A
Standard - CC.1.5.2.B
Standard - CC.1.5.2.C
Standard - CC.1.5.2.D
Standard - CC.1.5.2.F
Standard - CC.1.5.2.E
Standard - CC.1.5.2.G

IX. Arithmetic

Higher Level Computation

Standard - CC.2.1.4.B.1

Apply place value concepts to show an understanding of multi-digit whole numbers.

Standard - CC.2.1.4.B.2

Use place value understanding and properties of operations to perform multi-digit arithmetic.

Standard - 3.3.K.A5

Record daily weather conditions using simple charts and graphs Identify seasonal changes in the environment. Distinguish between types of precipitation.

Place Value

Numbers 700-1000

Multiplication Times Tables 1-12

Standard - CC.2.2.3.A.3

Demonstrate multiplication and division fluency.

**X. Form Drawing / Fables
Metamorphosis Exercises**

- Standard - CC.1.1.4.D
- Standard - CC.1.1.4.E
- Standard - CC.1.2.4.A
- Standard - CC.1.2.4.B
- Standard - CC.1.2.4.C
- Standard - CC.1.2.4.D
- Standard - CC.1.2.4.E
- Standard - CC.1.2.4.F
- Standard - CC.1.2.4.G
- Standard - CC.1.2.4.H
- Standard - CC.1.2.4.I
- Standard - CC.1.2.4.J
- Standard - CC.1.2.4.K
- Standard - CC.1.2.4.L
- Standard - CC.1.4.4.A
- Standard - CC.1.4.4.B
- Standard - CC.1.4.4.C
- Standard - CC.1.4.4.D
- Standard - CC.1.4.4.F
- Standard - CC.1.4.4.E
- Standard - CC.1.4.4.G
- Standard - CC.1.4.4.H
- Standard - CC.1.4.4.I
- Standard - CC.1.4.4.J
- Standard - CC.1.4.4.K
- Standard - CC.1.4.4.L
- Standard - CC.1.4.4.M
- Standard - CC.1.4.4.N
- Standard - CC.1.4.4.O
- Standard - CC.1.4.4.P
- Standard - CC.1.4.4.Q
- Standard - CC.1.4.4.R
- Standard - CC.1.4.4.S
- Standard - CC.1.4.4.T
- Standard - CC.1.4.4.V
- Standard - CC.1.4.4.W
- Standard - CC.1.4.4.X
- Standard - CC.1.5.4.A
- Standard - CC.1.5.4.B
- Standard - CC.1.5.4.C
- Standard - CC.1.5.4.D
- Standard - CC.1.5.4.E

Standard - CC.1.5.4.G

XI. Legends and Folklore of Heroic People from Around the World/ L.A.

Phonics

Writing Paragraphs

Standard - CC.1.3.1.E

Standard - CC.1.1.2.D

Standard - CC.1.1.2.E

Standard - CC.1.2.2.B

Standard - CC.1.2.2.C

Standard - CC.1.2.2.E

Standard - CC.1.2.2.F

Standard - CC.1.2.2.G

Standard - CC.1.2.2.H

Standard - CC.1.2.2.I

Standard - CC.1.2.2.J

Standard - CC.1.2.2.K

Standard - CC.1.2.2.L

Standard - CC.1.3.2.A

Standard - CC.1.3.2.B

Standard - CC.1.3.2.C

Standard - CC.1.3.2.D

Standard - CC.1.3.2.E

Standard - CC.1.3.2.F

Standard - CC.1.3.2.G

Standard - CC.1.3.2.H

Standard - CC.1.3.2.I

Standard - CC.1.3.2.J

Standard - CC.1.3.2.K

Standard - CC.1.5.2.A

Standard - CC.1.5.2.B

Standard - CC.1.5.2.C

Standard - CC.1.5.2.D

Standard - CC.1.5.2.F

Standard - CC.1.5.2.E

Standard - CC.1.5.2.G

XII. Work on Class Play

Standard - CC.1.2.1.H

Identify the reasons an author gives to support points in a text.

Standard - CC.1.2.1.I

Identify basic similarities in and differences between two texts on the same topic.

Standard - CC.1.3.1.E

Standard - CC.1.1.2.D
Standard - CC.1.1.2.E
Standard - CC.1.2.2.B
Standard - CC.1.2.2.C
Standard - CC.1.2.2.E
Standard - CC.1.2.2.F
Standard - CC.1.2.2.G
Standard - CC.1.2.2.H
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Standard - CC.1.3.2.K
Standard - CC.1.5.2.A
Standard - CC.1.5.2.B
Standard - CC.1.5.2.C
Standard - CC.1.5.2.D
Standard - CC.1.5.2.F
Standard - CC.1.5.2.E
Standard - CC.1.5.2.G

XIII. Year-End Review- Review of standards covered over the course of the year.

Grade Three

Third Grade Main Lesson Block Rotation

I. Farming and Gardening/Creation Stories

Stories of people who rely on the land for survival

Standard - 3.1.2.A5

Explain how different parts of a plant work together to make the organism function.

Standard - 3.1.2.A9

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
- Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.
- Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.
- Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

Standard - 3.1.2.C2

Explain that living things can only survive if their needs are being met.

Standard - CC.1.3.3.I

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies and tools.

Standard - CC.1.3.3.J

Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships.

Standard - CC.1.3.3.K

Read and comprehend literary fiction on grade level, reading independently and proficiently.

Standard - CC.1.5.3.E

Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Standard - CC.1.5.3.G

Demonstrate command of the conventions of standard English when speaking based on grade 3 level and content.

Standard - 3.4.3.A1

Identify how the natural made world and the human made world are different.

Food Processing

Standard - 3.2.2.A3

Demonstrate how heating and cooling may cause changes in the properties of materials.

Standard - 3.2.2.A4

Experiment and explain what happens when two or more substances are combined (e.g. mixing, dissolving, and separated (e.g. filtering, evaporation)).

Standard - 3.2.3.A3

Demonstrate how heating and cooling may cause changes in the properties of materials including phase changes.

Standard - 3.2.2.A5, 3.2.K.A5, 3.2.1.A5, 3.2.2.A5

CONSTANCY AND CHANGE Recognize that everything is made of matter.

Standard - 3.2.3.A4

Use basic reactions to demonstrate observable changes in properties of matter (e.g., burning, cooking).

Standard - 3.2.3.B3

Explore temperature changes that result from the addition or removal of heat.

Standard - CC.1.4.2.T

With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.

Standard - CC.1.4.2.V

Participate in individual or shared research and writing projects.

Standard - CC.1.4.2.W

Recall information from experiences or gather information from provided sources to answer a question.

Standard - CC.1.4.2.X

Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

Standard - 3.4.3.B4

Illustrate how people have made tools to provide food, clothing, and shelter.

Standard - 11.3.6.A

Demonstrate knowledge of techniques used to evaluate food in various forms (e.g., canned, frozen, dried, irradiated).

Standard - 11.3.6.B

Describe safe food handling techniques (e.g., storage, temperature control, food preparation, conditions that create a safe working environment for food production).

Standard - 11.3.6.C

Analyze factors that affect food choices.

Standard - 11.3.6.F

Analyze basic food preparation techniques and food-handling procedures.

Standard - 11.3.6.G

Describe the physical, biological, and chemical changes that take place in food preparation.

Standard - 11.3.6.D

Describe a well-balanced daily menu using the dietary guidelines and the food guide pyramid.

Standard - 11.3.6.E

Explain the relationship between calories, nutrient and food input versus energy output; describe digestion.

Standard - 15.4.2.A

Identify various technologies used in the classroom and at home.

Natural Cycles - Water Cycle

Standard - 3.1.K.A9, 3.1.1.A9, 3.1.K.B6, 3.1.1.B6, 3.1.2.B6, 3.1.K.C4, 3.1.1.C4, 3.1.2.C4, 3.1.3.B6, 3.2.K.A6, 3.2.1.A6

Distinguish between scientific fact and opinion.

Ask questions about objects, organisms, and events.

Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.

Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.

Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.

Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.

Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

Standard - CC.1.1.3.D

Know and apply grade level phonics and word analysis skills in decoding words. • Identify and know the meaning of the most common prefixes and derivational suffixes. • Decode words with common Latin suffixes. • Decode multi-syllable words. • Read grade-appropriate irregularly spelled words.

Standard - CC.1.1.3.E

Read with accuracy and fluency to support comprehension: • Read on-level text with purpose and understanding. • Read on-level text orally with accuracy, appropriate rate, and expression on successive readings. • Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Standard - CC.1.2.3.A

Determine the main idea of a text; recount the key details and explain how they support the main idea.

Standard - CC.1.2.3.B

Ask and answer questions about the text and make inferences from text; refer to text to support responses.

Standard - CC.1.2.3.C

Explain how a series of events, concepts, or steps in a procedure is connected within a text, using language that pertains to time, sequence, and cause/effect.

Standard - 3.4.3.E2

Identify some processes used in agriculture that require different procedures, products, or systems.

Standard - 3.4.3.E6

Explain how manufacturing systems design and produce products in quantity.

Standard - 3.4.4.E1

Identify tools and devices that have been designed to provide information about a healthy lifestyle.

Standard - 3.4.4.E2

Identify the technologies in agriculture that make it possible for food to be available year round.

Standard - 3.4.4.E6

Identify key aspects of manufacturing processes (designing products, gathering resources and using tools to separate, form and combine materials in order to produce products).

Standard - 3.3.4.A4

Recognize Earth's different water resources, including both fresh and saltwater.

Describe phase changes in the forms of water on Earth.

II. Arithmetic

Multiplication/Division Fact Fluency

Standard - CC.2.2.3.A.3

Demonstrate multiplication and division fluency.

Carrying and Borrowing

Place Value to the Millions

Standard - 3.3.1.A5

Become familiar with weather instruments. Collect, describe, and record basic information about weather over time.

Standard - 3.2.1.B3

Observe and record daily temperatures. Draw conclusions from daily temperature records as related to heating and cooling.

Standard - 3.3.1.A7

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
- Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.
- Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.
- Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

III. Language Arts

Ancient Hebrew and Phoenician Cultures

Writing Letters, Persuasive Writing, Author's Purpose

Cursive Handwriting

Reading Aloud Skills

Phonics and Spelling

Grammar: Parts of Speech

Standard - CC.1.2.3.D

Explain the point of view of the author.

Standard - CC.1.2.3.E

Use text features and search tools to locate and interpret information.

Standard - CC.1.2.3.F

Determine the meaning of words and phrases as they are used in grade level text, distinguishing literal from non-literal meaning as well as shades of meaning among related words.

Standard - CC.1.2.3.G

Use information gained from text features to demonstrate understanding of a text.

Standard - CC.1.2.3.H

Describe how an author connects sentences and paragraphs in a text to support particular points.

Standard - CC.1.2.3.I

Compare and contrast the most important points and key details presented in two texts on the same topic.

Standard - CC.1.2.3.J

Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships.

Standard - CC.1.2.3.K

Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade level reading and content; choosing flexibly from a range of strategies and tools.

Standard - CC.1.2.3.L

Read and comprehend literary non-fiction and informational text on grade level, reading independently and proficiently.

Standard Area - CC.1.3: Reading Literature: Students read and respond to works of literature - with emphasis on comprehension, making connections among ideas and between texts with focus on textual evidence.

Standard - CC.1.3.3.A

Determine the central message, lesson, or moral in literary text; explain how it is conveyed in text.

Standard - CC.1.3.3.B

Ask and answer questions about the text and make inferences from text; refer to text to support responses.

Standard - CC.1.3.3.C

Describe characters in a story and explain how their actions contribute to the sequence of events.

Standard - CC.1.3.3.D

Explain the point of view of the author.

Standard - CC.1.5.3.A

Engage effectively in a range of collaborative discussions on grade level topics and texts, building on others' ideas and expressing their own clearly.

Standard - CC.1.5.3.B

Determine the main ideas and supporting details of a text read aloud or information presented in diverse media formats, including visually, quantitatively, and orally.

Standard - CC.1.5.3.C

Ask and answer questions about information from a speaker, offering appropriate detail.

Standard - 3.4.3.A2

Identify that some systems are found in nature and some systems are made by humans.

Standard - 3.4.3.C3

Recognize that all products and systems are subject to failure; many products and systems can be fixed.

Standard - 3.4.3.E4

Recognize that information and communication technology is the transfer of messages among people and/or machines over distances through the use of technology.

Standard - CC.1.2.3.A

Standard - CC.1.2.3.B

Standard - CC.1.2.3.C

Standard - CC.1.1.3.D

Standard - CC.1.1.3.E

Standard - CC.1.3.3.I

Standard - CC.1.3.3.J

Standard - CC.1.3.3.K

Standard - CC.1.5.3.E

Standard - CC.1.5.3.G

Standard - CC.1.4.2.T

Standard - CC.1.4.2.V

Standard - CC.1.4.2.W

Standard - CC.1.4.2.X

IV. Arithmetic: Measurement

Place Value to the Millions

Roman Numerals

Three Digit Multiplication and Division

Standard - CC.2.2.4.A.1

Represent and solve problems involving the four operations.

Measurement: Time, Phases of the Moon, Weather

Standard - 3.3.1.B1

Explain why shadows fall in different places at different times of the day.

Standard - 3.3.2.B1

Observe and record • location of the Sun and the Moon in the sky over a day. • changes in the appearance of the Moon over a month. Observe, describe, and predict seasonal patterns of sunrise and sunset.

Standard - 3.3.3.B1

Relate the rotation of the earth and day/night, to the apparent movement of the sun, moon, and stars across the sky.

Describe the changes that occur in the observable shape of the moon over the course of a month.

Standard - 3.2.1.B3

Observe and record daily temperatures. Draw conclusions from daily temperature records as related to heating and cooling.

3.3.1.A5

Become familiar with weather instruments. Collect, describe, and record basic information about weather over time.

Standard - 3.3.4.A5

Describe basic weather elements.

Identify weather patterns over time.

V. Shelters & House Building/Professions

Standard - 15.8.5.B

Identify the different forms of business ownership in the local community.

Standard - 15.8.5.C

Explain the importance of ethical behavior in various situations.

Standard - 15.8.5.D

Identify the process for planning and completing a project.

Standard - 15.9.2.A

With prompting and support, ask and answer questions about careers in marketing.

Standard - 15.9.2.B

Ask and answer questions about items you and your family purchased.

Standard - 15.9.2.E

Ask and answer questions about reasons you or your family buys an item.

Standard - 15.9.2.F

With prompting and support, differentiate between products and services.

Standard - 15.9.2.G

Give examples of where consumers purchase products and services.

Standard - 15.9.2.H

Ask and answer questions about costs of products and services.

Standard - 15.9.2.I

Provide examples of promotional items and advertisements.

Standard - 15.9.2.M

Ask and answer questions about right and wrong (ethics) in the classroom.

Standard - 15.4.2.M

With help and support, identify various technologies used in the workplace.

Standard - 15.5.2.B

With prompting and support, list skills needed to run your own business (lemonade stand, etc.).

Standard - 15.5.2.D

With prompting and support, name local small business owners in your community. Standard - 15.4.2.A Identify various technologies used in the classroom and at home.

Standard - 15.4.2.B

Demonstrate responsible use of technology and equipment.

Standard - 15.2.2.Q

Ask and answer questions related to interests and careers.

Standard - 15.5.2.A

Identify people in the community who own a business.

Standard - 15.2.2.B

Identify occupations of familiar adults.

Standard - 15.2.2.C

With prompting and support, discuss the concept of a global community.

Standard - 15.2.2.D

Ask and answer questions about different types of work.

Standard - 15.2.2.H

With prompting and support, ask appropriate questions about work activities.

Standard - 15.1.2.A

With help and support, ask and answer questions about careers in accounting.

Standard - 3.1.3.A2

Describe the basic needs of living things and their dependence on light, food, air, water, and shelter.

Standard - CC.1.4.3.V

Conduct short research projects that build knowledge about a topic.

Standard - CC.1.4.3.W

Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

Standard - CC.1.4.3.X

Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

Standard - CC.1.5.3.D

Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly with adequate volume, appropriate pacing, and clear pronunciation.

Standard - 3.4.3.B3

Identify and define products made to meet individual needs versus wants.

Standard - 3.4.3.B4

Illustrate how people have made tools to provide food, clothing, and shelter.

Standard - 3.4.3.C1

Recognize design is a creative process and everyone can design solutions to problems.

Standard - 3.4.3.C2

Explain why the design process requires creativity and consideration of all ideas.

Standard - 3.4.3.D1

Identify people's needs and wants and define some problems that can be solved through the design process.

Standard - 3.4.3.E3

Recognize that tools, machines, products, and systems use energy in order to do work.

Standard - 3.4.4.A1

Understand that tools, materials, and skills are used to make things and carry out tasks.

Standard - 3.4.4.A3

Describe how various relationships exist between technology and other fields.

Standard - 3.4.4.B1

Describe how technology affects humans in various ways.

Standard - 3.4.4.D1

Investigate how things are made and how they can be improved.

Standard - 3.4.4.E7

Understand that structures rest on foundations and that some structures are temporary, while others are permanent.

Standard - 3.4.7.E7

Examine subsystems found in the construction of a building.

Standard - 3.4.8.E7

Analyze factors that determine structural design (e.g., building laws and codes, style, convenience, cost, climate, and function).

Standard - 15.4.5.M

Discuss the impact of emerging technologies on a variety of careers.

Standard - 15.5.5.A

Define the qualities of an entrepreneur.

Standard - 15.5.5.B

Define the skill set of an entrepreneur. Reference Career Education and Work 13.4.5 A - B

Standard - 15.5.5.C

Discuss differences and similarities between an entrepreneurship and a corporation.

Standard - 15.5.5.D

Discuss traditional entrepreneurships and the pros and cons of being one's own boss.

Standard - 15.5.5.E

Reference Economics 6.5.8.F

Standard - 15.5.5.F

Identify global businesses in the local or state economy

Standard - 15.5.5.I

Identify the functions of a business operation.

Standard - 15.1.5.A

Explore various accounting careers.

Standard - 15.1.5.B

Explain the need for ethics in the classroom and business.

Standard - 15.1.5.F

Identify family and business assets.

Standard - 15.1.5.G

Identify family and business liabilities.

Standard - 15.1.5.I

Ask and answer questions about ownership in a business.

Standard - 15.1.5.J

Discuss supplies needed to run a business.

Standard - 15.1.5.K

Recognize and give examples of revenue.

Standard - 15.1.5.L

Recognize and give examples of expenses.

Standard - 15.1.5.M

Describe the different methods of how people are compensated.

Standard - 15.1.5.N

Discuss the different forms of business ownership in the community.

Standard - 15.1.5.W

Discuss problems associated not having enough cash.

Standard - 15.1.5.X

Identify costs in business.

Standard - 15.1.5.Y

Discuss the price of an item and the actual amount paid.

Standard - 15.2.5.B

Discuss career pathways and describe businesspeople in those pathways within the community.

Standard - 15.2.5.C

Identify and compare occupations within the global marketplace.

Standard - 15.2.5.D

Discuss traditional and virtual work environments.

Standard - 15.7.2.B

With prompting and support, identify products manufactured in other countries.

Standard - 15.7.2.I

Ask and answer questions to demonstrate understanding that communication differs across the globe.

Standard - 15.7.2.K

With prompting and support, provide examples of responsible behavior related to the use of natural resources.

Standard - 4.3.7.A

Explain how products are derived from natural resources.

Describe the process of converting raw materials to consumer goods.

Differentiate between renewable and nonrenewable resources

Reading Aloud with Fluency

Writing Summaries

Standard - CC.1.3.3.E

Refer to parts of texts when writing or speaking about a text using such terms as chapter, scene and stanza and describe how each successive part builds upon earlier sections.

Standard - CC.1.3.3.F

Determine the meaning of words and phrases as they are used in grade level text, distinguishing literal from non-literal meaning as well as shades of meaning among related words.

Standard - CC.1.3.3.G

Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).

Standard - CC.1.3.3.H

Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters.

Standard - CC.1.4.3.A

Write informative/ explanatory texts to examine a topic and convey ideas and information clearly.

Standard - CC.1.4.3.B

Identify and introduce the topic.

Standard - CC.1.4.3.C

Develop the topic with facts, definitions, details, and illustrations, as appropriate.

Standard - CC.1.4.3.D

Create an organizational structure that includes information grouped and connected logically with a concluding statement or section.

Standard - CC.1.4.3.E

Choose words and phrases for effect.

Standard - CC.1.4.3.F

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling

Standard - CC.1.4.3.G

Write opinion pieces on familiar topics or texts.

Standard - CC.1.4.3.H

Introduce the topic and state an opinion on the topic.

Standard - CC.1.4.3.I

Support an opinion with reasons.

Standard - CC.1.4.3.J

Create an organizational structure that includes reasons linked in a logical order with a concluding statement or section.

Standard - CC.1.4.3.K

Use a variety of words and sentence types to appeal to the audience.

Standard - CC.1.4.3.L

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling

Standard - 4.5.7.A

Describe how the development of civilization affects the use of natural resources.

Compare and contrast how people use natural resources in sustainable and non-sustainable ways throughout the world.

VI. Arithmetic

Multi-digit Multiplication

Introduction to Long Division

Weight and Measures: Time, Money, And Linear Measurement

Standard - CC.2.4.2.A.1

Measure and estimate lengths in standard units using appropriate tools.

Standard - 15.1.2.G

Ask and answer questions about money you or your family owes.

Standard - 15.1.2.N

Ask and answer questions about business ownership in the community.

Standard - 15.6.2.A

With prompting and support, discuss the difference between a need and a want.

Standard - 15.6.2.J

With prompting and support, ask and answer questions about borrowing and paying back money.

Standard - 15.7.2.B

With prompting and support, identify products manufactured in other countries.

Standard - 15.7.2.I

Ask and answer questions to demonstrate understanding that communication differs across the globe.

Standard - 15.8.2.A

Ask and answer questions about the different businesses and jobs in the community.

Standard - 15.8.2.C

Ask and answer questions about right and wrong (ethics) in the classroom.

Standard - 15.8.2.D

With prompting and support, engage in project planning and completion.

Standard - 15.8.2.E

With prompting and support, ask and answer questions about roles and functions of managers and workers.

Standard - 15.7.2.K

With prompting and support, provide examples of responsible behavior related to the use of natural resources.

Standard - 15.6.2.N

With prompting and support, ask and answer questions about items of value that could be lost or damaged.

Standard - 15.6.2.B

Ask and answer questions about a monetary decision.

Standard - 15.1.2.M

Ask and answer questions about being compensated for completing a task.

Standard - CC.2.4.2.A.2

Tell and write time to the nearest five minutes using both analog and digital clocks.

Standard - CC.2.4.3.A.2

Tell and write time to the nearest minute and solve problems by calculating time intervals.

Standard - CC.2.4.2.A.3

Solve problems and make change using coins and paper currency with appropriate symbols.

Standard - 3.3.3.A4

Connect the various forms of precipitation to the weather in a particular place and time.

Standard - 15.8.2.G

Identify leaders in your school and community; define their roles.

Standard - 15.8.2.I

Identify communication skills necessary for successful interacting with others.

Standard - 15.8.2.J

With prompting and support, identify technologies used to help schools run efficiently.

Standard - 3.3.3.A5

Explain how air temperature, moisture, wind speed and direction, and precipitation make up the weather in a particular place and time.

Standard - CC.2.4.2.A.4

Represent and interpret data using line plots, picture graphs, and bar graphs.

Standard - CC.2.4.2.A.6

Extend the concepts of addition and subtraction to problems involving length.

Standard - CC.2.4.3.A.1

Solve problems involving measurement and estimation of temperature, liquid volume, mass or length.

Standard - 3.4.3.A3

Identify how the study of technology uses many of the same ideas and skills as many other subjects.

Standard - 3.4.3.B1

Describe how using technology can be good or bad.

Standard - 3.4.4.C2

Describe the engineering design process:

Define a problem. Generate ideas. Select a solution and test it. Make the item. Evaluate the item. Communicate the solution with others. Present the results

Standard - 3.4.4.C3

Explain how asking questions and making observations help a person understand how things work and can be repaired.

Fractions

Standard - CC.2.1.3.C.1

Explore and develop an understanding of fractions as numbers.

Standard - CC.2.3.3.A.2

Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.

Standard - CC.2.4.3.A.3

Solve problems and make change involving money using a combination of coins and bills.

Standard - CC.2.4.3.A.4

Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.

Standard - CC.2.2.4.A.1

Represent and solve problems involving the four operations.

VII. Farming & Gardening

Fabric and Fibers

Plant Growth and Life Cycle

Standard - 3.1.3.A1

Describe characteristics of living things that help to identify and classify them.

Standard - 3.1.3.A3

Illustrate how plants and animals go through predictable life cycles that include birth, growth, development, reproduction, and death.

Standard - 3.1.4.B2

Recognize that reproduction is necessary for the continuation of life.

Standard - 3.1.4.B1

Describe features that are observable in both parents and their offspring.

Standard - 3.1.4.B5 PATTERN Identify observable patterns in the physical characteristics of plants or groups of animals.

Standard - 3.1.4.C2

Describe plant and animal adaptations that are important to survival.

Standard - 3.1.3.A5

Identify the structures in plants that are responsible for food production, support, water transport, reproduction, growth, and protection.

Standard - CC.2.4.3.A.5

Determine the area of a rectangle and apply the concept to multiplication and to addition.

Standard - CC.2.4.3.A.6

Solve problems involving perimeters of polygons and distinguish between linear and area measures.

Standard - CC.1.4.3.S

Draw evidence from literary or informational texts to support analysis, reflection, and research, applying grade level reading standards for literature and informational texts

Standard - CC.1.4.3.T

With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

Standard - CC.2.2.4.A.1

Represent and solve problems involving the four operations.

Standard - 3.4.3.B2

Explain how materials are re-used or recycled.

Standard - 3.4.3.D2

Observe, analyze and document how simple systems work.

Standard - 3.4.3.D3

Collect information about everyday products and systems by asking questions.

Standard - 3.4.3.E1

Identify the technologies that support and improve quality of life.

Standard - 3.4.3.E2

Identify some processes used in agriculture that require different procedures, products, or systems.

Standard - 3.4.7.E2

Examine specialized equipment and practices used to improve the production of food, fiber, fuel, and other useful products and in the care of animals.

VIII. Language Arts

Cursive Handwriting

Grammar

Writing Letters, Persuasive Writing, Writer's Purpose

Standard - 3.4.4.E4

Explain how information and communication systems allow information to be transferred from human to human.

Standard - CC.1.2.3.A

Standard - CC.1.2.3.B

Standard - CC.1.2.3.C

Standard - CC.1.1.3.D

Standard - CC.1.1.3.E

Standard - CC.1.3.3.I

Standard - CC.1.3.3.J

Standard - CC.1.3.3.K

Standard - CC.1.5.3.E

Standard - CC.1.5.3.G

Standard - CC.1.4.2.T

Standard - CC.1.4.2.V

Standard - CC.1.4.2.W

Standard - CC.1.4.2.

IX. Measurement

Weights and Measures: Volume

Division with Remainders

Standard - CC.2.2.4.A.1

Represent and solve problems involving the four operations.

X. Class Play

Standard - CC.1.2.3.A

Standard - CC.1.2.3.B

Standard - CC.1.2.3.C

Standard - CC.1.1.3.D

Standard - CC.1.1.3.E

Standard - CC.1.3.3.I

Standard - CC.1.3.3.J

Standard - CC.1.3.3.K

Standard - CC.1.5.3.E

Standard - CC.1.5.3.G

Standard - CC.1.4.2.T

Standard - CC.1.4.2.V

Standard - CC.1.4.2.W

Standard - CC.1.4.2.X

XI. House Building or Building Project

Design and Build Class Project and Farm Trip

Standard - 3.1.3.B1

Understand that plants and animals closely resemble their parents.

Standard - 3.1.4.B1

Describe features that are observable in both parents and their offspring.

Standard - 3.1.3.B5

PATTERNS Identify characteristics that appear in both parents and offspring.

Standard - 3.1.4.A5

Describe common functions living things share to help them function in a specific environment.

Standard - 3.1.4.A1

Classify plants and animals according to the physical characteristics that they share.

Standard - 3.1.4.A2

Describe the different resources that plants and animals need to live.

Standard - 3.1.4.A3

Identify differences in the life cycles of plants and animals.

Standard - 3.4.3.E7

Recognize that people live, work, and go to school in buildings which are different types of structures.

Standard - 3.4.4.D2

Recognize and use everyday symbols (e.g. icons, simple electrical symbols measurement) to communicate key ideas.

Identify and use simple hand tools (e.g., hammer, scale) correctly and safely.

Standard - 3.4.4.C1

Understand that there is no perfect design.

Standard - 3.4.4.E6

Identify key aspects of manufacturing processes (designing products, gathering resources and using tools to separate, form and combine materials in order to produce products).

Standard - CC.2.4.2.A.1

Standard - CC.2.4.2.A.2

Standard - CC.2.4.3.A.2

Standard - CC.2.4.2.A.3

Standard – C.C.3.3.3.A4

Standard - CC.2.4.2.A.4

Standard - CC.2.4.2.A.6

Standard - CC.2.4.3.A.1

Standard - CC.2.1.3.C.1

Standard - CC.2.3.3.A.2

Standard - CC.2.4.3.A.3

Standard - CC.2.4.3.A.4

XII. Review of the Year

Review of standards covered over the course of the year.

Grade Four

Fourth Grade Main Lesson Block Rotation

I. Local Geography and History

Maps Skills

Local History and Geography

Native Americans

Moravians

Revolutionary War

Lehigh Canal Towpath Trail

19th Century Industry

Modern Lehigh Valley

Standard - 15.8.5.A

Identify the expansion and decline of businesses in the community.

Standard - 3.3.3.A1

Explain and give examples of the ways in which soil is formed.

Standard - 3.3.1.A4

Identify and describe types of fresh and salt-water bodies (ocean, rivers, lakes, ponds).

Standard - CC.1.1.4.D

Know and apply grade level phonics and word analysis skills in decoding words. • Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology to read accurately unfamiliar multisyllabic words.

Standard - CC.1.1.4.E

Read with accuracy and fluency to support comprehension: • Read on-level text with purpose and understanding. • Read on-level text orally with accuracy, appropriate rate, and expression

on successive readings. • Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Standard - CC.1.2.4.A

Determine the main idea of a text and explain how it is supported by key details; summarize the text.

Standard - CC.1.2.4.B

Refer to details and examples in text to support what the text says explicitly and make inferences.

Standard - CC.1.2.4.C

Explain events, procedures, ideas, or concepts in a text, including what happened and why, based on specific information in the text.

Standard - CC.1.2.4.D

Compare and contrast an event or topic told from two different points of view.

Standard - CC.1.2.4.E

Use text structure to interpret information (e.g., chronology, comparison, cause/effect, problem/solution).

Standard - CC.1.2.4.F

Determine the meaning of words and phrases as they are used in grade level text, including figurative language.

Standard - CC.1.2.4.G

Interpret various presentations of information within a text or digital source and explain how the information contributes to an understanding of text in which it appears.

Standard - CC.1.2.4.H

Explain how an author uses reasons and evidence to support particular points in a text.

Standard - CC.1.2.4.I

Integrate information from two texts on the same topic to demonstrate understanding of that topic.

Standard - CC.1.2.4.J

Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being and that are basic to a particular topic.

Standard - CC.1.2.4.K

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade level reading and content, choosing flexibly from a range of strategies and tools.

Standard - CC.1.2.4.L

Read and comprehend literary non-fiction and informational text on grade level, reading independently and proficiently.

Standard - CC.1.4.4.A

Write informative/ explanatory texts to examine a topic and convey ideas and information clearly.

Standard - CC.1.4.4.B

Identify and introduce the topic clearly.

Standard - CC.1.4.4.C

Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic; include illustrations and multimedia when useful to aiding comprehension.

Standard - CC.1.4.4.D

Group related information in paragraphs and sections, linking ideas within categories of information using words and phrases; provide a concluding statement or section; include formatting when useful to aiding comprehension.

Standard - CC.1.4.4.F

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling

Standard - CC.1.4.4.E

Use precise language and domain-specific vocabulary to inform about or explain the topic.

Standard - CC.1.4.4.G

Write opinion pieces on topics or texts.

Standard - CC.1.4.4.H

Introduce the topic and state an opinion on the topic.

Standard - CC.1.4.4.I

Provide reasons that are supported by facts and details.

Standard - CC.1.4.4.J

Create an organizational structure that includes related ideas grouped to support the writer's purpose and linked in a logical order with a concluding statement or section related to the opinion.

Standard - CC.1.4.4.K

Choose words and phrases to convey ideas precisely.

Standard - CC.1.4.4.L

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.4.M

Write narratives to develop real or imagined experiences or events.

Standard - CC.1.4.4.N

Orient the reader by establishing a situation and introducing a narrator and/or characters.

Standard - CC.1.4.4.O

Use dialogue and descriptions to develop experiences and events or show the responses of characters to situations; use concrete words and phrases and sensory details to convey experiences and events precisely.

Standard - CC.1.4.4.P

Organize an event sequence that unfolds naturally, using a variety of transitional words and phrases to manage the sequence of events; provide a conclusion that follows from the narrated experiences and events.

Standard - CC.1.4.4.Q

Choose words and phrases to convey ideas precisely.

Standard - CC.1.4.4.R

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.4.S

Draw evidence from literary or informational texts to support analysis, reflection, and research, applying grade level reading standards for literature and informational texts.

Standard - CC.1.4.4.T

With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

Standard - CC.1.4.4.V

Conduct short research projects that build knowledge through investigation of different aspects of a topic.

Standard - CC.1.4.4.W

Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

Standard - CC.1.4.4.X

Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

Standard - CC.1.5.4.A

Engage effectively in a range of collaborative discussions on grade level topics and texts, building on others' ideas and expressing their own clearly.

Standard - CC.1.5.4.B

Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

Standard - CC.1.5.4.C

Identify the reasons and evidence a speaker provides to support particular points.

Standard - CC.1.5.4.D

Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speaking clearly with adequate volume, appropriate pacing, and clear pronunciation.

Standard - CC.1.5.4.E

Differentiate between contexts that require formal English versus informal situations.

Standard - CC.1.5.4.G

Demonstrate command of the conventions of standard English when speaking based on grade 4 level and content.

Standard - 3.4.3.E5

Understand that transportation has many parts that work together to help people travel.

Standard - 3.4.4.B2

Explain how the use of technology affects the environment in good and bad ways.

Standard - 3.4.4.B3

Explain why new technologies are developed and old ones are improved in terms of needs and wants.

Standard - 3.4.4.B4

Describe how the history of civilization is linked closely to technological development.

Standard - 3.4.4.D3

Investigate and assess the influence of a specific technology or system on the individual, family, community, and environment.

Standard - 3.3.6.A1

Recognize and interpret various mapping representations of Earth's common features.

Standard - 3.3.6.A2

Examine how soil fertility, composition, resistance to erosion, and texture are affected by many factors.

Standard - 3.4.6.E2

Identify how emerging agricultural technologies have an effect on ecosystem dynamics and human/ animal food resources.

Standard - 3.3.4.A6

MODELS/SCALE Identify basic landforms using models and simple maps.

CONSTANCY/ CHANGE Identify simple changes in the earth system as air, water, soil and rock interact.

SCALE Explain how basic weather elements are measured.

Standard - 4.5.6.A

Examine how historical events have shaped the sustainable use of natural resources.

II. Arithmetic

Codes and Numeric Patterns

Standard - CC.2.2.4.A.4

Generate and analyze patterns using one rule.

Review of Previous Work

Factoring

Standard - CC.2.2.4.A.2

Develop and/or apply number theory concepts to find factors and multiples.

III. Zoology

Human Beings, Rodents, Sea Creatures, Ungulates

Standard - 4.5.6.D

Identify reasons why organisms become threatened, endangered, and extinct.

Standard - 3.1.2.A3

Identify similarities and differences in the life cycles of plants and animals.

Standard - 3.1.2.C3

CONSTANCY AND CHANGE Describe some plants and animals that once lived on Earth, (e.g., dinosaurs) but cannot be found anymore. Compare them to now living things that resemble them in some way (e.g. lizards and birds).

Standard - 3.1.3.C2

Describe animal characteristics that are necessary for survival.

Standard - 3.1.3.C3

CONSTANCY AND CHANGE Recognize that fossils provide us with information about living things that inhabited the Earth long ago

Standard - 3.1.4.A8

MODELS Construct and interpret models and diagrams of various animal and plant life cycles.

Standard - 3.1.4.C1

Identify different characteristics of plants and animals that help some populations survive and reproduce in greater numbers.

Describe how environmental changes can cause extinction in plants and animals.

Standard - 3.1.4.C2

Describe plant and animal adaptations that are important to survival.

Standard - 3.4.4.A2

Understand that systems have parts and components that work together.

Standard - 3.1.6.C1

Differentiate between instinctive and learned animal behaviors that relate to survival.

Standard - 3.1.7.A1

Describe the similarities and differences of physical characteristics in diverse organisms.

Standard - 3.1.7.A2

Describes how organisms obtain and use energy throughout their lives.

Standard - 3.1.7.A3

Explain why the life cycles of different organisms have varied lengths.

Standard - 3.1.4.B2

Recognize that reproduction is necessary for the continuation of life.

Standard - 3.1.4.B1

Describe features that are observable in both parents and their offspring.

Standard - 3.1.4.A8

MODELS Construct and interpret models and diagrams of various animal and plant life cycles.

Standard - 3.1.4.C1

Identify different characteristics of plants and animals that help some populations survive and reproduce in greater numbers.

Describe how environmental changes can cause extinction in plants and animals.

Standard - 3.1.4.C2

Describe plant and animal adaptations that are important to survival.

Standard - 3.1.4.C1

Identify different characteristics of plants and animals that help some populations survive and reproduce in greater numbers.

Describe how environmental changes can cause extinction in plants and animals.

Standard - 3.1.4.C2

Describe plant and animal adaptations that are important to survival.

Standard - 3.1.4.C3

CONSTANCY AND CHANGE Compare fossils to one another and to currently living organisms according to their anatomical similarities and Differences.

IV. Norse Mythology

The Norse Creation myth: the lineage of the Aesir, the gods of Asgaard. Yggdrisil, the World Ash

Odin, Thor, Loki and other gods and goddesses; The Norns and their prophecies

Adventures of Odin, Thor and Loki

Exploits of the Vanir and minor Aesir

Standard - CC.1.1.4.D

Standard - CC.1.1.4.E

Standard - CC.1.2.4.A

Standard - CC.1.2.4.B

Standard - CC.1.2.4.C

Standard - CC.1.2.4.D

Standard - CC.1.2.4.E

Standard - CC.1.2.4.F

Standard - CC.1.2.4.G

Standard - CC.1.2.4.H

Standard - CC.1.2.4.I

Standard - CC.1.2.4.J

Standard - CC.1.2.4.K

Standard - CC.1.2.4.L

Standard - CC.1.4.4.A

Standard - CC.1.4.4.B

Standard - CC.1.4.4.C

Standard - CC.1.4.4.D

Standard - CC.1.4.4.F

Standard - CC.1.4.4.E

Standard - CC.1.4.4.G

Standard - CC.1.4.4.H

Standard - CC.1.4.4.I

Standard - CC.1.4.4.J

Standard - CC.1.4.4.K

Standard - CC.1.4.4.L

Standard - CC.1.4.4.M

Standard - CC.1.4.4.N

Standard - CC.1.4.4.O

Standard - CC.1.4.4.P

Standard - CC.1.4.4.Q

Standard - CC.1.4.4.R

Standard - CC.1.4.4.S

Standard - CC.1.4.4.T

Standard - CC.1.4.4.V

Standard - CC.1.4.4.W

Standard - CC.1.4.4.X

Standard - CC.1.5.4.A

Standard - CC.1.5.4.B

Standard - CC.1.5.4.C

Standard - CC.1.5.4.D

Standard - CC.1.5.4.E

Standard - CC.1.5.4.G

V. Language Arts

The seven parts of speech

Writing personal and business letters

The Three Norns and the three simple tenses

Standard - CC.1.1.4.D

Standard - CC.1.1.4.E

Standard - CC.1.2.4.A

Standard - CC.1.2.4.B

Standard - CC.1.2.4.C

Standard - CC.1.2.4.D

Standard - CC.1.2.4.E

Standard - CC.1.2.4.F

Standard - CC.1.2.4.G

Standard - CC.1.2.4.H

Standard - CC.1.2.4.I

Standard - CC.1.2.4.J

Standard - CC.1.2.4.K

Standard - CC.1.2.4.L

Standard - CC.1.4.4.A

Standard - CC.1.4.4.B

Standard - CC.1.4.4.C

Standard - CC.1.4.4.D

Standard - CC.1.4.4.F

Standard - CC.1.4.4.E

Standard - CC.1.4.4.G

Standard - CC.1.4.4.H

Standard - CC.1.4.4.I

Standard - CC.1.4.4.J

Standard - CC.1.4.4.K

Standard - CC.1.4.4.L

Standard - CC.1.4.4.M

Standard - CC.1.4.4.N

Standard - CC.1.4.4.O

Standard - CC.1.4.4.P

Standard - CC.1.4.4.Q

Standard - CC.1.4.4.R

Standard - CC.1.4.4.S

Standard - CC.1.4.4.T

Standard - CC.1.4.4.V

Standard - CC.1.4.4.W
Standard - CC.1.4.4.X
Standard - CC.1.5.4.A
Standard - CC.1.5.4.B
Standard - CC.1.5.4.C
Standard - CC.1.5.4.D
Standard - CC.1.5.4.E
Standard - CC.1.5.4.G

VI. Class Play and Language Arts – Grammar

Standard - CC.1.1.4.D
Standard - CC.1.1.4.E
Standard - CC.1.2.4.A
Standard - CC.1.2.4.B
Standard - CC.1.2.4.C
Standard - CC.1.2.4.E
Standard - CC.1.2.4.F
Standard - CC.1.2.4.J
Standard - CC.1.2.4.K
Standard - CC.1.4.4.F
Standard - CC.1.4.4.E
Standard - CC.1.4.4.K
Standard - CC.1.4.4.L
Standard - CC.1.4.4.M
Standard - CC.1.4.4.N
Standard - CC.1.4.4.O
Standard - CC.1.4.4.P
Standard - CC.1.4.4.Q
Standard - CC.1.4.4.R
Standard - CC.1.4.4.S
Standard - CC.1.4.4.T
Standard - CC.1.4.4.V
Standard - CC.1.4.4.W
Standard - CC.1.4.4.X
Standard - CC.1.5.4.A
Standard - CC.1.5.4.B
Standard - CC.1.5.4.D
Standard - CC.1.5.4.E
Standard - CC.1.5.4.G

VII. Arithmetic

Fractions

Standard - CC.2.1.4.C.1

Extend the understanding of fractions to show equivalence and ordering.

Standard - CC.2.1.4.C.2

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Standard - CC.2.1.4.C.3

Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, e.g, 19/100).

Standard - CC.2.1.5.C.1

Use the understanding of equivalency to add and subtract fractions.

Measurement and Data

Standard - CC.2.4.4.A.1

Solve problems involving measurement and conversions from a larger unit to a smaller unit.

Standard - CC.2.4.4.A.2

Translate information from one type of data display to another.

Standard - CC.2.4.4.A.4

Represent and interpret data involving fractions using information provided in a line plot.

VIII. Norse Mythology

Loki's anger at the Aesir; The death of Baldur

Ragnarok: The final days of the Aesir

The story of Siegfried

Standard - CC.1.1.4.D

Standard - CC.1.1.4.E

Standard - CC.1.2.4.A

Standard - CC.1.2.4.B

Standard - CC.1.2.4.C

Standard - CC.1.2.4.D

Standard - CC.1.2.4.E

Standard - CC.1.2.4.F

Standard - CC.1.2.4.G

Standard - CC.1.2.4.H

Standard - CC.1.2.4.I

Standard - CC.1.2.4.J

Standard - CC.1.2.4.K

Standard - CC.1.2.4.L

Standard - CC.1.4.4.A

Standard - CC.1.4.4.B

Standard - CC.1.4.4.C

Standard - CC.1.4.4.D

Standard - CC.1.4.4.F

Standard - CC.1.4.4.E

Standard - CC.1.4.4.G

Standard - CC.1.4.4.H

Standard - CC.1.4.4.I

Standard - CC.1.4.4.J

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Standard - CC.1.4.4.L
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Standard - CC.1.4.4.N
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Standard - CC.1.4.4.P
Standard - CC.1.4.4.Q
Standard - CC.1.4.4.R
Standard - CC.1.4.4.S
Standard - CC.1.4.4.T
Standard - CC.1.4.4.V
Standard - CC.1.4.4.W
Standard - CC.1.4.4.X
Standard - CC.1.5.4.A
Standard - CC.1.5.4.B
Standard - CC.1.5.4.C
Standard - CC.1.5.4.D
Standard - CC.1.5.4.E
Standard - CC.1.5.4.G

IX. Zoology: Birds, Felines and Canines

Standard - 3.1.2.A3
Standard - 3.1.2.C3
Standard - 3.1.3.C2
Standard - 3.1.3.C3

X. Language Arts

More complex tenses

Types of sentences and sentence punctuation

Standard - CC.1.1.4.D
Standard - CC.1.1.4.E
Standard - CC.1.2.4.A
Standard - CC.1.2.4.B
Standard - CC.1.2.4.C
Standard - CC.1.2.4.D
Standard - CC.1.2.4.E
Standard - CC.1.2.4.F
Standard - CC.1.2.4.G
Standard - CC.1.2.4.H
Standard - CC.1.2.4.I
Standard - CC.1.2.4.J
Standard - CC.1.2.4.K
Standard - CC.1.2.4.L
Standard - CC.1.4.4.A
Standard - CC.1.4.4.B

Standard - CC.1.4.4.C
Standard - CC.1.4.4.D
Standard - CC.1.4.4.F
Standard - CC.1.4.4.E
Standard - CC.1.4.4.G
Standard - CC.1.4.4.H
Standard - CC.1.4.4.I
Standard - CC.1.4.4.J
Standard - CC.1.4.4.K
Standard - CC.1.4.4.L
Standard - CC.1.4.4.M
Standard - CC.1.4.4.N
Standard - CC.1.4.4.O
Standard - CC.1.4.4.P
Standard - CC.1.4.4.Q
Standard - CC.1.4.4.R
Standard - CC.1.4.4.S
Standard - CC.1.4.4.T
Standard - CC.1.4.4.V
Standard - CC.1.4.4.W
Standard - CC.1.4.4.X
Standard - CC.1.5.4.A
Standard - CC.1.5.4.B
Standard - CC.1.5.4.C
Standard - CC.1.5.4.D
Standard - CC.1.5.4.E
Standard - CC.1.5.4.

XI. Year-End Review

Review of standards and topics covered over the course of the year

Grade Five

Five Grade Main Lesson Block Rotation

I. Botany

Standard - 3.1.3.C1

Recognize that plants survive through adaptations, such as stem growth towards light and root growth downward in response to gravity.

Recognize that many plants and animals can survive harsh environments because of seasonal behaviors (e.g. hibernation, migration, trees shedding leaves).

Standard - 3.2.3.B6

ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Standard - 3.1.5.A2

Describe how life on earth depends on energy from the sun.

Standard - 3.1.5.A3

Compare and contrast the similarities and differences in life cycles of different organisms.

Standard - 3.1.5.B1

Differentiate between inherited and acquired characteristics of plants and animals.

Standard - 3.1.5.B6

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understand that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.1.6.C4

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.1.5.C1

Describe how organisms meet some of their needs in an environment by using behaviors (patterns of activities) in response to information (stimuli) received from the environment.

Standard - 3.1.5.C1

Describe how organisms meet some of their needs in an environment by using behaviors (patterns of activities) in response to information (stimuli) received from the environment.

Standard - 3.3.5.A4

Explain the basic components of the water cycle.

Standard - 3.4.5.E2

Understand that there are many different tools necessary to maintain an ecosystem, whether natural or man-made.

Standard - 3.4.5.E4

Describe how the use of symbols, measurements, and drawings promotes clear communication by providing a common language to express ideas.

Standard - 3.1.6.A1

Describe the similarities and differences of major physical characteristics in plants, animals, fungi, protists, and bacteria.

Standard - 3.1.6.A2

Describe how energy derived from the sun is used by plants to produce sugars (photosynthesis) and is transferred within a food chain from producers (plants) to consumers to decomposers.

Standard - 3.1.6.A8

SCALE

Explain why the details of most cells are visible only through a microscope.

Standard - 3.1.7.A8

MODELS

Apply the appropriate models to show interactions among organisms in an environment.

3.1.4.A1

Classify plants and animals according to the physical characteristics that they share.

Standard - 3.1.4.A2

Describe the different resources that plants and animals need to live.

Standard - 3.1.4.A3

Identify differences in the life cycles of plants and animals.

Standard - 3.1.4.A5

Describe common functions living things share to help them function in a specific environment.

Standard - 3.1.4.B1

Describe features that are observable in both parents and their Offspring.

Standard - 3.1.4.B5

PATTERNS, Identify observable patterns in the physical characteristics of plants or groups of animals.

Standard - 3.1.4.C2

Describe plant and animal adaptations that are important to survival.

Standard - 3.1.4.A8

MODELS Construct and interpret models and diagrams of various animal and plant life cycles.

Standard - 3.4.5.C1

Explain how the design process is a purposeful method of planning practical solutions to problems.

Standard - 4.4.6.A

Explain how different plants and animals in the United States have specific growing requirements related to climate and soil conditions.

Standard - 4.4.6.B

Analyze how soil types and geographic regions have impacted agriculture in Pennsylvania.

Standard - 4.4.7.A

Describe how agricultural practices, the environment, and the availability of natural resources are related.

II. Mathematics

Standard - CC.2.1.5.B.1

Apply place value to show an understanding of operations and rounding as they pertain to whole numbers and decimals.

Standard - CC.2.1.5.C.2

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

Standard - CC.2.2.5.A.1

Interpret and evaluate numerical expressions using order of operations.

Standard - CC.2.2.5.A.4

Analyze patterns and relationships using two rules.

III. North American Geography

Standard - 3.3.5.A5

Differentiate between weather and climate.

Explain how the cycling of water, both in and out of the atmosphere, has an effect on climate

Standard - 3.3.5.A7

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.4.5.E5

Examine reasons why a transportation system may lose efficiency or fail (e.g., one part is missing or malfunctioning or if a subsystem is not working).

Standard - 3.3.6.A2

Examine how soil fertility, composition, resistance to erosion, and texture are affected by many factors.

Standard - 15.7.5.A

Identify global and domestic business and products.

Standard - 15.7.5.B

Identify businesses in the community that trade products and/or services internationally.

Standard - 15.7.5.E

Discuss laws in the U.S. that promote free enterprise.

Standard - 15.7.5.H

Describe resources used for business in the domestic and global economy.

Standard - 4.4.7.D

Identify the positive and negative effects of technology used in agriculture and its effects on the food and fiber system and the environment over time.

IV. Language Arts and Digital Technology

Standard - CC.1.1.5.D

Know and apply grade level phonics and word analysis skills in decoding words. • Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology to read accurately unfamiliar multisyllabic words.

Standard - CC.1.1.5.E

Read with accuracy and fluency to support comprehension: • Read on-level text with purpose and understanding. • Read on-level text orally with accuracy, appropriate rate, and expression on successive readings. • Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Standard Area - CC.1.2: Reading Informational Text: Students read, understand, and respond to informational text – with emphasis on comprehension, making connections among ideas and between texts with focus on textual evidence.

Standard - CC.1.2.5.A

Determine two or more main ideas in a text and explain how they are supported by key details; summarize the text.

Standard - CC.1.2.5.B

Cite textual evidence by quoting accurately from the text to explain what the text says explicitly and make inferences.

Standard - CC.1.2.5.C

Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a text based on specific information in the text.

Standard - CC.1.2.5.D

Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

Standard - CC.1.2.5.E

Use text structure, in and among texts, to interpret information (e.g., chronology, comparison, cause/effect, problem/ solution).

Standard - CC.1.2.5.F

Determine the meaning of words and phrases as they are used in grade level text, including interpretation of figurative language.

Standard - CC.1.2.5.G

Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

Standard - CC.1.2.5.H

Determine how an author supports particular points in a text through reasons and evidence.

Standard - CC.1.2.5.I

Integrate information from several texts on the same topic to demonstrate understanding of that topic.

Standard - CC.1.2.5.J

Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

Standard - CC.1.2.5.K

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade level reading and content, choosing flexibly from a range of strategies and tools.

Standard - CC.1.2.5.L

Read and comprehend literary non-fiction and informational text on grade level, reading independently and proficiently.

Standard - CC.1.3.5.A

Determine a theme of a text from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.

Standard - CC.1.3.5.B

Cite textual evidence by quoting accurately from the text to explain what the text says explicitly and make inferences.

Standard - CC.1.3.5.C

Compare and contrast two or more characters, settings or events in a story or drama, drawing on specific details in the text.

Standard - CC.1.3.5.D

Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

Standard - CC.1.3.5.E

Explain how a series of chapters, scenes or stanzas fits together to provide the overall structure of a particular story, drama, or poem.

Standard - CC.1.3.5.F

Determine the meaning of words and phrases as they are used in grade level text, including interpretation of figurative language.

Standard - CC.1.3.5.G

Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).

Standard - CC.1.3.5.H

Compare and contrast texts in the same genre on their approaches to similar themes and topics as well as additional literary elements.

Standard - CC.1.3.5.I

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies and tools.

Standard - CC.1.3.5.J

Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

Standard - CC.1.3.5.K

Read and comprehend literary fiction on grade level, reading independently and proficiently.

Standard - CC.1.4.5.A

Write informative/ explanatory texts to examine a topic and convey ideas and information clearly.

Standard - CC.1.4.5.B

Identify and introduce the topic clearly.

Standard - CC.1.4.5.C

Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic; include illustrations and multimedia when useful to aiding comprehension.

Standard - CC.1.4.5.D

Group related information logically linking ideas within and across categories of information using words, phrases, and clauses; provide a concluding statement or section; include formatting when useful to aiding comprehension.

Standard - CC.1.4.5.F

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.5.E

Write with an awareness of style. • Use precise language and domain-specific vocabulary to inform about or explain the topic. • Use sentences of varying length.

Standard - CC.1.4.5.G

Write opinion pieces on topics or texts.

Standard - CC.1.4.5.H

Introduce the topic and state an opinion on the topic.

Standard - CC.1.4.5.I

Provide reasons that are supported by facts and details; draw from credible sources.

Standard - CC.1.4.5.J

Create an organizational structure that includes related ideas grouped to support the writer's purpose; link opinion and reasons using words, phrases, and clauses; provide a concluding statement or section related to the opinion.

Standard - CC.1.4.5.K

Write with an awareness of style. • Use sentences of varying length. • Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.

Standard - CC.1.4.5.L

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.5.M

Write narratives to develop real or imagined experiences or events.

Standard - CC.1.4.5.N

Orient the reader by establishing a situation and introducing a narrator and/or characters.

Standard - CC.1.4.5.O

Use narrative techniques such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations; use concrete words and phrases and sensory details to convey experiences and events precisely.

Standard - CC.1.4.5.P

Organize an event sequence that unfolds naturally, using a variety of transitional words and phrases to manage the sequence of events; provide a conclusion that follows from the narrated experiences and events.

Standard - CC.1.4.5.Q

• Write with an awareness of styles. • Use sentences of varying length. • Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.

Standard - CC.1.4.5.R

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.5.S

Draw evidence from literary or informational texts to support analysis, reflection, and research, applying grade level reading standards for literature and informational texts.

Standard - CC.1.4.5.T

With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

Standard - CC.1.4.5.U

With some guidance and support, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.

Standard - CC.1.4.5.V

Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.

Standard - CC.1.4.5.W

Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.

Standard - CC.1.4.5.X

Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

Standard - CC.1.5.5.A

Engage effectively in a range of collaborative discussions on grade level topics and texts, building on others' ideas and expressing their own clearly.

Standard - CC.1.5.5.B

Summarize the main points written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

Standard - CC.1.5.5.C

Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

Standard - CC.1.5.5.D

Report on a topic or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speaking clearly with adequate volume, appropriate pacing, and clear pronunciation.

Standard - CC.1.5.5.F

Include multimedia components and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

Standard - CC.1.5.5.E

Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

Standard - CC.1.5.5.G

Demonstrate command of the conventions of standard English when speaking based on grade 5 level and content.

Standard - 3.4.5.A2

Understand that a subsystem is a system that operates as part of a larger system.

Standard - 15.3.2.S

With prompting and support, ask and answer questions about electronic communication.

Standard - 15.3.2.T

With prompting and support, answer questions related to digital citizenship. Reference Business, Computer and Information Technologies 15.4.2.B

Standard - 15.4.2.B

Demonstrate responsible use of technology and equipment.

Standard - 15.4.2.C

With prompting and support, identify peripheral devices of computer system including input and output devices.

Standard - 15.4.5.C

Describe the purpose, use, and care of peripheral devices of computer systems including input, processing, storage, and output devices.

Standard - 15.4.2.D

Demonstrate the correct use of simple input technologies (e.g., mouse, touch screen, microphone, etc.).

Standard - 15.4.2.G

With help and support, select and use various software/applications for an intended purpose.

Standard - 15.4.2.K

With help and support, identify similarities and differences between text, graphics, audio, animation, and video.

Standard - 15.4.2.L

With help and support, use web browser to locate content-specific websites.

Standard - 15.4.2.M

With help and support, identify various technologies used in the workplace.

Standard - 15.3.5.T

Explain the importance of digital citizenship. Reference Business, Computer and Information Technologies 15.4.5.B

Standard - 15.3.5.V

Identify mobile communications used in various settings.

Standard - 15.3.5.X

Identify diversity within groups and its effect on communications.

Standard - 15.4.5.D

Demonstrate the ergonomically correct use of more sophisticated input technologies.

Standard - 15.4.5.G

Create a digital project using appropriate software/application for an authentic task.

Standard - 15.4.5.K

Use digital media to enhance a content-specific work product.

Standard - 15.4.5.L

Discuss the characteristics of a credible website.

Standard - 15.3.2.T

With prompting and support, answer questions related to digital citizenship. Reference Business, Computer and Information Technologies 15.4.2.B

Standard - 15.3.5.A

Create work product with a variety of formats including note taking, outlines, essays, correspondence, journals and presentations. Reference English Language Arts CC.1.4.2.T,

CC.1.4.5.F, CC.1.4.5.L, CC.1.4.5.R

Standard - 15.3.5.B

Compose simple requests for information to respond to needs of audience.

Standard - 15.3.5.C

Apply strategies to understand directions. Reference English Language Arts CC.1.1.2.E, CC.1.2.5.C

Standard - 15.3.5.M

Apply proper etiquette when using technology.

Standard - 15.6.5.N

Discuss methods to protect valuable items against damage or loss.

Standard - 15.3.5.N Apply appropriate work ethic in the classroom.

Standard - 15.3.5.O

Discuss appropriate communication skills within organizations.

Standard - 15.3.5.Q

Identify communication channels at school, home, and social events.

Standard - 15.3.5.S

Explain electronic communication options (e.g., formal vs. informal, time constraints, geographic location) based on the intended message.

Standard - 15.3.5.T

Explain the importance of digital citizenship. Reference Business, Computer and Information Technologies 15.4.5.B

Standard - 15.3.5.V

Identify mobile communications used in various settings.

Standard - 15.3.5.X

Identify diversity within groups and its effect on communications.

Standard - 15.7.5.I

Identify how misunderstandings occur when speaking, writing, or incorrectly interpreting language.

Standard - 15.7.5.J

Identify non-verbal behaviors and their impact on communication.

V. Ancient Myths and History

Standard - 3.4.5.A1

Explain how people use tools and techniques to help them do things.

VI. Mathematics

Standard - CC.2.3.5.A.1

Graph points in the first quadrant on the coordinate plane and interpret these points when solving real world and mathematical problems.

Standard - CC.2.3.5.A.2

Classify two-dimensional figures into categories based on an understanding of their properties.

Standard - CC.2.4.5.A.1

Solve problems using conversions within a given measurement system.

Standard - CC.2.4.5.A.2

Represent and interpret data using appropriate scale.

Standard - CC.2.4.5.A.4

Solve problems involving computation of fractions using information provided in a line plot.

Standard - CC.2.4.5.A.5

Apply concepts of volume to solve problems and relate volume to multiplication and to addition.

VII. North American Geography

Standard - 3.3.5.A1

Describe how landforms are the result of a combination of destructive forces such as erosion and constructive erosion, deposition of sediment, etc.

Standard - 3.3.5.A2

Describe the usefulness of Earth's physical resources as raw materials for the human made world.

Standard - 3.3.5.A3

Explain how geological processes observed today such as erosion, movement of lithospheric plates, and changes in the composition of the atmosphere are similar to those in the past.

Standard - 15.3.5.S

Explain electronic communication options (e.g., formal vs. informal, time constraints, geographic location) based on the intended message.

Standard - CC.1.1.5.D

Standard - CC.1.1.5.E

Standard - CC.1.2.5.A

Standard - CC.1.2.5.B

Standard - CC.1.2.5.C

Standard - CC.1.2.5.D

Standard - CC.1.2.5.E

Standard - CC.1.2.5.F

Standard - CC.1.2.5.G

Standard - CC.1.2.5.H

Standard - CC.1.2.5.I

Standard - CC.1.2.5.J

Standard - CC.1.2.5.K

Standard - CC.1.2.5.L

Standard - CC.1.3.5.A

Standard - CC.1.3.5.B

Standard - CC.1.3.5.C

Standard - CC.1.3.5.D

Standard - CC.1.3.5.E

Standard - CC.1.3.5.F

Standard - CC.1.3.5.G

Standard - CC.1.3.5.H

Standard - CC.1.3.5.I

Standard - CC.1.3.5.J

Standard - CC.1.3.5.K

Standard - CC.1.4.5.A

Standard - CC.1.4.5.B
Standard - CC.1.4.5.C
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Standard - CC.1.4.5.S
Standard - CC.1.4.5.T
Standard - CC.1.4.5.V
Standard - CC.1.4.5.W
Standard - CC.1.4.5.X
Standard - CC.1.5.5.A
Standard - CC.1.5.5.B
Standard - CC.1.5.5.F
Standard - CC.1.5.5.E
Standard - CC.1.5.5.G

VIII. Ancient Myths and History

Standard - CC.1.1.5.D
Standard - CC.1.1.5.E
Standard - CC.1.2.5.A
Standard - CC.1.2.5.B
Standard - CC.1.2.5.C
Standard - CC.1.2.5.D
Standard - CC.1.2.5.E
Standard - CC.1.2.5.F
Standard - CC.1.2.5.G
Standard - CC.1.2.5.H
Standard - CC.1.2.5.I
Standard - CC.1.2.5.J
Standard - CC.1.2.5.K
Standard - CC.1.2.5.L
Standard - CC.1.3.5.A
Standard - CC.1.3.5.B
Standard - CC.1.3.5.C
Standard - CC.1.3.5.D

- Standard - CC.1.3.5.E
- Standard - CC.1.3.5.F
- Standard - CC.1.3.5.G
- Standard - CC.1.3.5.H
- Standard - CC.1.3.5.I
- Standard - CC.1.3.5.J
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- Standard - CC.1.4.5.B
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- Standard - CC.1.4.5.F
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- Standard - CC.1.4.5.J
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- Standard - CC.1.4.5.M
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- Standard - CC.1.4.5.S
- Standard - CC.1.4.5.T
- Standard - CC.1.4.5.V
- Standard - CC.1.4.5.W
- Standard - CC.1.4.5.X
- Standard - CC.1.5.5.A
- Standard - CC.1.5.5.B
- Standard - CC.1.5.5.F
- Standard - CC.1.5.5.E
- Standard - CC.1.5.5.G

IX. Language Arts and Digital Technology

Standard - 15.4.5.A

Identify emerging technologies used for educational and personal success.

Standard - 15.4.5.B

Identify and demonstrate understanding of ethical, safe, and social online behavior and potential consequences of unethical, unsafe, and inappropriate behavior.

Standard - 15.3.2.M

With prompting and support, demonstrate proper etiquette while using technology.

Standard - 15.3.2.S

With prompting and support, ask and answer questions about electronic communication.

Standard - CC.1.1.5.D

Standard - CC.1.1.5.E
Standard - CC.1.2.5.A
Standard - CC.1.2.5.B
Standard - CC.1.2.5.C
Standard - CC.1.2.5.D
Standard - CC.1.2.5.E
Standard - CC.1.2.5.F
Standard - CC.1.2.5.G
Standard - CC.1.2.5.H
Standard - CC.1.2.5.I
Standard - CC.1.2.5.J
Standard - CC.1.2.5.K
Standard - CC.1.2.5.L
Standard - CC.1.3.5.A
Standard - CC.1.3.5.B
Standard - CC.1.3.5.C
Standard - CC.1.3.5.D
Standard - CC.1.3.5.E
Standard - CC.1.3.5.F
Standard - CC.1.3.5.G
Standard - CC.1.3.5.H
Standard - CC.1.3.5.I
Standard - CC.1.3.5.J
Standard - CC.1.3.5.K
Standard - CC.1.4.5.A
Standard - CC.1.4.5.B
Standard - CC.1.4.5.C
Standard - CC.1.4.5.D
Standard - CC.1.4.5.F
Standard - CC.1.4.5.E
Standard - CC.1.4.5.G
Standard - CC.1.4.5.H
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Standard - CC.1.4.5.U

Standard - CC.1.4.5.V

Standard - CC.1.4.5.W

Standard - CC.1.4.5.X

Standard - CC.1.5.5.A

Standard - CC.1.5.5.B

Standard - CC.1.5.5.C

Standard - CC.1.5.5.D

Standard - CC.1.5.5.F

Standard - CC.1.5.5.E

Standard - CC.1.5.5.G

X. Work on Class Play and Language Arts

See Language Arts block standards.

XI. Ancient Myths and History

Standard - 15.3.5.D

Explain and use vocabulary terms related to business and commerce. Reference English Language Arts CC.1.1.5.D

Standard - 15.3.5.E

Distinguish between age appropriate and inappropriate print and electronic resources used for introductory research. Reference English Language Arts CC.1.4.5.U

Standard - 15.3.5.F

Ask meaningful questions based upon a speaker's premise. Reference English Language Arts CC.1.5.5.G, CC.1.5.2.D

Standard - 15.3.5.G

Prepare appropriate information for impromptu and planned presentations. Reference English Language Arts CC.1.5.2.D

Standard - 15.3.5.H

Present information as an individual or in a small group. Reference English Language Arts CC.1.5.5.A, CC.1.5.5.C, CC.1.5.5.D, CC.1.5.5.E

Standard - 15.3.5.I

Demonstrate note taking and questioning skills. Reference English Language Arts CC.1.5.2.C

Standard - 15.3.5.J

Demonstrate active listening techniques.

Standard - 15.3.5.K

Model appropriate verbal and non-verbal behaviors in various contexts.

Standard - 3.4.5.C3

Identify how invention and innovation are creative ways to turn ideas into real things.

Standard - CC.1.1.5.D

Standard - CC.1.1.5.E

Standard - CC.1.2.5.A

Standard - CC.1.2.5.B

Standard - CC.1.2.5.C

Standard - CC.1.2.5.D

Standard - CC.1.2.5.E

- Standard - CC.1.2.5.F
- Standard - CC.1.2.5.G
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- Standard - CC.1.4.5.W
- Standard - CC.1.4.5.X
- Standard - CC.1.5.5.A
- Standard - CC.1.5.5.B
- Standard - CC.1.5.5.F
- Standard - CC.1.5.5.E
- Standard - CC.1.5.5.G

XII. Class Trip Botanical Gardens

Grade Six

I. Mathematics: Geometrical Drawing

Standard - CC.2.3.4.A.2

Classify two-dimensional figures by properties of their lines and angles.

Standard - CC.2.4.4.A.6

Measure angles and use properties of adjacent angles to solve problems.

Standard - CC.2.3.6.A.1

Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.

Standard - CC.2.3.7.A.2

Visualize and represent geometric figures and describe the relationships between them.

Standard - CC.2.3.8.A.2

Understand and apply congruence, similarity, and geometric transformations using various tools.

Standard - CC.2.3.8.A.3

Understand and apply the Pythagorean Theorem to solve problems.

Standard - 9.1.8.B

Recognize, know, use and demonstrate a variety of appropriate arts elements and principles to produce, review and revise original works in the arts.

Dance: • move • perform • read and notate dance • create and choreograph • improvise

Music: • sing • play an instrument • read and notate music • compose and arrange • improvise

Theatre: • stage productions • read and write scripts • improvise • interpret a role • design sets • direct

Visual Arts: • paint • draw • craft • sculpt • print • design for environment, communication, multi-media

II. Astronomy

Standard - 3.3.5.B1

Provide evidence that the earth revolves around (orbits) the sun in a year's time and that the earth rotates on its axis once approximately every 24 hours.

Standard - 3.3.5.B3

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.4.6.D2

Use computers appropriately to access and organize and apply information.

Standard - 3.3.8.B1

Explain how light, measured remotely, can be used to classify objects in the universe.

Standard - 3.3.8.B2

SCALE AND MEASUREMENT

Explain measurements and evidence indicating the age of the universe.

Standard - 3.3.8.B3

Compare and contrast scientific theories.

Know that both direct and indirect observations are used by scientists to study the natural world and universe.

Identify questions and concepts that guide scientific investigations.

Formulate and revise explanations and models using logic and evidence.

Recognize and analyze alternative explanations and models.

Explain the importance of accuracy and precision in making valid measurements.

Standard - 3.4.8.A1

Analyze the development of technology based on affordability or urgency.

Standard - 3.3.4.B1

Identify planets in our solar system and their basic characteristics.

Describe the earth's place in the solar system that includes the sun (a star), planets, and many moons.

Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars.

Standard - 3.3.4.B2

SCALESKnow the basic characteristics and uses of telescopes.

PATTERNS/PHASES Identify major lunar phases.

PATTERNS Explain time (days, seasons) using solar system motions.

III. Language Arts

Standard - CC.1.4.2.U; Standard - CC.1.4.3.U; Standard - CC.1.5.4.F

With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers.

Standard - CC.1.5.3.F

Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.

Standard - CC.1.2.6.A

Determine the central idea of a text and how it is conveyed through particular Standard - CC.1.2.6.B

Cite textual evidence to support analysis of what the text says explicitly as well as inferences and/or generalizations drawn from the text.

Standard - CC.1.2.6.C

Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text.

Standard - CC.1.2.6.D

Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.

Standard - CC.1.2.6.E

Analyze the author's structure through the use of paragraphs, chapters, or sections.

Standard - CC.1.2.6.F

Determine the meaning of words and phrases as they are used in grade level reading and content, including interpretation of figurative language in context.

Standard - CC.1.2.6.G

Integrate information presented in different media or formats (e.g. visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

Standard - CC.1.2.6.H

Evaluate an author's argument by examining claims and determining if they are supported by evidence.

Standard - CC.1.2.6.I

Examine how two authors present similar information in different types of text.

Standard - CC.1.2.6.J

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Standard - CC.1.2.6.K

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade level reading and content, choosing flexibly from a range of strategies and tools.

Standard - CC.1.2.6.L

Read and comprehend literary non-fiction and informational text on grade level, reading independently and proficiently.

Standard Area - CC.1.3: Reading Literature: Students read and respond to works of literature - with emphasis on comprehension, making connections among ideas and between texts with focus on textual evidence.

Standard - CC.1.3.6.A

Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

Standard - CC.1.3.6.B

Cite textual evidence to support analysis of what the text says explicitly as well as inferences and/or generalizations drawn from the text.

Standard - CC.1.3.6.C

Describe how a particular story or drama's plot unfolds in a series of episodes, as well as how the characters respond or change as the plot moves toward a resolution.

Standard - CC.1.3.6.D

Determine an author's purpose in a text and explain how it is conveyed in a text.

Standard - CC.1.3.6.E

Analyze how the structure of a text contributes to the development of theme, setting, and plot.

Standard - CC.1.3.6.F

Determine the meaning of words and phrases as they are used in grade level reading and content, including interpretation of figurative language in context.

Standard - CC.1.3.6.G

Compare and contrast the experiences of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what is “seen” and “heard” when reading the text to what is perceived when listening or watching.

Standard - CC.1.3.6.H

Compare and contrast texts in different forms or genres in terms of their approaches to similar themes and topics as well as their use of additional literary elements.

Standard - CC.1.3.6.I

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies and tools.

Standard - CC.1.3.6.J

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Standard - CC.1.3.6.K

Read and comprehend literary fiction on grade level, reading independently and proficiently.

Standard Area - CC.1.4: Writing: Students write for different purposes and audiences. Students write clear and focused text to convey a well-defined perspective and appropriate content.

Standard - CC.1.4.6.A

Write informative/ explanatory texts to examine a topic and convey ideas, concepts, and information clearly.

Standard - CC.1.4.6.B

Identify and introduce the topic for the intended audience.

Standard - CC.1.4.6.C

Develop and analyze the topic with relevant facts, definitions, concrete details, quotations, or other information and examples; include graphics and multimedia when useful to aiding comprehension.

Standard - CC.1.4.6.D

Organize ideas, concepts, and information using strategies such as definition, classification, comparison/contrast, and cause/effect; use appropriate transitions to clarify the relationships among ideas and concepts; provide a concluding statement or section; include formatting when useful to aiding comprehension.

Standard - CC.1.4.6.E

Write with an awareness of the stylistic aspects of composition. • Use precise language and domain-specific vocabulary to inform about or explain the topic. • Use sentences of varying lengths and complexities • Develop and maintain a consistent voice • Establish and maintain a formal style

Standard - CC.1.4.6.F

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.6.G

Write arguments to support claims.

Standard - CC.1.4.6.H

Introduce and state an opinion on a topic.

Standard - CC.1.4.6.I

Use clear reasons and relevant evidence to support claims, using credible sources and demonstrating an understanding of the topic.

Standard - CC.1.4.6.J

Organize the claim(s) with clear reasons and evidence clearly; clarify relationships among claim(s) and reasons by using words, phrases, and clauses; provide a concluding statement or section that follows from the argument presented.

Standard - CC.1.4.6.K

Write with an awareness of the stylistic aspects of composition. • Use precise language and domain-specific vocabulary to inform about or explain the topic. • Use sentences of varying lengths and complexities. • Use precise language. • Develop and maintain a consistent voice • Establish and maintain a formal style.

Standard - CC.1.4.6.L

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.6.M

Write narratives to develop real or imagined experiences or events.

Standard - CC.1.4.6.N

Engage and orient the reader by establishing a context and introducing a narrator and/or characters.

Standard - CC.1.4.6.O

Use narrative techniques such as dialogue, description, and pacing, to develop experiences, events, and/or characters; use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.

Standard - CC.1.4.6.P

Organize an event sequence that unfolds naturally and logically, using a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another; provide a conclusion that follows from the narrated experiences and events.

Standard - CC.1.4.6.Q

Write with an awareness of the stylistic aspects of writing. • Vary sentence patterns for meaning, reader/listener interest, and style. • Use precise language. • Develop and maintain a consistent voice.

Standard - CC.1.4.6.R

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.6.S

Draw evidence from literary or informational texts to support analysis, reflection, and research, applying grade level reading standards for literature and literary non-fiction.

Standard - CC.1.4.6.T

With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

Standard - CC.1.4.6.U

Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.

Standard - CC.1.4.6.V

Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

Standard - CC.1.4.6.W

Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of other while avoiding plagiarism and providing basic bibliographic information for sources.

Standard - CC.1.4.6.X

Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

Standard Area - CC.1.5: Speaking and Listening: Students present appropriately in formal speaking situations, listen critically, and respond intelligently as individuals or in group discussions.

Standard - CC.1.5.6.A

Engage effectively in a range of collaborative discussions, on grade level topics, texts, and issues, building on others' ideas and expressing their own clearly.

Standard - CC.1.5.6.B

Delineate a speaker's argument and specific claims by identifying specific reasons and evidence, and recognize arguments or claims not supported by factual evidence.

Standard - CC.1.5.6.C

Interpret information presented in diverse media and formats (e.g. visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.

Standard - CC.1.5.6.D

Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.

Standard - CC.1.5.6.E

Adapt speech to a variety of contexts and tasks.

Standard - CC.1.5.6.F

Include multimedia components and visual displays in presentations to clarify information.

Standard - CC.1.5.6.G

Demonstrate command of the conventions of standard English when speaking based on grade 6 level and content.

Standard - 3.4.7.E4

Illustrate how information can be acquired and sent through a variety of technological sources, including print and electronic media.

IV. Mathematics

Fraction addition, subtraction, multiplication and division (with particular emphasis on using mixed numbers)

Long division and multiplication of decimal numbers

Exponents

Standard - CC.2.1.6.E.1

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Standard - CC.2.1.6.E.2

Identify and choose appropriate processes to compute fluently with multi-digit numbers.

Standard - CC.2.1.6.E.3

Develop and/or apply number theory concepts to find common factors and multiples.

Standard - CC.2.1.6.E.4

Apply and extend previous understandings of numbers to the system of rational numbers.

Standard - CC.2.4.7.B.3

Investigate chance processes and develop, use, and evaluate probability models.

Standard - 3.4.6.D3

Design and use instruments to evaluate data.

Standard - 15.6.5.Q

Discuss the purpose and function of investments.

Standard - 15.6.5.R

Discuss investments and how they can grow in value.

V. Roman History, Part 1

Standard - CC.8.5.6-8.C

Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).

Standard - CC.8.5.6-8.D

Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

Standard - CC.8.5.6-8.E

Describe how a text presents information (e.g., sequentially, comparatively, causally).

Standard - CC.8.5.6-8.F

Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Standard - CC.8.5.6-8.G

Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Standard - CC.8.5.6-8.J

By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently

Standard - 3.4.7.E5

Explain how processes, such as receiving, holding, storing, loading, moving, unloading, delivering, evaluating, marketing, managing and communicating are necessary for the entire system to operate efficiently.

VI. Mineralogy

Standard - 3.3.4.A1

Describe basic landforms. Identify the layers of the earth.

Recognize that the surface of the earth changes due to slow processes and rapid processes.

Standard - 3.3.4.A2

Identify basic properties and uses of Earth's materials including rocks, soils, water, and gases of the atmosphere.

Standard - 3.3.4.A3

Recognize that fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time.

Standard - 3.3.3.A1

Explain and give examples of the ways in which soil is formed.

Standard - 3.3.3.A2

Identify the physical properties of minerals and demonstrate how minerals can be tested for these different physical properties.

Standard - 3.1.6.B6

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.3.7.A1

Define basic features of the rock cycle.

Describe the layers of the earth.

Differentiate among the mechanisms by which heat is transferred through the Earth's system.

Standard - 3.3.7.A3

Explain and give examples of how physical evidence, such as fossils and surface features of glaciation support theories that the Earth has evolved over geologic time.

Compare geologic processes over time.

Standard - 3.3.7.A2

Explain land use in relation to soil type and topography.

Standard - 3.4.7.E6

Examine the processes involved in extracting (e.g., harvesting, drilling, mining) raw materials from the earth for use in manufacturing processes.

VII. Class Play

Standard - 9.1.8.A

Know and use the elements and principles of each art form to create works in the arts and humanities.

Elements

Dance: • energy/force • space • time

Music: • duration • intensity • pitch • timbre

Theatre: • scenario • script/text • set design

Visual Arts: • color • form/shape • line • space • texture • value

Principles

Dance: • choreography • form • genre • improvisation • style • technique

Music: • composition • form • genre • harmony • rhythm • texture

Theatre: • balance • collaboration • discipline • emphasis • focus • intention • movement • rhythm • style • voice

Visual Arts: • balance • contrast • emphasis/focal point • movement/rhythm • proportion/scale • repetition • unity/harmony

VIII. Mathematics

Prime numbers and prime factorization

Conversions between decimals, fractions and percents

Mental math calculation to develop concentration and confidence

Basic statistics – calculation of mean, median and mode

Standard - CC.2.4.6.B.1

Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.

Standard - CC.2.4.7.B.1

Draw inferences about populations based on random sampling concepts.

Standard - CC.2.4.7.B.2

Draw informal comparative inferences about two populations.

Standard - CC.2.4.8.B.1

Analyze and/or interpret bivariate data displayed in multiple representations.

Standard - CC.2.4.8.B.2

Understand that patterns of association can be seen in bivariate data utilizing frequencies.

Measurement conversions (volume, distance and weight)

Business math with emphasis on percents

Standard - CC.2.2.6.B.1

Apply and extend previous understandings of arithmetic to algebraic expressions.

Standard - CC.2.2.6.B.2

Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.

Standard - CC.2.2.6.B.3

Represent and analyze quantitative relationships between dependent and independent variables.

IX. Physics

Standard - 3.1.5.A9

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.4.5.A3

Describe how technologies are often combined.

Standard - 3.4.5.B1

Explain how the use of technology can have unintended consequences.

Standard - 3.2.5.A1

Describe how water can be changed from one state to another by adding or taking away heat.

Standard - 3.2.5.A6

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.2.5.B1

Explain how mass of an object resists change to motion.

Standard - 3.2.5.B2

Examine how energy can be transferred from one form to another.

Standard - 3.2.5.B3

Demonstrate how heat energy is usually a byproduct of an energy transformation.

Standard - 3.2.5.B4

Demonstrate how electrical circuits provide a means of transferring electrical energy when heat, light, sound, and chemical changes are produced.

Demonstrate how electromagnets can be made and used.

Standard - 3.2.3.A2

Recognize that all objects and materials in the world are made of matter.

Standard - 3.2.3.A5

CONSTANCY AND CHANGE Recognize that everything is made of matter.

Standard - 3.2.4.A2

Demonstrate that materials are composed of parts that are too small to be seen without magnification.

Standard - 3.2.4.A3

Demonstrate the conservation of mass during physical changes such as melting or freezing.

Standard - 3.2.4.A4

Recognize that combining two or more substances may make new materials with different properties.

Standard - 3.2.4.A5

MODELS Use models to demonstrate the physical change as water goes from liquid to ice and from liquid to vapor.

Standard - 3.2.3.B2

Explore energy's ability to cause motion or create change.

Explore how energy can be found in moving objects, light, sound, and heat. Standard - 3.2.3.B4

Identify and classify objects and materials that are conductors or insulators of electricity.

Identify and classify objects and materials as magnetic or non-magnetic.

Standard - 3.2.3.B5

Recognize that light travels in a straight line until it strikes an object or travels from one material to another

Standard - 3.2.5.B5

Compare the characteristics of sound as it is transmitted through different materials.

Relate the rate of vibration to the pitch of the sound.

Standard - 3.2.5.B7

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understand that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.4.5.B2

Describe how waste may be appropriately recycled or disposed of to prevent unnecessary harm to the environment.

Standard - 3.4.5.E3

Explain how tools, machines, products, and systems use energy in order to do work.

Standard - 3.2.6.A1

Distinguish the differences in properties of solids, liquids, and gases.

Differentiate between volume and mass. Investigate that equal volumes of different substances usually have different masses.

Standard - 3.3.6.A4

Describe how water on earth cycles in different forms and in different locations, including underground and in the atmosphere.

Standard - 3.4.7.E3

Examine the efficiency of energy use in our environment

Standard - 3.4.8.A2

Explain how controls are steps that people perform using information about the system that causes systems to change.

Standard - 3.4.8.A3

Compare how a product, system, or environment developed for one setting may be applied to another setting.

Standard - 3.4.8.B1

Evaluate the societal implications of the management of waste produced by technology.

Standard - 3.2.4.A1

Identify and classify objects based on their observable and measurable physical properties.

Compare and contrast solids, liquids, and gases based on their properties.

3.2.4.B1 Standard - 3.2.4.B1

Explain how an object's change in motion can be observed and measured.

Standard - 3.2.4.B2

Identify types of energy and their ability to be stored and changed from one form to another.

Standard - 3.2.4.B3

Understand that objects that emit light often emit heat.

Standard - 3.2.4.B4

Apply knowledge of basic electrical circuits to the design and construction of simple direct current circuits.

Compare and contrast series and parallel circuits.

Demonstrate that magnets have poles that repel and attract each other.

Standard - 3.2.4.B5

Demonstrate how vibrating objects make sound and sound can make things vibrate.

Demonstrate how light can be reflected, refracted, or absorbed by an object.

Standard - 3.2.4.B6

ENERGY Give examples of how energy can be transformed from one form to Another.

Standard - 4.3.8.A

Compare and contrast alternative sources of energy.

X. Roman History, Part 2

Standard - CC.8.5.6-8.C

Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).

Standard - CC.8.5.6-8.D

Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

Standard - CC.8.5.6-8.E

Describe how a text presents information (e.g., sequentially, comparatively, causally).

Standard - CC.8.5.6-8.F

Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Standard - CC.8.5.6-8.G

Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Standard - CC.8.5.6-8.J

By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently

XI. European Geography

Standard - CC.8.5.6-8.A

Cite specific textual evidence to support analysis of primary and secondary sources.

XII. Class Trip Museum of Natural History, the Rose Planetarium, and the Cloisters.

XIII. Medieval History

Standard - CC.8.5.6-8.A

Cite specific textual evidence to support analysis of primary and secondary sources.

Grade Seven

I. Perspective Drawing and Mathematics

II. Late Medieval History

Standard - CC.8.5.6-8.A

Cite specific textual evidence to support analysis of primary and secondary sources.

Standard - CC.8.5.6-8.B

Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

Standard - CC.8.5.6-8.C

Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).

Standard - CC.8.5.6-8.D

Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

Standard - CC.8.5.6-8.E

Describe how a text presents information (e.g., sequentially, comparatively, causally).

Standard - CC.8.5.6-8.F

Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Standard - CC.8.5.6-8.G

Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Standard - CC.8.5.6-8.H

Distinguish among fact, opinion, and reasoned judgment in a text.

Standard - CC.8.5.6-8.I

Analyze the relationship between a primary and secondary source on the same topic.

Standard - CC.8.5.6-8.J

By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently

III. Mathematics

Measurement conversions with particular emphasis on the metric system

Conversions between fractions and decimals

Standard - CC.2.1.7.E.1

Apply and extend previous understandings of operations with fractions to operations with rational numbers.

Percent calculations and conversions

Standard - CC.2.2.7.B.1

Apply properties of operations to generate equivalent expressions.

IV. Language Arts and Grammar

Standard - CC.1.2.7.A

Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.

Standard - CC.1.2.7.B

Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences, conclusions, and/or generalizations drawn from the text.

Standard - CC.1.2.7.C

Analyze the interactions between individuals, events, and ideas in a text.

Standard - CC.1.2.7.D

Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.

Standard - CC.1.2.7.E

Analyze the structure of the text through evaluation of the author's use of graphics, charts, and the major sections of the text.

Standard - CC.1.2.7.F

Determine the meaning of words and phrases as they are used in grade level reading and content, including interpretation of figurative, connotative, and technical meanings.

Standard - CC.1.2.7.G

Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g. how the delivery of a speech affects the impact of the words).

Standard - CC.1.2.7.H

Evaluate an author's argument, reasoning, and specific claims for the soundness of the argument and the relevance of the evidence.

Standard - CC.1.2.7.I

Analyze how two or more authors present and interpret facts on the same topic.

Standard - CC.1.2.7.J

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Standard - CC.1.2.7.K

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade level reading and content, choosing flexibly from a range of strategies and tools.

Standard - CC.1.2.7.L

Read and comprehend literary non-fiction and informational text on grade level, reading independently and proficiently.

Standard Area - CC.1.3: Reading Literature: Students read and respond to works of literature - with emphasis on comprehension, making connections among ideas and between texts with focus on textual evidence.

Standard - CC.1.3.7.A

Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.

Standard - CC.1.3.7.B

Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences, conclusions, and/or generalizations drawn from the text.

Standard - CC.1.3.7.C

Analyze how particular elements of a story or drama interact and how setting shapes the characters or plot.

Standard - CC.1.3.7.D

Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.

Standard - CC.1.3.7.E

Analyze how the structure or form of a text contributes to its meaning.

Standard - CC.1.3.7.F

Determine the meaning of words and phrases as they are used in grade level reading and content, including interpretation of figurative, connotative meanings.

Standard - CC.1.3.7.G

Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g. lighting, sound, color, or camera focus and angles in a film).

Standard - CC.1.3.7.H

Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.

Standard - CC.1.3.7.I

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 7 reading and content, choosing flexibly from a range of strategies and tools.

Standard - CC.1.3.7.J

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Standard - CC.1.3.7.K

Read and comprehend literary fiction on grade level, reading independently and proficiently.

Standard Area - CC.1.4: Writing: Students write for different purposes and audiences. Students write clear and focused text to convey a well-defined perspective and appropriate content.

Standard - CC.1.4.7.A

Write informative/ explanatory texts to examine a topic and convey ideas, concepts, and information clearly.

Standard - CC.1.4.7.B

Identify and introduce the topic clearly, including a preview of what is to follow.

Standard - CC.1.4.7.C

Develop and analyze the topic with relevant facts, definitions, concrete details, quotations, or other information and examples; include graphics and multimedia when useful to aiding comprehension.

Standard - CC.1.4.7.D

Organize ideas, concepts, and information using strategies such as definition, classification, comparison/contrast, and cause/effect; use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts; provide a concluding statement or section; include formatting when useful to aiding comprehension.

Standard - CC.1.4.7.E

Write with an awareness of the stylistic aspects of composition. • Use precise language and domain-specific vocabulary to inform about or explain the topic. • Use sentences of varying lengths and complexities • Develop and maintain a consistent voice. • Establish and maintain a formal style.

Standard - CC.1.4.7.F

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.7.G

Write arguments to support claims.

Standard - CC.1.4.7.H

Introduce and state an opinion on a topic.

Standard - CC.1.4.7.I

Acknowledge alternate or opposing claims and support claim with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic.

Standard - CC.1.4.7.J

Organize the claim(s) with clear reasons and evidence clearly; clarify relationships among claim(s) and reasons by using words, phrases, and clauses to create cohesion; provide a concluding statement or section that follows from and supports the argument presented.

Standard - CC.1.4.7.K

Write with an awareness of the stylistic aspects of composition. • Use precise language and domain-specific vocabulary to inform about or explain the topic. • Use sentences of varying lengths and complexities. • Use precise language. • Develop and maintain a consistent voice. • Establish and maintain a formal style.

Standard - CC.1.4.7.L

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.7.M

Write narratives to develop real or imagined experiences or events.

Standard - CC.1.4.7.N

Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters.

Standard - CC.1.4.7.O

Use narrative techniques such as dialogue, description, and pacing, to develop experiences, events, and/or characters; use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.

Standard - CC.1.4.7.P

Organize an event sequence that unfolds naturally and logically, using a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another; provide a conclusion that follows from and reflects on the narrated experiences and events.

Standard - CC.1.4.7.Q

Write with an awareness of the stylistic aspects of writing. • Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy. • Use sentences of varying lengths and complexities • Use precise language. • Develop and maintain a consistent voice.

Standard - CC.1.4.7.R

Demonstrate a grade appropriate command of the conventions of standard English grammar and spelling.

Standard - CC.1.4.7.S

Draw evidence from literary or informational texts to support analysis, reflection, and research, applying grade level reading standards for literature and literary non-fiction.

Standard - CC.1.4.7.T

With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.

Standard - CC.1.4.7.U

Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.

Standard - CC.1.4.7.V

Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.

Standard - CC.1.4.7.W

Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

Standard - CC.1.4.7.X

Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

Standard Area - CC.1.5: Speaking and Listening: Students present appropriately in formal speaking situations, listen critically, and respond intelligently as individuals or in group discussions.

Standard - CC.1.5.7.A

Engage effectively in a range of collaborative discussions, on grade level topics, texts, and issues, building on others' ideas and expressing their own clearly.

Standard - CC.1.5.7.B

Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.

Standard - CC.1.5.7.C

Analyze the main ideas and supporting details presented in diverse media formats (e.g. visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.

Standard - CC.1.5.7.D

Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.

Standard - CC.1.5.7.E

Adapt speech to a variety of contexts and tasks.

Standard - CC.1.5.7.F

Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

Standard - CC.1.5.7.G

Demonstrate command of the conventions of standard English when speaking based on grade 7 level and content.

V. Physiology Animal and Plant

Standard - 4.1.7.E

Identify factors that contribute to change in natural and human-made systems.

Explain the processes of primary and secondary succession in a given ecosystem.

Standard - 4.2.7.A

Explain how water enters, moves through, and leaves a watershed.

Explain the concept of stream order.

Describe factors that affect the flow and water quality within a watershed

Standard - 4.4.8.A

Identify and describe how food safety issues have impacted the food and fiber system.

Standard - 4.2.7.B

Explain the primary functions of a wetland within a watershed.

Providing habitat, flood control, water purification.

Serving as buffer zones, wildlife propagation areas, and food and fiber systems.

Standard - 4.2.7.C

Use appropriate tools and techniques to analyze a freshwater environment.

Interpret physical, chemical, and biological data as a means of assessing the environmental quality of a freshwater environment.

Standard - 4.2.8.A

Describe factors that affect the quality of ground and surface waters.

Standard - 4.2.8.B

Explain the value of wetlands to other living things.

Standard - 4.2.8.C

Describe how a diversity index is used to assess water quality.

Standard - 4.1.7.A

Describe the relationships between biotic and abiotic components of an ecosystem.

Compare and contrast different biomes and their characteristics

Describe symbiotic and predator/prey relationships

Standard - 4.1.7.C

Explain the flow of energy within an ecosystem.

Compare and contrast the flow of energy between organisms in different habitats.

Explain the concept of trophic levels.

Standard - 3.1.7.B6

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.1.5.A5

Explain the concept of a cell as the basic unit of life.

Compare and contrast plant and animal cells.

Standard - 3.1.5.C2

Give examples of how inherited characteristics (e.g., shape of beak, length of neck, location of eyes, shape of teeth) may change over time as adaptations to changes in the environment that enable organisms to survive.

Standard - 3.1.6.A4

Recognize that all organisms are composed of cells and that many organisms are unicellular and must carry out all life functions in one cell.

Standard - 3.1.6.A5

Describe basic structures that plants and animals have that contribute to their ability to make or find food and reproduce.

Standard - 3.1.4.C2

Describe plant and animal adaptations that are important to survival.

Standard - 3.1.6.A6

Identify examples of unicellular and multicellular organisms.

Standard - 3.1.6.A8

SCALE

Explain why the details of most cells are visible only through a microscope.

Standard - 3.1.6.A9, 3.1.5.C4

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Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understand that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.1.7.A4

Explain how cells arise from pre-existing cells.

Standard - 3.1.7.A5

Explain how the cell is the basic structural and functional unit of living things.

Standard - 3.1.7.A6

Identify the levels of organization from cell to organism.

Standard - 3.1.7.A7

Compare life processes (e.g. growth, digestion) at the organism level with life processes at the cellular level.

Standard - 3.1.7.A9

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.1.7.B1

Explain how genetic instructions influence inherited traits.

Identify Mendelian patterns of inheritance.

Standard - 3.1.7.B2

Compare sexual reproduction with asexual reproduction.

Standard - 3.1.7.B4

Describe how selective breeding and biotechnology can alter the genetic composition of organisms.

Standard - 3.1.7.B5

PATTERNS

Compare and contrast observable patterns in the physical characteristics across families, strains and species.

Standard - 3.1.7.B6

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.1.7.C1

Describe how natural selection is an underlying factor in a population's ability to adapt to changes.

Standard - 3.1.7.C2

Explain why the extinction of a species may occur when the environment changes.

Explain that mutations can alter a gene and are the original source of new variations in a population.

Standard - 3.1.7.C2

Explain why the extinction of a species may occur when the environment changes.

Explain that mutations can alter a gene and are the original source of new variations in a population.

Standard - 3.1.7.C3

CONSTANCY AND CHANGE

Identify evidence drawn from geology, fossils, and comparative anatomy that provides the basis for the theory of evolution.

Standard - 3.1.7.C4

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understand that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

VI. Geography & Age of Exploration

Standard - CC.8.5.6-8.A

Cite specific textual evidence to support analysis of primary and secondary sources.

Standard - CC.8.5.6-8.B

Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

Standard - CC.8.5.6-8.C

Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).

Standard - CC.8.5.6-8.D

Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

Standard - CC.8.5.6-8.E

Describe how a text presents information (e.g., sequentially, comparatively, causally).

Standard - CC.8.5.6-8.F

Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Standard - CC.8.5.6-8.G

Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Standard - CC.8.5.6-8.H

Distinguish among fact, opinion, and reasoned judgment in a text.

Standard - CC.8.5.6-8.I

Analyze the relationship between a primary and secondary source on the same topic.

Standard - CC.8.5.6-8.J

By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently

Standard - 3.4.5.B4

Identify how the way people live and work has changed history in terms of technology.

VII. Class Play

VIII. Physics

Standard - 3.4.5.C1

Explain how the design process is a purposeful method of planning practical solutions to problems.

Standard - 3.4.5.C2

Describe how design, as a dynamic process of steps, can be performed in different sequences and repeated.

Standard - 3.4.5.C3

Identify how invention and innovation are creative ways to turn ideas into real things.

Standard - 3.4.5.D1

Identify ways to improve a design solution.

Standard - 3.4.5.D2

Use information provided in manuals, protocols, or by experienced people to see and understand how things work.

Standard - 3.4.5.D3

Determine if the human use of a product or system creates positive or negative results.

Standard - 3.2.6.A3

Explain and give examples of how mass is conserved in a closed system.

Standard - 3.2.6.A5

CONSTANCY AND CHANGE

Identify characteristic properties of matter that can be used to separate one substance from the other.

Standard - 3.2.6.B1

Explain how changes in motion require a force.

Standard - 3.2.6.B2

Describe energy as a property of objects associated with heat, light, electricity, magnetism, mechanical motion, and sound.

Differentiate between potential and kinetic energy.

Standard - 3.2.6.B3

Give examples of how heat moves in predictable ways, normally flowing from warmer objects to cooler ones until they reach the same temperature.

Explain the effect of heat on particle motion by describing what happens to particles during a phase change.

Standard - 3.2.6.B4

Describe how electric current produces magnetic forces and how moving magnets produce electric current.

Derive Ohm's Law through investigation of voltage, current, and resistance.

Standard - 3.2.6.B6

ENERGY

Demonstrate that heat moves in predictable ways from warmer objects to cooler ones.

SCALE

Investigate that materials may be composed of parts too small to be seen without magnification.

Standard - 3.2.6.B7

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.4.6.D1

Apply a design process to solve problems beyond the laboratory classroom.

Standard - 3.4.6.E3

Investigate that power is the rate at which energy is converted from one form to another or transferred from one place to another.

Standard - 3.4.6.E4

Illustrate how communication systems are made up of a source, encoder, transmitter, receiver, decoder, and destination.

Examine how communications information technologies are used to help humans make decisions and solve problems

Standard - 3.4.6.E5

Demonstrate how transporting people and goods involves a combination of individuals and sub-systems, such as structural, propulsion, suspension, guidance, control, and support.

Standard - 3.4.6.E6

Identify key aspects of manufacturing systems that use mechanical processes to change the form of natural materials (e.g., separating, forming, combining, conditioning).

Standard - 3.4.6.E7

Explain how the type of structure determines the way the parts are put together.

Standard - 3.2.7.B1

Describe how unbalanced forces acting on an object change its velocity.

Analyze how observations of displacement, velocity, and acceleration provide necessary and sufficient evidence for the existence of forces.

Standard - 3.2.7.B2

Describe how energy can be changed from one form to another (transformed) as it moves through a system or transferred from one system to another system.

Standard - 3.2.7.B5

Demonstrate that visible light is a mixture of many different colors.

Explain the construct of the electromagnetic spectrum.

Describe how sound and light energy are transmitted by waves.

Standard - 3.2.7.B6

ENERGY

Demonstrate that heat is often produced as energy is transformed through a system.

ENERGY

Demonstrate how the transfer of heat energy causes temperature changes.

Standard - 3.2.7.B7

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.4.7.C1

Describe how design, as a creative planning process, leads to useful products and systems.

Standard - 3.4.7.C2

Explain how modeling, testing, evaluating, and modifying are used to transform ideas into practical solutions.

Standard - 3.4.7.C3

Describe how troubleshooting as a problem-solving method may identify the cause of a malfunction in a technological system.

Standard - 3.4.7.D1

Identify and collect information about everyday problems that can be solved by technology and generate ideas and requirements for solving a problem.

Standard - 3.4.7.D2

Select and safely use appropriate tools, products and systems for specific tasks.

Standard - 3.4.7.D3

Use data collected to analyze and interpret trends in order to identify the positive or negative effects of a technology.

IX. Renaissance History

Standard - CC.8.5.6-8.A

Cite specific textual evidence to support analysis of primary and secondary sources.

Standard - CC.8.5.6-8.B

Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

Standard - CC.8.5.6-8.C

Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).

Standard - CC.8.5.6-8.D

Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

Standard - CC.8.5.6-8.E

Describe how a text presents information (e.g., sequentially, comparatively, causally).

Standard - CC.8.5.6-8.F

Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Standard - CC.8.5.6-8.G

Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Standard - CC.8.5.6-8.H

Distinguish among fact, opinion, and reasoned judgment in a text.

Standard - CC.8.5.6-8.I

Analyze the relationship between a primary and secondary source on the same topic.

Standard - CC.8.5.6-8.J

By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently

X. Chemistry

Standard - 3.4.5.B3

Describe how community concerns support or limit technological developments.

Standard - 3.2.6.A2

Compare and contrast pure substances with mixtures.

Standard - 3.2.6.A4

Differentiate between physical changes and chemical changes

Standard - 3.2.6.A6

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.2.7.A1

Differentiate between elements, compounds, and mixtures.

Identify groups of elements that have similar properties.

Explain how materials are characterized by having a specific amount of mass in each unit of volume (density).

Standard - 3.4.7.A1

Explain how technology is closely linked to creativity, which has resulted in innovation and invention.

Standard - 3.4.7.A2

Explain how different technologies involve different sets of processes.

Standard - 3.4.7.A3

Explain how knowledge gained from other fields of study has a direct effect on the development of technological products and systems.

Standard - 3.4.7.B1

Explain how the use of technology can have consequences that affect humans in many ways.

Standard - 3.4.7.B2

Explain how decisions to develop and use technologies may be influenced by environmental and economic concerns.

Standard - 3.4.7.B3

Describe how invention and innovation lead to changes in society and the creation of new needs and wants.

Standard - 3.4.7.B4

Explain how many inventions and innovations have evolved by using deliberate and methodical processes of tests and refinements.

Standard - 3.4.7.B2

Explain how decisions to develop and use technologies may be influenced by environmental and economic concerns.

Gardening Teacher Specialist - Environmental Study

Standard - 4.5.7.C

Explain how human actions affect the health of the environment.

Identify residential and industrial sources of pollution and their effects on environmental health.

Standard - 4.5.7.E

Describe how length and degree of exposure to pollutants may affect human health.

Identify diseases/ conditions that have been associated with exposure to pollutants

Standard - 4.5.8.A

Explain how Best Management Practices (BMP) can be used to mitigate environmental problems.

Standard - 4.5.8.C

Describe how humans can reduce pollution.

Standard - 4.5.8.D

Compare and contrast waste generated from various sources of energy.

XI. Class Trip: Metropolitan Museum of Art and the Cathedral of St. John the Divine

XII. Mathematics

Introduction to compound interest

Proportion and Ratio

Standard - CC.2.1.6.D.1

Understand ratio concepts and use ratio reasoning to solve problems.

Standard - CC.2.1.7.D.1

Analyze proportional relationships and use them to model and solve real-world and mathematical problems.

Operations involving positive and negative numbers

Standard - CC.2.2.7.B.3

Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.

Solving basic linear equations

Standard - CC.2.2.8.B.2

Understand the connections between proportional relationships, lines, and linear equations.

Standard - CC.2.2.8.B.3

Analyze and solve linear equations and pairs of simultaneous linear equations.

Standard - CC.2.2.8.C.1

Define, evaluate, and compare functions.

Standard - CC.2.2.8.C.2

Use concepts of functions to model relationships between quantities.

Introduction to irrational numbers

Standard - CC.2.1.8.E.1

Distinguish between rational and irrational numbers using their properties.

Standard - CC.2.1.8.E.4

Estimate irrational numbers by comparing them to rational numbers.

Standard - CC.2.2.8.B.1

Apply concepts of radicals and integer exponents to generate equivalent expressions.

Area, perimeter, volume

Standard - CC.2.3.7.A.1

Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.

Standard - CC.2.3.8.A.1

Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems.

Properties of angles of parallel lines cut by a transversal

Grade Eight

I. Geometry

II. History

Standard - CC.8.5.6-8.A

Cite specific textual evidence to support analysis of primary and secondary sources.

Standard - CC.8.5.6-8.A

Cite specific textual evidence to support analysis of primary and secondary sources.

Standard - CC.8.5.6-8.B

Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

Standard - CC.8.5.6-8.C

Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).

Standard - CC.8.5.6-8.D

Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

Standard - CC.8.5.6-8.E

Describe how a text presents information (e.g., sequentially, comparatively, causally).

Standard - CC.8.5.6-8.F

Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Standard - CC.8.5.6-8.G

Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Standard - CC.8.5.6-8.H

Distinguish among fact, opinion, and reasoned judgment in a text.

Standard - CC.8.5.6-8.I

Analyze the relationship between a primary and secondary source on the same topic.

Standard - CC.8.5.6-8.J

By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently

Standard - 3.4.6.A1

Identify how creative thinking and economic and cultural influences shape technological development.

Standard - 3.4.6.A2

Describe how systems thinking involves considering how every part relates to others.

Standard - 3.4.8.E5

Describe how governmental regulations influence the design, operation and efficiency of transportation systems.

III. Mathematics

Standard - CC.2.3.7.A.1

Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.

Standard - CC.2.3.8.A.1

Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems.

Standard - 3.4.6.A3

Explain how knowledge from other fields of study (STEM) integrate to create new technologies.

Standard - 3.4.8.E6

Analyze the steps involved in the manufacturing process (e.g., design, development, production, marketing and servicing of products and systems).

Standard - 15.1.8.A

Identify knowledge, skills, and attitudes needed for careers in accounting.

Standard - 15.1.8.B

Describe ethical and unethical business practices related to accounting.

Standard - 15.1.8.C

Identify the parts of the accounting equation.

Standard - 15.1.8.D

Describe the components of the accounting cycle.

Standard - 15.1.8.E

Explore various technologies used in accounting.

Standard - 15.1.8.F

Identify, recognize, and classify short- and long-term assets.

Standard - 15.1.8.G

Identify, recognize, and classify short- and long-term liabilities.

Standard - 15.1.8.H

Discuss the value of family and business assets over time.

Standard - 15.1.8.I

Identify and classify the classes and rights of types of stock.

Standard - 15.1.8.J

Explain the concept of inventory and its role in business.

Standard - 15.1.8.K

Identify and classify revenue.

Standard - 15.1.8.L

Identify and classify expenses.

Standard - 15.1.8.M

Identify and give examples of net pay and gross pay.

Standard - 15.1.8.N

Discuss the advantages and disadvantages of the different forms of business ownership (proprietorship, partnership, and corporation, etc.).

Standard - 15.1.8.P

Identify and describe bank statements.

Standard - 15.1.8.Q

Identify and recognize financial reports and their purpose.

Standard - 15.1.8.T

Identify and give examples of possible financial indicators for various types of business.

Standard - 15.1.8.W

Identify and give examples of problems associated with a business not having enough cash on hand.

Standard - 15.1.8.X

Identify and list examples of fixed and variable costs.

Standard - 15.1.8.Y

Identify and list examples of taxes.

Standard - 15.1.8.Z

Identify the importance of good record keeping for businesses.

IV. Human Anatomy

Standard - 3.4.5.E1

Identify how technological advances have made it possible to create new devices and to repair or replace certain parts of the human body.

Standard - 3.4.6.E1

Describe how advances and innovations in medical technologies are used to improve health care.

Standard - 3.4.7.E1

Investigate recent advancements in medical technologies and their impact on quality of life.

Standard - 3.1.8.A8

CHANGE AND CONSTANCY

Explain mechanisms organisms use to adapt to their environment.

Standard - 3.1.8.A9

Compare and contrast scientific theories.

Know that both direct and indirect observations are used by scientists to study the natural world and universe.

Identify questions and concepts that guide scientific investigations.

Formulate and revise explanations and models using logic and evidence.

Recognize and analyze alternative explanations and models.

Explain the importance of accuracy and precision in making valid measurements.

Standard - 3.1.8.C1

Explain how reproductive success coupled with advantageous traits over many generations contributes to natural selection.

Standard - 3.1.8.C4

Compare and contrast scientific theories.

Know that both direct and indirect observations are used by scientists to study the natural world and universe.

Identify questions and concepts that guide scientific investigations.

Formulate and revise explanations and models using logic and evidence.

Recognize and analyze alternative explanations and models.

Explain the importance of accuracy and precision in making valid measurements.

V. Meteorology

Standard - 3.3.6.A5

Describe the composition and layers of the atmosphere.

Explain the effects of oceans on climate.

Describe how global patterns such as the jet stream and water currents influence local weather in measurable terms such as temperature, wind direction and speed, and precipitation.

Standard - 3.3.6.A7

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.3.6.B1

Compare and contrast the size, composition, and surface features of the planets that comprise the solar system as well as the objects orbiting them.

Recognize the role of gravity as a force that pulls all things on or near the earth toward the center of the earth and in the formation of the solar system and the motions of objects in the solar system.

Explain why the planets orbit the sun in nearly circular paths.

Describe how the planets change their position relative to the background of the stars

Explain how the tilt of the earth and its revolution around the sun cause an uneven heating of the earth which in turn causes the seasons and weather patterns.

Standard - 3.3.6.B2

MODELS

Use models to demonstrate that earth has different seasons and weather patterns.

MODELS

Use models to demonstrate that the phases of the moon are a result of its orbit around Earth.

Standard - 3.3.6.B3

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

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Analyze alternative explanations and understand that science advances through legitimate skepticism.

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Standard - 3.3.7.A4

Differentiate among Earth's water systems.

Describe the motions of tides and identify their causes.

Standard - 3.3.7.A5

Describe basic elements of meteorology.

Explain the relationship between the energy provided by the sun and the temperature differences among water, land and atmosphere.

Standard - 3.3.7.A6

MODELS/SCALES

Describe the scales involved in characterizing Earth and its atmosphere.

MODELS/SCALES

Create models of Earth's common physical features.

Standard - 3.3.7.A7

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understand that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.3.7.B1

Explain how gravity is the major force in the formation of the planets, stars, and the solar system.

Describe gravity as a major force in determining the motions of planets, stars, and the solar system.

Compare and contrast properties and conditions of objects in the solar system to those on Earth.

Standard - 3.3.7.B2

SCALE AND MEASUREMENT

Identify a variety of instruments used to gather evidence about the universe.

PATTERNS

Describe repeating patterns in the Sun-Earth-Moon system and the positions of stars.

SCALE

Relate planetary size and distance in our solar system using an appropriate scale model.

Standard - 3.3.7.B3

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understanding that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.3.8.A1

Distinguish between physical and chemical weathering.

Compare and contrast the types of energy that drive Earth's systems.

Standard - 3.3.8.A2

Describe renewable and nonrenewable energy resources.

Standard - 3.3.8.A3

Explain how matter on earth is conserved throughout the geological processes over time.

Standard - 3.3.8.A4

Explain how the oceans form one interconnected circulation system powered by wind, tides, the Earth's rotation, and water density differences.

Standard - 3.3.8.A5

Explain how the curvature of the earth contributes to climate.

Compare and contrast water vapor, clouds, and humidity.

Standard - 3.3.8.A6

CHANGES

Explain changes in earth systems in terms of energy transformation and transport.

MODELS

Explain how satellite images, models, and maps are used to identify Earth's resources.

Standard - 3.3.8.A7

Compare and contrast scientific theories.

Know that both direct and indirect observations are used by scientists to study the natural world and universe.

Identify questions and concepts that guide scientific investigations.

Formulate and revise explanations and models using logic and evidence.

Recognize and analyze alternative explanations and models.

Explain the importance of accuracy and precision in making valid measurements.

Standard - 3.4.8.B2

Compare and contrast decisions to develop and use technologies as related to environmental and economic concerns.

VI. Chemistry/Organic Chemistry

Standard - 3.4.6.D1

Apply a design process to solve problems beyond the laboratory classroom.

Standard - 3.2.7.A2

Identify atoms as the basic building blocks of matter and that elements are composed of one type of atom.

Standard - 3.2.7.A3

Explain how energy transfer can affect the chemical and physical properties of matter.

Standard - 3.2.7.A4

Describe how reactants change into products in simple chemical reactions.

Standard - 3.2.7.A6

Understand how theories are developed.

Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.

Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.

Describe relationships using inference and prediction.

Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.

Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.

Analyze alternative explanations and understand that science advances through legitimate skepticism.

Use mathematics in all aspects of scientific inquiry.

Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.

Standard - 3.1.8.B6

Compare and contrast scientific theories.

Know that both direct and indirect observations are used by scientists to study the natural world and universe.

Identify questions and concepts that guide scientific investigations.

Formulate and revise explanations and models using logic and evidence.

Recognize and analyze alternative explanations and models.

Explain the importance of accuracy and precision in making valid measurements.

Standard - 3.2.8.A2

Identify characteristics of elements derived from the periodic table.

Standard - 3.2.8.A4

Compare and contrast physical and chemical changes in terms of products.

Standard - 3.2.8.A6

Compare and contrast scientific theories.

Know that both direct and indirect observations are used by scientists to study the natural world and universe.

Identify questions and concepts that guide scientific investigations.

Formulate and revise explanations and models using logic and evidence.

Recognize and analyze alternative explanations and models.

Explain the importance of accuracy and precision in making valid measurements.

Standard - 3.4.8.E1

Analyze what technologies are used in genetic engineering and predict how it may change the future of medicine.

Standard - 3.4.8.E2

Describe how biotechnology applies the principles of biology to create commercial products or processes.

VII. History

Standard - CC.8.5.6-8.A

Cite specific textual evidence to support analysis of primary and secondary sources.

Standard - CC.8.5.6-8.B

Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

Standard - CC.8.5.6-8.C

Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).

Standard - CC.8.5.6-8.D

Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

Standard - CC.8.5.6-8.E

Describe how a text presents information (e.g., sequentially, comparatively, causally).

Standard - CC.8.5.6-8.F

Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Standard - CC.8.5.6-8.G

Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Standard - CC.8.5.6-8.H

Distinguish among fact, opinion, and reasoned judgment in a text.

Standard - CC.8.5.6-8.I

Analyze the relationship between a primary and secondary source on the same topic.

Standard - CC.8.5.6-8.J

By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently

Standard - 3.4.5.E6

Examine how manufacturing technologies have become an integral part of the engineered world.

Standard - 3.4.5.E7

Describe the importance of guidelines when planning a community.

Standard - 3.4.6.B1

Describe how economic, political, and cultural issues are influenced by the development and use of technology.

Standard - 3.4.6.B3

Interpret how societal and cultural priorities are reflected in technological devices.

Standard - 3.4.6.B4

Demonstrate how new technologies are developed based on people's needs, wants, values, and/ or interests.

Standard - 3.4.8.B3

Explain how throughout history, new technologies have resulted from the demands, values, and interests of individuals, businesses, industries, and societies.

Standard - 3.4.8.B4

Explain how societal and cultural priorities and values are reflected in technological devices.

VIII. Physics

Standard - 3.4.6.C1

Recognize that requirements for a design include such factors as the desired elements and features of a product or system or the limits that are placed on the design.

Standard - 3.4.6.C2

Show how models are used to communicate and test design ideas and processes.

Standard - 3.4.6.C3

Explain why some technological problems are best solved through experimentation.

Standard - 3.2.7.B3

Differentiate among convection, conduction, and radiation.

Explain why heat energy consists of the random motion and vibrations of the particles of matter.

Standard - 3.2.7.B4

Explain how electrical current is produced by the flow of electrons.

Explain and demonstrate how electric current produces magnetic forces and how moving magnets produce electric current.

Standard - 3.2.8.A1

Differentiate between mass and weight.

Standard - 3.2.8.A3

Explain how changes in matter are accompanied by changes in energy.

Standard - 3.2.8.B1

Explain how inertia is a measure of an object's mass.

Explain how momentum is related to the forces acting on an object.

Standard - 3.2.8.B2

Identify situations where kinetic energy is transformed into potential energy, and vice versa.

Standard - 3.2.8.B3

Explain how changes in temperature are accompanied by changes in kinetic energy.

Standard - 3.2.8.B4

Compare and contrast atomic properties of conductors and insulators.

Standard - 3.2.8.B6

PATTERNS

Explain how physics principles underlie everyday phenomena and important technologies.

Standard - 3.2.8.B7

Compare and contrast scientific theories.

Know that both direct and indirect observations are used by scientists to study the natural world and universe.

Identify questions and concepts that guide scientific investigations.

Formulate and revise explanations and models using logic and evidence.

Recognize and analyze alternative explanations and models.

Explain the importance of accuracy and precision in making valid measurements.

Standard - 3.4.8.C1

Evaluate the criteria and constraints of a design.

Standard - 3.4.8.C2

Explore the design process as a collaborative endeavor in which each person in the group presents his or her ideas in an open forum.

Standard - 3.4.8.C3

Analyze how a multi-disciplinary (STEM) approach to problem solving will yield greater results.

Standard - 3.4.8.D1

Test and evaluate the solutions for a design problem.

Standard - 3.4.8.D2

Operate and maintain systems in order to achieve a given purpose.

Standard - 3.4.8.E4

Describe how the design of the message is influenced by such factors as the intended audience, medium, purpose, and nature of the message.

Standard - 3.4.8.D3

Interpret and evaluate the accuracy of the information obtained and determine its usefulness.

Standard - 3.4.8.E3

Examine power systems are used to drive and provide propulsion to other technological products or systems.

Standard - 3.4.8.E4

Describe how the design of the message is influenced by such factors as the intended audience, medium, purpose, and nature of the message.

IX. Class Play Preparation

X. World Geography

Standard - 3.3.6.A6

MODELS/SCALES

Describe the scales involved in characterizing Earth and its atmosphere.

MODELS/SCALES

Create models of Earth's common physical features.

Standard - 3.4.6.B1

Describe how economic, political, and cultural issues are influenced by the development and use of technology.

Standard - 3.4.6.B2

Describe how technologies can be used to repair damage caused by natural disasters and to break down waste from the use of various products and systems.

Standard - 3.4.8.E5

Describe how governmental regulations influence the design, operation and efficiency of transportation systems.

Standard - 15.7.5.K

Explain how the responsible use of natural resources benefits the individual; the family; and local, national, and global communities.

Standard - 15.7.5.L

Explain why business organizations should be constantly aware of external changes.

Standard - 15.7.5.M

Identify countries that produce or specialize in a particular product or industry.

Standard - 15.7.5.O

Reference Economics 6.4.3.B, 6.4.4.B, 6.4.5.B, 6.4.5.C

XI. Occupations, Entrepreneurialism, Management, and Business

Standard - 15.8.5.E

Explain the need for management hierarchy in a business.

Standard - 15.8.5.F

Discuss techniques to manage individuals or businesses.

Standard - 15.8.5.H

Explain strategies designed to motivate individuals.

Standard - 15.2.8.A

Examine various occupation options based on career assessments results, personal characteristics, talents, skills, abilities, and aptitudes as related to career pathways, clusters, or occupations. Reference Career Education and Work 13.1.8.A - B

Standard - 15.2.8.B

Apply various online and traditional career management tools to explore career clusters.

Standard - 15.2.8.C

Correlate individual career interests to job opportunities within the global marketplace.

Standard - 15.2.8.D

Compare and contrast occupations in a virtual versus a traditional work environment.

Standard - 15.2.8.E

Examine school program offerings related to individual career options. Reference Career Education and Work 13.1.8.D

Standard - 15.2.8.F

Analyze financial options and costs associated with post-secondary education.

Standard - 15.2.8.G

Evaluate applications to define the purpose and audience.

Standard - 15.2.8.H

Identify interview strategies.

Standard - 15.2.8.I

Examine laws associated with employment including Child Labor Laws and Civil Rights Act of 1964.

Standard - 15.2.8.J

Develop a career plan based on career assessment results, occupational research and high school course offerings. Reference Career Education and Work 13.1.8.G, 13.1.8.H

Standard - 15.2.8.K

Explain the importance of personal networking and its impact on achieving a career goal. Reference Career Education and Work 13.2.8.B

Standard - 15.2.8.L

Illustrate how personal qualities and behavior affect school and work success.

Standard - 15.2.8.M

Explain the importance of workplace expectations. Reference Career Education and Work 13.3.8.A - B

Standard - 15.2.8.N

Reference Business, Computer and Information Technology 15.3.8.X

Standard - 15.2.8.O

Explore diversity as related to occupations.

Standard - 15.2.8.P

Identify strategies for conflict resolution. Reference Career Education and Work 13.3.8.C

Standard - 15.2.8.Q

Explain how changes in society influence the job market (creation of new positions and elimination of obsolete work). Reference Career Education and Work 13.3.8.F

Standard - 15.3.8.A

Selecting the appropriate writing type to produce a work product. Reference English Language Arts CC.1.4.8.T

Standard - 15.3.8.B

Produce a variety of business documents and reports; focus on content, style, and format.

Standard - 15.3.8.C

Apply strategies to understand complex directions. Reference English Language Arts CC.1.2.8.C

Standard - 15.3.8.D

Distinguish between appropriate and in- appropriate business work products. Reference English Language Arts CC.1.2.8.F

Standard - 15.3.8.E

Choose appropriate print and electronic resources to meet project need. Reference English Language Arts CC.1.4.8.U

Standard - 15.3.8.F

Define a position, support it with claims, and respond to questions to support claim. Reference English Language Arts CC.1.5.8.G., CC.1.5.8.C, CC.1.5.8.D

Standard - 15.3.8.G

Develop appropriate information and content for presentations, meetings, discussions, and group assignments. Reference English Language Arts CC.1.5.8.A, CC.1.5.8.D

Standard - 15.3.8.H

Deliver presentations using a variety of techniques and media; employ conventions of language. Reference English Language Arts CC.1.5.8.E, CC.1.5.8.G

Standard - 15.3.8.I

Distinguish between relevant and non-relevant information for note taking, questioning, or decision making. Reference English Language Arts CC.1.5.9-10.C

Standard - 15.3.8.J

Identify barriers to active listening (e.g., environmental, peer, time, and cultural distractions).

Standard - 15.3.8.K

Determine the situational appropriateness of verbal and non-verbal behaviors.

Standard - 15.3.8.L

Describe the characteristics of positive role models for development of work ethic and leadership skills.

Standard - 15.3.8.M

Demonstrate proper etiquette when networking either face-to-face or online.

Standard - 15.3.8.N

Examine the impact of work ethic in various contexts.

Standard - 15.3.8.O

Discuss types of communication skills (e.g., internal, external) in organizations.

Standard - 15.3.8.P

Describe leadership communication skills necessary for goal setting and generating ideas.

Standard - 15.3.8.Q

Identify communication channels and their purpose in the business community.

Standard - 15.3.8.R

Discuss appropriate communication strategies between supervisors and subordinates.

Standard - 15.3.8.S

Apply appropriate electronic communication based on message requirements.

Standard - 15.3.8.T

Discuss the rules of digital citizenship. Reference Business, Computer and Information Technologies 15.4.8.B

Standard - 15.3.8.U

Identify and employ various electronic communication options related to desired outcomes.

Standard - 15.3.8.V

Describe varieties of mobile communication used within businesses and/or organizations.

Standard - 15.3.8.W

Use electronic communication with peers and/or educators to produce a work product.

Standard - 15.3.8.X

Demonstrate effective techniques for good communication.

Standard Area - 15.4: Computer and Information Technologies

Standard - 15.4.8.A

Analyze the influence of emerging technologies on daily life.

Standard - 15.4.8.B

Interpret and apply appropriate social, legal, ethical, and safe behaviors of digital citizenship.

Standard - 15.4.8.C

Compare and contrast peripheral devices of computing systems for specific needs.

Standard - 15.4.8.D

Create projects using emerging input technologies.

Standard - 15.4.8.E

Explain the different operating systems.

Standard - 15.4.8.F

Identify network communication technologies.

Standard - 15.4.8.G

Create an advanced digital project using appropriate software/application for an authentic task.

Standard - 15.4.8.H

Explain the differences between a scripting language and a coding language.

Standard - 15.4.8.I

Solve a problem with an algorithm.

Standard - 15.4.8.J

Explain the basic differences between encoding and decoding.

Standard - 15.4.8.K

Create a multimedia project using student-created digital media.

Standard - 15.4.8.L

Evaluate the accuracy and bias of online sources of information; appropriately cite online resources.

Standard - 15.4.8.M

Explore and describe how emerging technologies are used across different career paths.

Standard - 15.6.8.A

Reference Economics 6.1.12.A - D

Standard - 15.6.8.B

Discuss the importance of developing short-, medium-, and long-term personal financial goals.

Standard - 15.6.8.C

Reference Career Education and Work 13.3.8.D

Standard - 15.6.8.D

Identify employee benefits and their impact on income.

Standard - 15.6.8.E

Explain the difference between sales and income tax. Reference Family and Consumer Sciences 11.1.12.E; Economics 6.5.12.A

Standard - 15.6.8.F

Evaluate assets as related to personal wealth and spending.

Standard - 15.6.8.G

Discuss the need for money management.

Standard - 15.6.8.H

Compare and contrast advantages and disadvantages of various options of paying for short- and long-term purchases.

Standard - 15.6.8.I

Compare advantages and disadvantages of different financial institutions relating to saving, investing, and borrowing.

Standard - 15.6.8.J

Explain the difference between simple and compound interest. Reference Family and Consumer Sciences 11.1.9.B

Standard - 15.6.8.K

Investigate factors that contribute to a positive or negative credit history.

Standard - 15.6.8.L

Analyze the components and value of credit reports for consumers, borrowers and lenders.

Standard - 15.6.8.M

Examine steps to minimize exposure to identity theft.

Standard - 15.6.8.N

Examine the purpose and importance of various types of insurances.

Standard - 15.6.8.P

Reference Economics 6.5.12.G - H

Standard - 15.6.8.Q

Calculate investment growth using varying rates of return.

Standard - 15.6.8.R

Evaluate the benefits of a diversified investment portfolio.

Standard - 15.7.8.A

Trace and discuss the effect of international trade on the U.S. throughout history.

Standard - 15.7.8.B

Identify barriers (time zones, transportation, language, regulations, social customs) to international trade and determine how these barriers can be overcome.

Standard - 15.7.8.C

Explain how current global events impact the business climate.

Standard - 15.7.8.D

Explain the advantages and disadvantages of different types of governments on business.

Standard - 15.7.8.E

Compare legal structure and laws of other countries as they relate to global business.

Reference Economics 6.3.8.D

Standard - 15.7.8.F

Identify economic indicators that define the health of a nation's businesses.

Standard - 15.7.8.G

Classify products and services as imports or exports.

Standard - 15.7.8.H

Compare and contrast the efficient use of natural and human resources and the impact on participation in the global economy.

Standard - 15.7.8.I

Analyze the impact of tone, style, and language in sending and receiving communications.

Standard - 15.7.8.J

Explain the importance of non-verbal behaviors on cultural business relationships.

Standard - 15.7.8.K

Discuss ethical business conduct and identify how companies may act in a globally responsible manner.

Standard - 15.7.8.L

Explain how historic international relationships impact current business.

Standard - 15.7.8.M

Investigate resources, agencies, and organizations that promote global trade.

Standard - 15.7.8.O

Reference Economics 6.3.6.D, 6.3.7.D, 6.3.8.D, 6.4.8.C, 6.4.8.E

Standard - 15.8.8.A

Explain how economic growth and decline impact business.

Standard - 15.8.8.B

Explain the characteristics of different forms of business ownership, such as sole proprietorship, partnership, and corporation.

Standard - 15.8.8.C

Discuss ethical and unethical behaviors and their impact on business and organizations.

Reference Economics 6.5.8.C

Standard - 15.8.8.D

Discuss the function of mission, vision, goals, and objectives within a business plan. Reference Career Education and Work 13.4.8.C

Standard - 15.8.8.E

Identify business management styles (e.g., autocratic, democratic, laissez-faire) used in a business or organization.

Standard - 15.8.8.F

Discuss strategies to motivate and compensate employees.

Standard - 15.8.8.G

Compare and contrast leadership styles.

Standard - 15.8.8.H

Compare and contrast motivational theories used in a business or organization.

Standard - 15.8.8.I

Demonstrate communication skills necessary for success within an organization. Reference Economics 6.5.8.D; Health, Safety, and Physical Education 10.3.6.C; Career Education and Work 13.3.8.C; Student Interpersonal Skills SIS 2.D

Standard - 15.8.8.J

Explain how technology tools are used in business management.

Standard - 15.8.8.K

Discuss the benefits of lifelong learning on career growth.

Standard - 15.8.8.M

Describe the interview and selection process for applicants in various businesses.

Standard - 15.8.8.P

Describe the role and function of performance evaluations in business.

Standard - 15.8.8.Q

Discuss employee compensation plans for various careers.

Standard - 15.8.8.R

Interpret data on financial statements as it relates to management decisions. Reference Business, Computer and Information Technology 15.1.8.W

Standard - 15.8.8.S

Identify the processes used to design, redesign, supply, and schedule production for a business product.

Standard - 15.8.8.T

Identify management strategies used by global businesses. Reference Business, Computer and Information Technology 15.7.8.L

Standard - 15.9.8.A

Explore various marketing careers and analyze their role in the business world.

Standard - 15.9.8.B

Describe how businesses influence purchasing decisions.

Standard - 15.9.8.C

Distinguish among members of a marketing channel, including company, intermediaries, retailer, and consumer.

Standard - 15.9.8.D

Reference Business, Computer and Information Technologies 15.3.8.D

Standard - 15.9.8.E

Differentiate types of consumer behavior and characteristics including but not limited to spending habits, emotional buying, rational buying and buying power.

Standard - 15.9.8.F

Compare and contrast processes used to obtain, develop, maintain, and improve products or services including product development, packaging, branding, product mix and product life cycle.

Standard - 15.9.8.G

Compare and contrast different processes of distribution.

Standard - 15.9.8.H

Analyze pricing strategies and practices used by local, domestic, and global industries.

Standard - 15.9.8.I

Compare and contrast existing promotional plans used by local, domestic, and global industries.

Standard - 15.9.8.J

Summarize data collection methods as related to marketing.

Standard - 15.9.8.K

Explain the components of a marketing plan.

Standard - 15.9.8.L

Explain how technologies are used in marketing to gain a competitive advantage.

Standard - 15.9.8.M

Discuss the laws and regulations that impact marketing and its consumers (e.g., Consumer Product Safety, Consumer Pricing Act, Trademark Counterfeiting Act, Federal Trade Commission Act).

Standard - 15.2.5.F

Discuss the costs associated with post-secondary education.

Standard - 15.2.5.G

With prompting and support, ask and answer questions about forms completed for school.

Standard - 15.2.5.H

Discuss interviewing as it relates to school and community.

Standard - 15.2.5.I

Explain why the U.S. has employment laws.

Standard - 15.2.5.J

Describe the importance of career planning. Reference Career Education and Work 13.1.5.G, 13.1.5.H

Standard - 15.2.5.K

Define personal networks and their functions.

Standard - 15.2.5.L

Describe personal qualities and behavior related to being a successful student.

Standard - 15.2.5.M

Explain the importance of adhering to expectations defined in the home, school, and

community. Reference Career Education and Work 13.3.5.A - B

Standard - 15.2.5.N

Reference Business, Computer and Information Technology 15.3.5.X

Standard - 15.2.5.O

Explain the importance of accepting diverse populations.

Standard - 15.2.5.P

Explain how conflicts can be resolved. Reference Career Education and Work 13.3.5.C

Standard - 15.2.5.Q

Identify recent occupations emerging in the workplace. Reference Career Education and Work 13.3.5.F

Standard - 15.8.5.J

Identify technology tools used by business management.

Standard - 15.8.5.R

Intentionally Blank Reference Business, Computer and Information Technology 15.1.5.W

Standard - 15.8.5.T

Intentionally Blank Reference Business, Computer and Information Technology 15.7.5.L

Standard - 15.9.5.A

Identify marketing careers and organizations within the field of marketing.

Standard - 15.9.5.B

Ask and answer questions about reasons you and your family made specific purchases.

Standard - 15.9.5.D

Reference Business, Computer and Information Technologies 15.3.5.D

Standard - 15.9.5.E

Give examples of various consumer behaviors and characteristics.

Standard - 15.9.5.F

Identify types of products and services that have changed over time.

Standard - 15.9.5.G

Explain the process used to obtain and maintain product and service availability.

Standard - 15.9.5.H

Discuss elements affecting a product's price.

Standard - 15.9.5.I

Distinguish types of promotions and their goal: education, awareness building, persuasion, and loyalty.

Standard - 15.9.5.J

Provide examples of marketing related data collection methods used by companies.

Standard - 15.9.5.L

Identify technologies that are used in marketing.

Standard - 15.9.5.M

Provide examples of problems businesses and consumers have with unethical or illegal behavior.

Standard - 15.5.8.A

Explore pathways to becoming an entrepreneur.

Standard - 15.5.8.B

Identify management and organizational skills needed for entrepreneurship. Reference Career

Education and Work 13.4.8 A - B

Standard - 15.5.8.C

Reference Economics 6.5.12.F.

Standard - 15.5.8.D

Compare and contrast entrepreneurship in emerging fields, (e.g., social media, online business, alternative energy sources and uses, agriculture and industrial) with traditional entrepreneurships.

Standard - 15.5.8.F

Identify interconnectivity of global and local business operating in the local/state economy.

Standard - 15.5.8.G

Identify the impact of global business on pricing for local entrepreneurs.

Standard - 15.5.8.H

Identify entrepreneurial opportunities in the global economy.

Standard - 15.5.8.I

Compare and contrast the various functions of operations management.

Standard - 15.5.8.J

Define the impact of emerging technologies on business management.

Standard - 15.5.8.K

Identify government agencies and regulations that impact business.

Standard - 15.5.8.L

Reference Economics 6.1.12.A - D; Career Education and Work 13.4.8. A - B

Standard - 15.5.8.M

Reference Career Education and Work 13.4.11.C

XII. Class Trip

Metropolitan Museum of Art, the Museum of Natural History, a Shakespeare performance in New York City, and possibly to Philadelphia