

2022 - 2023, Kindergarten, Science, Quarter 1

Big Ideas/Key Concepts:	
<ul style="list-style-type: none"> ● The five senses are touch, hear, see, smell, and taste. These can be used to ask and answer questions and gather information. ● The five senses can be used to explore and classify properties of matter. ● By describing objects accurately (drawing pictures and labeling with captions), we make our scientific observations clear. ● Using tools appropriately is a key scientific skill. 	
Standards	Student Friendly "I Can" Statements
<p><u>Matter and Its Interactions</u></p> <p>K.PS1.1 Plan and conduct an investigation to describe and classify different kinds of materials including wood, plastic, metal, cloth, and paper by their observable properties (color, texture, hardness, and flexibility) and whether they are natural or human-made. <i>Note: Students are not responsible for making quantitative measurements. Discussions can use relative terms such as 'less' or 'more', 'bigger' or 'smaller', etc.</i></p>	<p><u>Matter and Its Interactions</u></p> <p>I can describe different kinds of materials by how they look and feel.</p> <p>I can group materials based on their color, size, smell, how they feel, or other similar properties.</p> <p>I can describe whether a kind of material is natural or human-made.</p>
<p>K.PS1.2 Conduct investigations to understand that matter can exist in different states (solid and liquid) and has properties that can be observed and tested. <i>Note: Students are not responsible for using thermometers to make measurements of temperature. Discussion of gases as a state of matter will occur later in 3rd grade.</i></p>	<p>I can explore how something is either a solid or a liquid.</p> <p>I can observe and test the properties of solids and liquids.</p> <p>I can compare and contrast different solids and liquids.</p>
<p>K.PS1.3 Construct an evidence-based account of how an object made of a small set of pieces (blocks, snap cubes) can be disassembled and made into a new object.</p>	<p>I can use a small set of pieces to build an object.</p> <p>I can take apart my object and use the pieces to build a new object.</p>
<p><u>From Molecules to Organisms: Structures and Processes</u></p>	<p><u>From Molecules to Organisms: Structures and Processes</u></p>

<p>K.LS1.3 Explain how humans use their five senses in making scientific findings.</p>	<p>I can explain how we use our five senses to explore the world around us like scientists.</p>
<p><u>Engineering Design</u></p> <p>K.ETS1.1 Ask and answer questions about the scientific world and gather information using the senses.</p>	<p><u>Engineering Design</u></p> <p>I can ask and answer questions about the scientific world using my five senses.</p> <p>I can gather information about the scientific world by using my five senses.</p>
<p>K.ETS1.2 Describe objects accurately by drawing and/or labeling pictures.</p>	<p>I can draw and label pictures of objects to describe them.</p>
<p><u>Links Among Engineering, Technology, Science, and Society</u></p> <p>K.ETS2.1 Use appropriate tools (<u>magnifying glass</u>, rain gauge, <u>basic balance scale</u>) to make observations and answer testable scientific questions.</p>	<p><u>Links Among Engineering, Technology, Science, and Society</u></p> <p>I can use a magnifying glass and a basic balance scale to make observations and answer questions.</p>
<p>Embedded K-8 TN Computer Science Standards:</p> <ul style="list-style-type: none"> ● AIT.1 Identify and define problems and form significant questions for investigation. ● AIT.2 Develop a plan to use technology to find a solution and create projects. ● AIT.6 Collect, organize, analyze, and interpret data to identify solutions and/or make informed decisions. ● AIT.7 Infer and predict or propose relationships with data. ● D.C.2 Exhibit a positive mindset towards using technology that supports collaboration, learning, and productivity. 	

2021 - 2022, Kindergarten, Science, Quarter 2

Big Ideas/Key Concepts:

- Weather data can be analyzed and interpreted to make predictions and distinguish between the seasons.
- Weather patterns differ over time (hourly vs. daily), but all patterns are observable.
- Weather patterns and data can be described using graphs, symbols, and tools.
- Humans use their five senses to make observations about their world.
- The engineering design process allows people to ask and answer questions about their scientific world. This process includes describing objects by drawing them.
- A rain gauge can be used to help measure rainfall in an area.

Standards	Student Friendly “I Can” Statements
<p><u>Earth’s Systems</u></p> <p>K.ESS2.1 Analyze and interpret weather data (precipitation, wind, temperature, cloud cover) to describe weather patterns that occur over time (hourly, daily) using simple graphs, pictorial weather symbols, and tools (thermometer, rain gauge). <i>Note: Students are not required to read a thermometer for measurements, but should be able to make relative comparisons between two thermometers. The higher the liquid rises, the greater the temperature.</i></p>	<p><u>Earth’s Systems</u></p> <p>I can use tools (thermometer, rain gauge) to gather weather data.</p> <p>I can graph daily weather and use it to describe weather patterns.</p> <p>I can use my science vocabulary (temperature, precipitation, wind, cloud cover) to describe basic weather patterns.</p> <p>I can use simple graphs or picture symbols to describe hourly and daily weather patterns.</p>
<p>K.ESS2.2 Develop and use models to predict weather and identify patterns in spring, summer, autumn, and winter.</p>	<p>I can use models to predict the weather at different times of the year.</p> <p>I can identify patterns of weather in spring, summer, fall, and winter.</p>
<p><u>From Molecules to Organisms: Structures and Processes</u></p>	<p><u>From Molecules to Organisms: Structures and Processes</u></p>

<p>K.LS1.3 Explain how humans use their five senses in making scientific findings.</p>	<p>I can explain how we use our five senses to help us understand the world.</p>
<p><u>Engineering Design</u></p> <p>K.ETS1.1 Ask and answer questions about the scientific world and gather information using the senses.</p>	<p><u>Engineering Design</u></p> <p>I can ask and answer questions about the scientific world.</p> <p>I can gather information about the world by using my five senses.</p>
<p>K.ETS1.2 Describe objects accurately by drawing and/or labeling pictures.</p>	<p>I can draw and label pictures of objects accurately.</p>
<p><u>Links Among Engineering, Technology, Science, and Society</u></p> <p>K.ETS2.1 Use appropriate tools (magnifying glass, <u>rain gauge</u>, basic balance scale) to make observations and answer testable scientific questions.</p>	<p><u>Links Among Engineering, Technology, Science, and Society</u></p> <p>I can use a rain gauge to make observations and answer questions.</p>
<p>Embedded K-8 TN Computer Science Standards:</p> <ul style="list-style-type: none"> ● AIT.1 Identify and define problems and form significant questions for investigation. ● AIT.2 Develop a plan to use technology to find a solution and create projects. ● AIT.6 Collect, organize, analyze, and interpret data to identify solutions and/or make informed decisions. ● AIT.7 Infer and predict or propose relationships with data. ● D.C.2 Exhibit a positive mindset towards using technology that supports collaboration, learning, and productivity. 	

2021 - 2022, Kindergarten, Science, Quarter 3

Big Ideas/Key Concepts:	
Standards	Student Friendly "I Can" Statements
<ul style="list-style-type: none"> ● Weather forecasting helps us prepare for and respond to severe weather in Tennessee. ● All living things have basic needs; these can be represented through modeling. ● Humans impact the physical world we live in, and solutions need to be communicated to reduce that impact. ● The engineering design process allows people to ask and answer questions about their scientific world. ● A rain gauge can be used to help measure rainfall in an area. 	
<p><u>Earth and Human Activity</u></p> <p>K.ESS3.2 Explain the purpose of weather forecasting to prepare for, and respond to, severe weather in Tennessee.</p>	<p><u>Earth and Human Activity</u></p> <p>I can explain what weather forecasts are.</p> <p>I can explain how weather forecasts help us prepare for severe weather.</p>
<p>K.ESS3.1 Use a model to represent the relationship between the basic needs (shelter, food, water) of different plants and animals (including humans) and the places they live.</p> <p><i>Note: This standard should focus on the availability of resources in the places where organisms live. It is reinforced with K.LSS1.1 which addresses the organisms themselves.</i></p>	<p>I can ask questions to identify the basic needs for living things: shelter, food, and water.</p> <p>I can make a model to show the relationship between the basic needs of different plants and animals and the places they live.</p>
<p>K.ESS3.3 Communicate solutions that will reduce the impact from humans on land, water, air, and other living things in the local environment.</p>	<p>I can describe things that people do to live comfortably, and how those things can affect the world around them.</p> <p>I can explain how reusing or recycling materials helps reduce our impact on nature.</p>

	I can identify ways to reduce how much we affect the land, water, air, and other living things in the local environment. (e.g., turning off the lights, recycling, picking up litter, planting new trees, carpooling, etc.)
<u>From Molecules to Organisms: Structures and Processes</u>	<u>From Molecules to Organisms: Structures and Processes</u>
K.LS1.3 Explain how humans use their five senses in making scientific findings.	I can explain how humans use their five senses to help understand the world.
<u>Engineering Design</u>	<u>Engineering Design</u>
K.ETS1.1 Ask and answer questions about the scientific world and gather information using the senses.	I can ask and answer questions about the scientific world. I can gather information about the world by using my five senses.
K.ETS1.2 Describe objects accurately by drawing and/or labeling pictures.	I can draw and label pictures of objects accurately.
<u>Links Among Engineering, Technology, Science, and Society</u>	<u>Links Among Engineering, Technology, Science, and Society</u>
K.ETS2.1 Use appropriate tools (magnifying glass, rain gauge, <u>basic balance scale</u>) to make observations and answer testable scientific questions.	I can use a basic balance scale to make observations and answer questions.
Embedded K-8 TN Computer Science Standards: <ul style="list-style-type: none"> ● AIT.5 Evaluate the accuracy, relevance, appropriateness, and bias of electronic information sources. ● DC.1 Advocate, demonstrate, and routinely practice safe, legal, and responsible use of information and technology. ● DC.3 Exhibit leadership for digital citizenship. ● DC.4 Recognize and describe the potential risks and dangers associated with various forms of online communications (e.g., cell phones, social media, digital photos). ● DC.5 Explain responsible uses of technology and digital information; describe possible consequences of copyright infringement and piracy. 	

2021 - 2022, Kindergarten, Science, Quarter 4

Big Ideas/Key Concepts:

- The difference between plants and animals can be observed, particularly through locomotion, obtainment of food, and breathing.
- Living organisms and non-living materials are sortable based on physical characteristics.
- Young plants/animals resemble their parent(s).
- The engineering design process allows people to ask and answer questions about their scientific world. This process includes describing objects by drawing them.
- A magnifying glass can be used to help us better see small objects.

Standards	Student Friendly “I Can” Statements
<u>From Molecules to Organisms: Structures and Processes</u>	<u>From Molecules to Organisms: Structures and Processes</u>
K.LS1.1 Use information from observations to identify differences between plants and animals (locomotion, obtainment of food, and take in air/gases).	I can observe and identify differences between plants and animals. (movement, food, taking in air).
K.LS1.2 Recognize differences between living and non-living materials and sort them into groups by observable physical attributes.	I can describe differences between living and non-living things. I can analyze something’s physical properties and classify whether it is living or non-living.
K.LS1.3 Explain how humans use their five senses in making scientific findings.	I can explain how humans use their five senses to help understand the world.
<u>Heredity: Inheritance and Variation of Traits</u>	<u>Heredity: Inheritance and Variation of Traits</u>
K.LS3.1 Make observations to describe that young plants and animals resemble their parents.	I can observe young plants and animals and their parents.

	I can describe how young plants and animals look like their parents but aren't identical to them.
<u>Engineering Design</u>	<u>Engineering Design</u>
K.ETS1.1 Ask and answer questions about the scientific world and gather information using the senses.	I can ask and answer questions about the scientific world. I can gather information by using my five senses.
K.ETS1.2 Describe objects accurately by drawing and/or labeling pictures.	I can draw and label pictures of objects accurately.
<u>Links Among Engineering, Technology, Science, and Society</u>	<u>Links Among Engineering, Technology, Science, and Society</u>
K.ETS2.1 Use appropriate tools (<u>magnifying glass</u> , rain gauge, basic balance scale) to make observations and answer testable scientific questions.	I can use a magnifying glass to make observations and answer questions.
Embedded K-8 TN Computer Science Standards: <ul style="list-style-type: none"> ● AIT.1 Identify and define problems and form significant questions for investigation. ● AIT.2 Develop a plan to use technology to find a solution and create projects. ● AIT.6 Collect, organize, analyze, and interpret data to identify solutions and/or make informed decisions. ● AIT.7 Infer and predict or propose relationships with data. ● D.C.2 Exhibit a positive mindset towards using technology that supports collaboration, learning, and productivity. 	