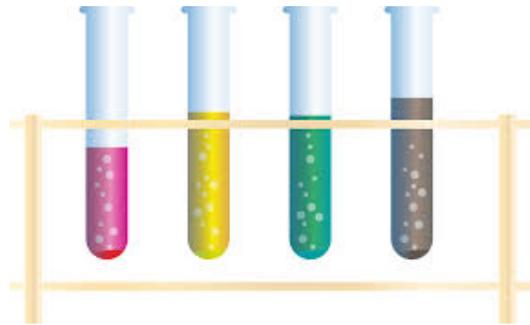


# Summer Science Enrichment Packet

## Rising 7<sup>th</sup> Graders



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

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## **Note to The Students and Parents/Guardians**

This calendar consists of daily activities to extend the learning beyond the school year. Be sure to keep track of your experiences in a science journal. (Suggested Journal: Wide-Ruled or College-Ruled Composition Book)

### **Some practices that Rising 7<sup>th</sup> Grade students should understand include:**

1. Asking questions (for science) and defining problems (for engineering)
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations (for science) and designing solutions (for engineering)
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

**Activities (Weeks 1-4, Monday – Friday) This month you will focus on the work of scientists and the impact of humans Earth’s waters.**

<p><b>Day 1</b> Write a scientific explanation describing why it is important for scientists to monitor the water in our oceans.</p>	<p><b>Day 2</b> Journal Entry: Explain the states of matter of water and describe where each state of matter may be found.</p>	<p><b>Day 3</b> Draw a model of the water cycle. In the model, be sure to include the following terms:  Evaporation Transpiration Precipitation Runoff Groundwater Condensation</p>	<p><b>Day 4</b> Journal Entry: Explain how thermal energy powers the water cycle.</p>	<p><b>Day 5</b> Visit the USGS Water Science School to read about the data that scientists collect on Earth’s water. <a href="https://water.usgs.gov/edu/qa-measure-data.html">https://water.usgs.gov/edu/qa-measure-data.html</a> In your journal, explain how this data is helpful to the public.</p>
<p><b>Day 6</b> Complete the water use assessment for your home. <a href="https://water.usgs.gov/edu/activity-percapita.html">https://water.usgs.gov/edu/activity-percapita.html</a> Use the results to brainstorm ways that you can cut down on your water usage.</p>	<p><b>Days 7, 8, and 9</b> Interview 5 family members or close friends using the following questions:</p> <ol style="list-style-type: none"> <li>1. Do you leave the water running when you brush your teeth?</li> <li>2. Have you ever timed how long you were in the shower? Did it make you think about taking a shorter shower?</li> <li>3. In what ways have you tried to limit your water use?</li> </ol>			<p><b>Day 10</b> After reflecting on the interview results, explain what you might do to help others conserve water.</p>
<p><b>Days 11-15</b> Review the water cycle model from Day Three. Think about where surface water evaporates from. Design an investigation in your home to compare how the width of the surface of the body of water affects the rate of evaporation. Keep in mind the independent and dependent variables. When designing the investigation, determine how the water level will be monitored. (Tip: Compare how water evaporates from a bowl (wide surface area) and drinking glass (smaller surface area). Be sure to design a tool for collecting the data. This investigation should be observed over the next two weeks.</p> <p><i>Things to think about:</i>  <i>What things need to be kept the same on the water sources that are being compared (the constants)?</i>  <i>What materials are needed?</i>  <i>Where should the investigation be kept so that it is undisturbed by others?</i></p>				

### **Days 16 and 17**

Research the use of reservoirs for water storage. Describe how they are used.

In Los Angeles, California, officials have come up with a way to slow the evaporation of water from California Reservoirs. Research this idea and explain how it works.

*\*Check the water levels of your evaporation investigation.*

### **Day 18**

Answer the following question:

Why is water so important to living things?

In your response consider:

how animals get food, how plants use it, how humans use it in every day life.

*\*Check the water levels of your evaporation investigation.*

### **Days 19 and 20**

Every day Americans drink many bottles of water. Read the information at the site below and write an explanation to discuss why other water containers should be used. Be sure to support the explanation with evidence.

<https://www.banthebottle.net/bottled-water-facts/>

*\*Check the water levels of your evaporation investigation.*

**Activities (Weeks 5-6, Monday – Friday) This month you will focus on living things.**

<p><b>Day 21</b> Analyze the results of the evaporation investigation. Write a conclusion supported by the data from the investigation.</p>	<p><b>Day 22</b> Think about the types of animals you have seen where you live (excluding pets). Make a list of at least five animals. For each animal, describe what they were doing.</p>	<p><b>Day 23</b> From the list of animals on Day 22, choose one characteristic of each animal and describe how it may help him or her survive. Remember that survival is about more than battling other animals.</p>	<p><b>Day 24</b> Many different types of trees exist in this area. Some of them have leaves that change color and fall to the ground in the cold months. Describe the difference between these trees and the trees that do not change color.</p>	<p><b>Day 25</b> Plants use energy from the sun to make their own food in a process called <i>photosynthesis</i>. Explain how this relationship with plants and the sun is important to animals.</p>
<p><b>Day 26</b> Describe two ways that plants and animals are alike and two ways that they are different. Write the response in paragraph form.</p>	<p><b>Day 27</b> Reflect on the evaporation investigation. Describe how the plants and animals in a particular habitat would be affected if the water evaporated at a high rate.</p>	<p><b>Day 28</b> Bacteria are organisms that have an important role. Research beneficial bacteria and develop a bulleted list of at least 10 ways that bacteria help an ecosystem and organisms within an ecosystem.</p>	<p><b>Days 29 and 30</b> Write a 1-minute public service announcement explaining how it is important to maintain healthy waterways for healthy humans, plants, and animals.</p>	