RUTABAGA Education

Pre-K and Kindergarten - Fall
PK/Kindergarten Standards included within lessons.

Common Core State Standards

CCSS.K.CC.B.4
Understand the relationship between numbers and quantities; connect counting to cardinality.

CCSS.K.CC.C.6
Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

CCSS.K.MD.A.1
Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

CCSS.K.MD.A.2
Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.

CCSS.K.MD.B.3
Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

CCSS.K.OA.A.2
Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

CCSS.K.G.A.1
Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

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Pre-K and Kindergarten - Fall
PK/Kindergarten Standards included within lessons.

CCSS.K.G.A.3
Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

CCSS.K.G.B.4
Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).

CCSSRL.K.10
Actively engage in group reading activities with purpose and understanding.

CCSSSL.K.1
Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

CCSSSL.K.3
Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

CCSSSL.K.6
Speak audibly and express thoughts, feelings, and ideas clearly.

CCSSCCRA.SL.2
Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSSCCRA.L.6
Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Pre-K and Kindergarten - Fall
PK/Kindergarten Standards included within lessons.

CCSS.MP4

Model with mathematics. Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

CCSS.MP5

Use appropriate tools strategically. Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Pre-K and Kindergarten - Fall
PK/Kindergarten Standards included within lessons.

Next Generation Science Standards

NGSS.K-PS3-1
Make observations to determine the effect of sunlight on Earth's surface. Examples of Earth's surface could include sand, soil, rocks, and water. Assessment of temperature is limited to relative measures such as warmer/cooler.

NGSS.K-ESS3-1
Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.

NGSS.K-ESS2-1
Use and share observations of local weather conditions to describe patterns over time. Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months. Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.

NGSS.K-LS1-1
Use observations to describe patterns of what plants and animals (including humans) need to survive. Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.

NGSS.K-ESS3-3
Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.

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Pre-K and Kindergarten - Winter
PK/Kindergarten Standards included within lessons.

Common Core State Standards

CCSS.RI.K.10
Actively engage in group reading activities with purpose and understanding.

CCSS.K.G.A.1
Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

CCSS.SL.K.1
Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

CCSS.SL.K.1a
Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).

CCSS.SL.K.3
Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

CCSS.CCRA.R.2
Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

CCSS.CCRA.SL.2
Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.MP4

Model with mathematics. Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

CCSS.MP5

Use appropriate tools strategically. Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Pre-K and Kindergarten - Winter
PK/Kindergarten Standards included within lessons.

Next Generation Science Standards

NGSS.K-PS3-1
Make observations to determine the effect of sunlight on Earth's surface. Examples of Earth's surface could include sand, soil, rocks, and water. Assessment of temperature is limited to relative measures such as warmer/cooler.

NGSS.K-ESS3-1
Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.

NGSS.K-ESS2-1
Use and share observations of local weather conditions to describe patterns over time. Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months. Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.

NGSS.K-ESS2-2
Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.

NGSS.K-LS1-1
Use observations to describe patterns of what plants and animals (including humans) need to survive. Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.

NGSS.K-ESS3-3
Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment. Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.

Pre-K and Kindergarten - Spring
PK/Kindergarten Standards included within lessons.

Common Core State Standards

CCSS.K.CC.B.4
Understand the relationship between numbers and quantities; connect counting to cardinality.

CCSS.K.MD.A.1
Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

CCSS.K.MD.A.2
Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.

CCSS.K.G.A.1
Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

CCSS.K.G.B.5
Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

CCSS.RI.K.4
With prompting and support, ask and answer questions about unknown words in a text.

CCSS.RI.K.7
With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).

CCSS.RI.K.10
Actively engage in group reading activities with purpose and understanding.

Pre-K and Kindergarten - Spring
PK/Kindergarten Standards included within lessons.

CCSS.SL.K.1
Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

CCSS.SL.K.1a
Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).

CCSS.SL.K.3
Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

CCSS.SL.K.4
Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.

CCSS.SL.K.5
Add drawings or other visual displays to descriptions as desired to provide additional detail.

CCSS.L.K.4
Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on kindergarten reading and content.

CCSS.L.K.5a
Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.

CCSS.L.K.5c
Identify real-life connections between words and their use (e.g., note places at school that are colorful).

Pre-K and Kindergarten - Spring
PK/Kindergarten Standards included within lessons.

CCSS.CCRA.R.7
Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

CCSS.CCRA.SL.1
Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

CCSS.CCRA.L.3
Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

CCSS.CCRA.L.4
Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

CCSS.CCRA.L.6
Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Next Generation Science Standards

NGSS.K-PS3-1
Make observations to determine the effect of sunlight on Earth's surface. Examples of Earth's surface could include sand, soil, rocks, and water. Assessment of temperature is limited to relative measures such as warmer/cooler.

Pre-K and Kindergarten - Spring
PK/Kindergarten Standards included within lessons.

NGSS.K-ESS3-1
Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.

NGSS.K-ESS2-1
Use and share observations of local weather conditions to describe patterns over time. Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months. Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.

NGSS.K-ESS2-2
Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.

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First and Second Grade - Fall
1st/2nd Grade Standards included within lessons.

Common Core State Standards

CCSS.K.CC.C.6
Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

CCSS.K.CC.C.7
Compare two numbers between 1 and 10 presented as written numerals.

CCSS.K.MD.A.1
Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

CCSS.K.MD.A.2
Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.

CCSS.K.MD.B.3
Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

CCSS.SL.1.1
Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

CCSS.SL.1.1a
Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).

CCSS.SL.1.1b
Build on others' talk in conversations by responding to the comments of others through multiple exchanges.

First and Second Grade - Fall
1st/2nd Grade Standards included within lessons.

CCSS.SL.1.1c
Ask questions to clear up any confusion about the topics and texts under discussion.

CCSS.SL.1.4
Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

CCSS.SL.1.5
Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.

CCSS.CCRA.R.7
Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

CCSS.CCRA.SL.2
Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.MP5
Use appropriate tools strategically. Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations.

First and Second Grade - Fall
1st/2nd Grade Standards included within lessons.

Next Generation Science Standards

NGSS.K-PS3-1
Make observations to determine the effect of sunlight on Earth's surface. Examples of Earth's surface could include sand, soil, rocks, and water. Assessment of temperature is limited to relative measures such as warmer/cooler.

NGSS.K-ESS3-1
Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.

NGSS.1-LS1-2
Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. Examples of patterns of behaviors could include the signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting the offspring).

NGSSK-ESS.2-1
Use and share observations of local weather conditions to describe patterns over time. Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months. Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.

NGSS.2-LS4-1
Make observations of plants and animals to compare the diversity of life in different habitats. Emphasis is on the diversity of living things in each of a variety of different habitats. Assessment does not include specific animal and plant names in specific habitats.

First and Second Grade - Fall
1st/2nd Grade Standards included within lessons.

NGSS.2-PS1-2
Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. Examples of properties could include, strength, flexibility, hardness, texture, and absorbency. Assessment of quantitative measurements is limited to length.

NGSS.K-LS1-1
Use observations to describe patterns of what plants and animals (including humans) need to survive. Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.

NGSS.2-LS2-1
Plan and conduct an investigation to determine if plants need sunlight and water to grow. Assessment is limited to testing one variable at a time.

NGSS.1-LS3-1
Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. Examples of patterns could include features plants or animals share. Examples of observations could include leaves from the same kind of plant are the same shape but can differ in size; and, a particular breed of dog looks like its parents but is not exactly the same. Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.

NGSS1-ESS1-2
Make observations at different times of year to relate the amount of daylight to the time of year. Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall. Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.

First and Second Grade - Winter

1st/2nd Grade Standards included within lessons.

Common Core State Standards

CCSS.K.MD.A.1
Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

CCSS.K.MD.A.2
Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute and describe the difference.

CCSS.K.G.A.3
Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

CCSS.SL.1.1
Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

CCSS.SL.1.1a
Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).

CCSS.SL.1.1b
Build on others' talk in conversations by responding to the comments of others through multiple exchanges.

CCSSSL.1.1c
Ask questions to clear up any confusion about the topics and texts under discussion.

CCSSSL.1.2
Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

First and Second Grade - Winter
1st/2nd Grade Standards included within lessons.

CCSS.SL.1.3
Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.

CCSS.CCRA.R.10
Read and comprehend complex literary and informational texts independently and proficiently.

CCSSCCRA.L.3
Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

CCSS.CCRA.L.4
Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

CCSS.CCRA.L.6
Acquire/use accurately a range of academic/domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Next Generation Science Standards

NGSS.1-LS1-2
Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. Examples of patterns of behaviors could include the signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting young).
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First and Second Grade - Winter
1st/2nd Grade Standards included within lessons.

NGSS.2-LS4-1
Make observations of plants and animals to compare the diversity of life in different habitats. Emphasis is on the diversity of living things in each of a variety of different habitats.

NGSS.2-PS1-1
Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.

NGSS.1-LS3-1
Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. Examples of patterns could include features plants or animals share. Examples of observations could include leaves from the same kind of plant are the same shape but can differ in size; and, a particular breed of dog looks like its parents but is not exactly the same. Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.

NGSS1-ESS1-2
Make observations at different times of year to relate the amount of daylight to the time of year. Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall. Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.

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First and Second Grade - Spring
1st/2nd Grade Standards included within lessons.

Common Core State Standards

CCSS.RI.1.3
Describe the connection between two individuals, events, ideas, or pieces of information in a text.

CCSS.RI.1.4
Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.

CCSS.RI.1.10
With prompting and support, read informational texts appropriately complex for grade 1.

CCSS.RI.2.4
Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.

CCSS.RI.2.7
Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.

CCSS.RI.2.10
By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

CCSS.SL.1.1
Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

First and Second Grade - Spring
1st/2nd Grade Standards included within lessons.

CCSS.SL.1.1a
Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).

CCSS.SL.1.1b
Build on others' talk in conversations by responding to the comments of others through multiple exchanges.

CCSS.SL.1.1c
Ask questions to clear up any confusion about the topics and texts under discussion.

CCSS.SL.1.2
Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

CCSSSL.1.3
Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.

CCSS.SL.2.1
Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

CCSS.CCRA.SL.1
Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

CCSS.CCRA.L.4
Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

First and Second Grade - Spring
1st/2nd Grade Standards included within lessons.

CCSSCCRA.L.6
Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Next Generation Science Standards

NGSS.1-ESS1-1
Use observations of the sun, moon, and stars to describe patterns that can be predicted. Examples of patterns could include that the sun and moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our sun are visible at night but not during the day. Assessment of star patterns is limited to stars being seen at night and not during the day.

NGSS.1-LS1-2
Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. Examples of patterns of behaviors could include the signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting the offspring).

NGSS.2-LS4-1
Make observations of plants and animals to compare the diversity of life in different habitats. Emphasis is on the diversity of living things in each of a variety of different habitats. Assessment does not include specific animal and plant names in specific habitats.

First and Second Grade - Spring
1st/2nd Grade Standards included within lessons.

NGSS.1-LS3-1
Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. Examples of patterns could include features plants or animals share. Examples of observations could include leaves from the same kind of plant are the same shape but can differ in size; and, a particular breed of dog looks like its parents but is not exactly the same. Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.

NGSS.1-ESS1-2
Make observations at different times of year to relate the amount of daylight to the time of year. Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall. Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.

NGSS.2-LS2-2
Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

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Third and Fourth Grade - Fall
3rd/4th Grade Standards included within lessons.

Common Core State Standards

CCSS.3.NBT.A.1
Use place value understanding to round whole numbers to the nearest 10 or 100.

CCSS3.NBT.A.3
Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

CCSS.RI.3.1
Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

CCSS.RI.3.4
Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.

CCSS.RI.3.7
Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

CCSSRI.3.10
By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.

CCSS.RI.4.7
Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

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Third and Fourth Grade - Fall
3rd/4th Grade Standards included within lessons.

CCSS.RI.4.10
By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

CCSS.SL.3.1
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

CCSS.SL.4.1
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

CCSS.SL.4.1d
Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

CCSS.SL.4.2
Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.SL.4.4
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; speak clearly at an understandable pace.

CCSS.L.3.6
Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., After dinner that night we went looking for them).

Third and Fourth Grade - Fall
3rd/4th Grade Standards included within lessons.

CCSS.CCRA.SL.1
Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

CCSS.CCRA.SL.2
Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.CCRA.L.4
Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

CCSS.MP1
Make sense of problems and persevere in solving them. Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Third and Fourth Grade - Fall
3rd/4th Grade Standards included within lessons.

CCSS.MP2

Reason abstractly and quantitatively. Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize-to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents-and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

CCSS.MP4

Model with mathematics. Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Third and Fourth Grade - Fall
3rd/4th Grade Standards included within lessons.

CCSS.MP5

Use appropriate tools strategically. Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Next Generation Science Standards

NGSS.4-LS1-1

Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin. Assessment is limited to macroscopic structures within plant and animal systems.

NGSS.3-LS2-1

Construct an argument that some animals form groups that help members survive.

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Third and Fourth Grade - Fall
3rd/4th Grade Standards included within lessons.

NGSS.3-LS4-3
Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.

NGSS.3-ESS2-2
Obtain and combine information to describe climates in different regions of the world.

NGSS.3-LS4-2
Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.

NGSS.3-LS3-2
Use evidence to support the explanation that traits can be influenced by the environment. Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.

NGSS.3-LS3-1
Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans. Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.

Third and Fourth Grade - Fall
3rd/4th Grade Standards included within lessons.

NGSS.3-LS4-4

Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms. Assessment is limited to a single environmental change. Assessment does not include the greenhouse effect or climate change.

NGSS.3-LS1-1

Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. Changes organisms go through during their life form a pattern. Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.

Third and Fourth Grade - Winter
3rd/4th Grade Standards included within lessons.

Common Core State Standards

CCSS.RI.3.3
Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

CCSS.RI.3.4
Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.

CCSS.RI.3.7
Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

CCSS.RI.3.10
By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.

CCSS.RI.4.4
Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

CCSS.RI.4.7
Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

Third and Fourth Grade - Winter
3rd/4th Grade Standards included within lessons.

CCSS.RI.4.10
By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

CCSS.RF.3.4a
Read grade-level text with purpose and understanding.

CCSS.RF.4.3
Know and apply grade-level phonics and word analysis skills in decoding words.

CCSS.RF.4.4a
Read grade-level text with purpose and understanding.

CCSS.SL.3.1
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

CCSS.SL.3.3
Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

CCSS.L.4.4
Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

CCSS.L.4.4b
Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph).

Third and Fourth Grade - Winter
3rd/4th Grade Standards included within lessons.

Next Generation Science Standards

NGSS.4-LS1-1
Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin. Assessment is limited to macroscopic structures within plant and animal systems.

NGSS.3-LS4-3
Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.

NGSS.3-LS3-2
Use evidence to support the explanation that traits can be influenced by the environment. Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.

NGSS.3-LS3-1
Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans. Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.

NGSS.3-LS1-1
Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. Changes organisms go through during their life form a pattern. Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.

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Third and Fourth Grade - Spring
3rd/4th Grade Standards included within lessons.

Common Core State Standards

CCSS.3.MD.C.5
Recognize area as an attribute of plane figures and understand concepts of area measurement.

CCSS.3.MD.C.6
Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

CCSS.3.MD.C.7
Relate area to the operations of multiplication and addition.

CCSS.3.MD.C.7a
Find the area of a rectangle with whole-number side lengths by tiling it and show that the area is the same as would be found by multiplying the side lengths.

CCSS.3.MD.C.7b
Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.

CCSS.3.MD.D.8
Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

CCSS.K.G.A.1
Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

Third and Fourth Grade - Spring
3rd/4th Grade Standards included within lessons.

CCSS.K.G.A.3
Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

CCSS.RI.3.4
Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.

CCSS.RI.3.7
Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

CCSS.RI.3.10
By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.

CCSS.SL.3.1
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

CCSS.CCRA.SL.1
Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

CCSS.CCRA.L.5
Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

CCSS.CCRA.L.6
Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

CCSS.MP4
Model with mathematics. Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

CCSSMP5
Use appropriate tools strategically. Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Third and Fourth Grade - Spring
3rd/4th Grade Standards included within lessons.

Next Generation Science Standards

NGSS.4-LS1-1
Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin. Assessment is limited to macroscopic structures within plant and animal systems.

NGSS.3-LS2-1
Construct an argument that some animals form groups that help members survive.

NGSS.3-LS4-3
Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.

NGSS.3-LS4-2
Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.

NGSS.3-LS3-2
Use evidence to support the explanation that traits can be influenced by the environment. Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.

Third and Fourth Grade - Spring
3rd/4th Grade Standards included within lessons.

NGSS.3-LS3-1

Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans. Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.

NGSS.3-LS1-1

Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. Changes organisms go through during their life form a pattern. Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.