

Elementary Science Summer Enrichment Packet for Rising 5th Graders



Prince George's County Public Schools
Division of Academics
Department of Curriculum and Instruction



Rising 5th Grade Science Summer Enrichment Packet

Note to the Students and Parents/Guardians

Expectations for Rising 5th Grade Students

Students will:

- Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
- Observe and describe changes over time in the properties, location, and motion of celestial objects.
- Explain that there must be a cause for changes in the motion of an object.
- Identify and describe ways in which heat can be produced.
- Provide evidence from investigations to identify processes that can be used to change physical properties of materials.
- Compare the observable properties of a variety of objects and the materials they are made of using evidence from investigations.

Students will need a science journal to record their responses. The science journal will be used to record exploration ideas, data, labeled graphs, newspaper clippings, and persuasive/writings and stories.

Suggested Science Journal: Wide-Ruled Composition Book

Enjoy your summer break and be safe.



June Activities



Physical Science: This month you will focus on the different states of matter.

<p>Day 1</p> <p>Click the titles below and watch the videos about matter:</p> <ul style="list-style-type: none">• What is matter?• Bill Nye The Science Guy: Matter <p>Complete interactive activity, click below:</p> <ul style="list-style-type: none">• Solid, Liquids and Gases	<p>Day 2</p> <p>Complete interactive activities, click below:</p> <ul style="list-style-type: none">• Properties of Matter• States of Matter	<p>Day 3</p> <p>Matter is all around us. Click the link below to learn about matter:</p> <ul style="list-style-type: none">• http://www.chem4kids.com/files/matter_intro.html. <p>Don't forget to click on the links and take the quiz.</p> <ul style="list-style-type: none">• Quiz About Matter
<p>Day 4</p> <p>Find out what properties cause liquids to form layers.</p> <p>Materials: corn syrup, dishwashing liquid, water, red food coloring, corn oil, cup, small paper clip, tiny piece of Styrofoam, and a piece of rubber band.</p> <p>What to do: Pour each liquid into the cup in the order that they are listed in the materials. Observe that the liquids form layers. Gently drop in a small paper clip. Watch until it stops sinking. Next, drop in a piece of Styrofoam. Wait until it stops. Then drop in the rubber band.</p> <p>Answer the following questions in your journal. Based on your observations, which liquid has the highest density? The lowest density? How do you know? Provide an explanation.</p>	<p>Day 5</p> <p>Work with a parent/guardian to complete this activity. You will need a large container. Rub your hands together and feel the heat of your palms. Get an ice cube to hold in your hands and hold your hands over the container. Hold until all the ice cubes have melted from the heat of your hands.</p> <p>In your journal, answer the following questions:</p> <ol style="list-style-type: none">1. What happened to ice cubes?2. Why did the ice cubes melt?3. Make a prediction about what would have happened to the ice if you did not rub your hands. <p>Suggested Virtual Field Trips/Tours:</p> <ul style="list-style-type: none">• Boston Children's Museum (Location: Boston, Massachusetts)• U.S. Census Bureau (Location: Suitland, Maryland)	



July Activities



Physical Science and Life Science: This month you will focus on forces, motion, energy, and plants.

<p>Day 1 Click the link below to learn about different types of energy. Forms of Energy</p>	<p>Day 2 Use what you know about the physics of motion to design a roller coaster. Draw your design in your science journal Play this fun game to test your knowledge about gravity, motion and forces. Make sure your track is designed to build up enough force to get the riders across the track with getting stuck or crashing. For directions how to design your rollercoaster and play the game, click here: Build A Rollercoaster Game</p> <p>Virtual roller coaster simulator: https://interactives.ck12.org/simulations/physics/roller-coaster/app/index.html</p>	<p>Day 4 and 5 Simple machines make work easier for us by allowing us to push or pull over increased distances. Over the next two days, complete each interactive activity below about simple machines. Have fun learning about simple machines! Simple Machines Hang Mouse Simple Machines Match It Simple Machines Letter Fall Simple Machine Word-O-Rama Simple Machine: Gold Burger To Go Simple Machine Quiz</p>		
<p>Day 6 and Day 7 Click here to learn more about simple machine: All About Simple Machines</p> <p>Draw a picture in your journal showing three types of simple machines that make work easier. Explain each of your drawings.</p>	<p>Day 8 Look at car or a picture of a car. In your journal, name at least three simple machines found on a car and explain how each one works. Clues to simple machines in cars</p>	<p>Day 9 Answer the following questions in your science journal. If two pulling forces applied to an object are in the same direction, would the forces be added together or subtracted? Explain.</p>	<p>Day 10 Suggested Virtual Field Trips/Tours Boston Children's Museum (Location: Boston, Massachusetts)</p>	
<p>Day 11 and Day 12 Plants are important to our lives. In your journal, draw a plant. Label and explain each part of the plant.</p> <p>Planting Seeds</p> <ul style="list-style-type: none"> You will need an adult (parent/guardian) With the help of an adult (parent/guardian), you can get seeds from an apple, orange, sunflower, lemon, tangerines, dry kidney or lima beans (the kidney or lime beans must first be soaked overnight) or store-bought 	<p>Day 13 Watch the videos learn about photosynthesis and pollination. Photosynthesis Pollination</p> <p>Think about what you have learned and write an explanation in your</p>	<p>Day 14 Observe the seeds you planted in the plastic cup. Explain in your journal what you see. Take the pollination quiz: Pollination Quiz</p>	<p>Day 15 Suggested Virtual Field Trips/Tours U.S. Census Bureau (Location: Suitland, Maryland)</p>	

<p>seed packets (only if you are able, buying store-bought seeds is not mandatory)</p> <ul style="list-style-type: none"> • 12-ounce clear plastic cups (with a hole poked in the bottom for water drainage) • plastic plate to rest the cups on • potting soil or dirt from outside your home • water with a spray bottle or cup <p>Directions</p> <ul style="list-style-type: none"> • Fill a plastic cup most of the way with potting soil and plant 4-7 beans. • Cover the seeds gently with soil. • Lightly water the soil, using the water spray bottle. • In your journal, draw your observations. • Observe the seeds you planted in the plastic cup. Explain in your journal what you see. • Water your seeds/plants based on how your soil looks. If your soil is dry, add water. 	<p>journal about the importance of photosynthesis and pollination.</p>		
<p>Day 16</p> <p>Click below to have a photosynthesis adventure! Photosynth Adventure</p> <p>Play a game about plants! Bob the Botanist</p> <p>Ms. Rose and Photosynthesis</p>	<p>Day 17</p> <p>Observe the seeds you planted in the plastic cup. Draw and explain in your journal what you see.</p>	<p>Day 18</p> <p>Select eight interactive activities to complete to learn more about plants. You can complete four each day.</p> <p>Click the link below. Plants</p> <p>After you have completed your 4 activities, write a summary in your journal explaining what you learned about plants.</p>	<p>Day 19</p> <p>Suggested Virtual Field Trips/Tours: National Museum of Natural History (Located: Washington, DC)</p> <p>United States Botanic Garden (Located: Washington, DC)</p>



August Activities

Earth and Space Science: This month you will focus on stars, planets and solar system.

<p>Day 1 Astronomy is the study of space. As a junior astronomer, learn about this exciting field using this link Space Science</p>	<p>Day 2 Watch the video about the Solar System. Exploring Our Solar System In your journal, write down what you saw that was interesting from the video and explain why.</p>	<p>Days 3 and 4 Everything in the solar system rotates around the sun. Review the solar system using the following link. Remember to take the quiz at the end. Cosmos for Kids: The Solar System</p>	<p>Day 5 How could you show that the moon can sometimes be seen in the day sky? Conduct an online investigate to find out. Record your research and explanation in your journal.</p>
<p>Day 6 Review what makes up a Galaxy by going to the link below to guide you: Milky Way and Galaxies Tour of the Galaxy In your journal, write down five interesting facts about the link you observed above.</p>	<p>Days 7 and 8 As Earth spins, sunrise occurs gradually across the United States. Earth's Rotation & Revolution The Sun Part I: Draw a picture of the daytime sky. Part II: Draw a picture of the night sky. Use chalk or a silver marker and black construction paper. In your journal, write a summary to explain your drawings.</p>	<p>Day 9 Find out how this natural event influenced the invention of different time zones. Record your research in your journal.</p>	<p>Day 10 Suggested Virtual Field Trip/Tour Smithsonian National Air and Space Museum (Location: Washington, DC) Koshland Science Museum (Located: Washington, DC)</p>