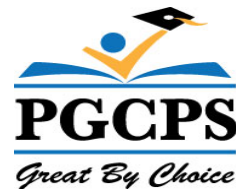


2016 Summer Science Calendars

Grades 6-8



**Prince George's County Public Schools
Office of Academic Programs
Department of Curriculum and Instruction**



Note to the Student

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.

Some indicators that students in Grades 6-8 should understand include, but are not limited to:

- Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
- Identify general distinctions among organisms that support classifying.
- Recognize and describe that environmental changes can have local, regional, and global consequences.
- Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.

This calendar will help you enhance your knowledge of these indicators.

Use the directions below to create a science journal. The science journal will be used to record exploration ideas, data, labeled graphs, newspaper clippings, and persuasive/writings and stories from the summer calendar activities.

- Use the following materials to create your journal:
 - construction paper
 - magazines (collage material)
 - notebook paper (3-hole)
 - scissors
 - single or 3-hole punch
 - fasteners (yarn, ribbon, brads, or rings)
 - ruler
 - tape
- Follow the procedures to create your journal:
 - Use construction paper to make a front and back cover for your journal. Cut the paper 23 cm wide by 30 cm long.
 - Place a piece of 3-hole notebook paper over the front and back covers and trace the three holes with a pencil.
 - Use a hole-puncher to punch out the holes you traced.
 - Sandwich a stack of 3-hole notebook paper between the front and back covers of the journal and fasten the papers together.
 - Create the front and back cover of your science journal. Use your creative skills to draw a picture or create a collage of things that relate to science.



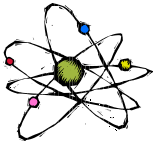
June 2016

Grades 6-8 Summer Science Calendar



This month you will focus on the work of scientists and the impact of pesticides on the environment.

Monday	Tuesday	Wednesday	Thursday	Friday
<p>20</p> <p style="font-size: 1.2em;">Last Day of School!</p>	<p>21</p> <p>Journal Entry: How do scientists use mathematics to explain the world around them?</p>	<p>22</p> <p>In your journal, convert between the following units:</p> <p>600 millimeters = _____ meters 0.35 liters = _____ millimeters 1, 0505 grams = _____ kilograms</p>	<p>23</p> <p>In a class of 28 students, 12 students take the bus to school, 10 students walk, and 6 students ride their bicycles. Create a circle graph to display this data. Record your answer and circle graph in your journal.</p>	<p>24</p> <p>Visit Discovery Education: “Scientific Inquiry” http://player.discoveryeducation.com/videos/hhView.cfm?guidAssetId=78fc114d-bec1-4208-bebd-1d932a5b8a1d</p> <p>After completing the activity, answer the questions in your journal. See the “Questions” tab.</p>
<p>27</p> <p>Visit your local library and check out a book to read about animal diversity and the impact of pesticides on the environment.</p>	<p>June 28 - June 30</p> <p>“Weigh the Impact”</p> <p>Identify the Need: Why do people use pesticides? Research: Using the Internet, research different insects affecting major crops in your state. Choose one pest insect. Find out the methods used in controlling it. Are there alternatives to pesticides? Write: A proposal to the governor of Maryland for insect control in your state. Use your research and notes to explain how your method works.</p> <p>Review the impact of pesticides on the environment. Use the following site to help in your review: www.PHSchool.com Use the Web code ceh-2020. Read the two articles “Controlling Insects that Affect Crops” and “Controlling Insects that Affect People.”</p>			<p>July 1</p> <p>Visit the website below to answer the two journal questions. https://www.usbg.gov/insects-garden Journal Questions: How can you identify insects from other animals? How do different insects grow? Give at least two examples.</p>

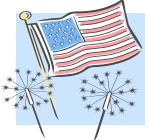


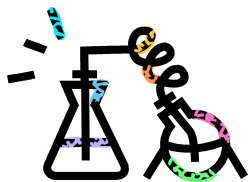
July 2016

Grades 6-8 Science Calendar



This month you will focus on the impact the environment has on animals and review experiments that help shaped the field of science.

Monday	Tuesday	Wednesday	Thursday	Friday
<p>4</p> <p>Happy 4th of July!!</p> 	<p>5</p> <p>Trace the evolution of arthropods and what adaptations they have to survive in virtually every part of the earth. Use the following site to assist you in your research: www.SciLinks.org Input Web code scn-0222. Review the following titles on the site: Introducing the Arthropods, Meet the Cambrian Critters.</p>	<p>6</p> <p>Suppose 33 percent of the 50 tons of wood produced in one year by a forest is consumed by termites and other insects. How many tons do the insects eat? Record your answer in your journal.</p>	<p>7</p> <p>Observe an arthropod at your local pet store or grocery store and describe details about its physical appearance, its movements, and any other behaviors that you observed. Record your observation in your journal.</p>	<p>8</p> <p>Take a trip to the United States Botanic Garden, 100 Maryland Avenue, SW Washington, DC 20001 202-226-1117 Free Admission Journal Entry: How do the insects here interact with the environment?</p>
<p>11</p> <p>Review how sea stars survive underwater. Look at the water vascular system of a sea star using the following site: www.PHSchool.com. Use this Web code cep-2025 to access the activity. Remember to take the self-test.</p>	<p>12</p> <p>In a paragraph, compare and contrast how sea stars, brittle stars and sea urchins move. Record your answer in your journal.</p>	<p>13</p> <p>Many organisms have been affected by oil spills. Conduct an experiment on the impact of oil on feathers. Use the link below for directions. http://bit.ly/lQeZV5</p>	<p>14</p> <p>Visit the "Ocean Portal" Smithsonian Museum National Museum of Natural History website. http://ocean.si.edu/slideshow/deep-ocean-diversity</p>	<p>15</p> <p>Respiration and circulation are essential to animal survival. Use the following site to review respiration and circulation www.PHSchool.com. Input the following Web code: cep-2032. Take the self-test.</p>
<p>18</p> <p>Design an experiment to determine how an owl's diet varies at different times of the year. Give an example of a hypothesis you could test with such an experiment. Include the variables you would control. Record your experiment in your journal. Check out the link below http://www.kidwings.com/owlpellets/fl ash/v4/index.htm</p>	<p>19</p> <p>Spontaneous Generation is best understood using Redi and Pasteur's experiments. Use the following site to conduct the experiment: www.PHSchool.com (Web code: cep-1011). In your journal, summarize the importance of their research in science.</p>	<p>20</p> <p>In your journal, write a newspaper article declaring that spontaneous generation has been rejected. Discuss how this may impact human history.</p>	<p>July 21 - July 22</p> <p>A Weizmann Institute study provides important new insights into the process of viral infection. The study, reported in the online journal <i>PLoS Biology</i>, reveals certain mechanisms by which mimivirus – a virus so called because it was originally thought to mimic bacteria in various aspects of their behavior – invades amoeba cells. Use the following sites to study viruses, bacteria, amoeba, and paramecium. Active & Hidden Viruses Activity – www.PHSchool.com Web code: cep-1021 More on Bacteria www.PHSchool.com Web code: cep-1022 Amoeba and Paramecium Activity www.PHSchool.com Web code: cep-1031 Write a summary of each in your journal.</p>	
<p>25</p> <p>Plant cells are different from animal cells. Use the following link to review the differences: www.PHSchool.com, Web code: cep-1041. Using items around your home, create a model of a plant cell and label the parts.</p>	<p>26</p> <p>Now that you know the differences between a plant and animal cell, draw a diagram in your journal or create a 3D model of an animal cell and label the parts.</p>	<p>July 27 - 29</p> <p>News Report: Something strange has happened to the local pond. It is covered with green scum and dead fish are floating on the surface. Write a news report explaining to the public what has happened. Remember to use your journal. Use the link provided to gain background information: http://healthvermont.gov/enviro/bg_algae/bgalgae_fact.aspx.</p>		



August 2016

Grades 6-8 Science Calendar



This month you will focus on the importance of water.

Monday	Tuesday	Wednesday	Thursday	Friday
1 Hydroponic Garden Hydroponic gardens are planned for future space flights and as a way to grow plants in cold climates. After researching these gardens, explain why hydroponic gardens are a good choice for each of these situations. Then, identify two more situations in which hydroponic gardens would be a good choice and explain why.	2 Visit your local library and check out a book to read about the importance of water.	3 Create a product label in your journal for bottled drinking water, explaining to consumers why water is a precious resource.	4 Calculate the density of the following 1_L samples of ocean water. Sample A has a mass of 1.01 kg; Sample B has a mass of 1.06 kg. Which sample would likely have the higher salinity? Explain your answer in your journal.	5 In your journal, answer the following questions about the Water Cycle. Include an illustration. Most of the water that evaporates on the earth comes from which source? What is the source of energy for the hydrologic or water cycle?
8 It is important to have clean water for drinking, cooking and bathing. Review the importance of water treatment. Use this link: www.PHSchool.com Web code: cfd-3022.	9 The concentration of iron in a water sample is 500 parts per million. Write this concentration as a fraction in your journal.	10 Learn about the importance of water conservation on the environment. Use the following site: www.PHSchool.com , Web code: cfd-3021.	11 Saving water is more important than ever. Create a poster explaining why saving water is essential to the environment. Use items around your home to design your poster. Share your findings with your family.	12 Visit Discovery Education Science: "Pond-er This" http://player.discoveryeducation.com/jews/hhView.cfm?guidAssetId=745c5f64-2c62-4d69-aeaf-078c3528e193



Tuesday, August 23, 2016: All students return to school!

