

Distance Learning Resources for Middle Level Science 6-8

The Office of Standards and Learning has compiled the resources in this document for middle level (6-8) Science learners in light of school closures due to the community impact of COVID-19.

The *South Carolina College- and Career-Ready Standards for Science* informed the selection and organization of these resources.

Note for the Teacher:

The resources listed below are learning experiences to get your students exploring science in the world around them, including skills it takes to think like scientists and or engineers. Teachers, choose among the resources listed below based on knowledge of your students and the work that has already been experienced in your classroom. Each of the following learning experiences can be given to students as they are stated below. Some have multiple options to choose from. However, feel free to modify as needed for your students. There are also virtual components of research for those that have access and you may choose how you would like for them to document their learning. The experiences can be copied and pasted into a document to be copied and sent to students, or they can be copied and pasted into your district's learning management system.

Sixth Grade: Connection to Standards/SEP's	For Students
<p>Earth's Weather and Climate</p> <p>6.E.2B.1 Analyze and interpret data from weather conditions (including wind speed and direction, air temperature, humidity, cloud types, and air pressure), weather maps, satellites, and radar to predict local weather patterns and conditions.</p> <p>6.E.2A.2 Critically analyze scientific arguments based on evidence for and against how different phenomena (natural and human induced) may contribute to the composition of Earth's atmosphere.</p>	<ul style="list-style-type: none">• Create an Infographic or poster on the causes and effects of human and natural impacts on Earth's atmosphere. Include an explanation of how greenhouse gases harm the atmosphere, how those gases are put in the atmosphere, and what can be changed to lessen the occurrence.• Based on prior knowledge of weather, collect data (including wind speed and direction, air temperature, humidity, cloud types, and air pressure) from your immediate area. Data can be found by watching the local news, newspaper, a weather app, or through observation. You will determine how to gather, record, and communicate the weather data.<ul style="list-style-type: none">○ After weather for the week has been gathered, recorded, and communicated, predict weather patterns for the following week, and make note of your predictions vs. reality. (total of 2 weeks)

Seventh Grade: Connection to Standards/SEP's	For Students
<p>Organization of Living Systems</p> <p>7.L.3A.4 Construct scientific arguments to support claims that bacteria are both helpful and harmful to other organisms and the environment.</p> <p>7.L.3A.1 Obtain and communicate information to support claims that (1) organisms are made of one or more cells, (2) cells are the basic unit of structure and function of organisms, and (3) cells come only from existing cells.</p>	<ul style="list-style-type: none">• Conduct research on different diseases, focusing on the effect the disease has on specific organ systems. Use information from your research to support an explanation for how the loss of function of an affected organ system harms the entire human body as a result of the interdependent nature of the major human body systems.• Students develop and use a model of a cell to communicate what occurs when an organelle fails.• Obtain information through library and online research and explorations about the various roles bacteria play in organisms and the environment. Reason with this information to support the claim that bacteria can be both harmful and helpful.

Eighth Grade: Connection to Standards/SEP's	For Students
<p>Forces and Motion 8.P.2A.2 Develop and use models to compare and predict the resulting effect of balanced and unbalanced forces on an object's motion in terms of magnitude and direction. 8.P.2A.3 Construct explanations for the relationship between the mass of an object and the concept of inertia (Newton's First Law of Motion).</p>	<ul style="list-style-type: none">• Design a model and explain how the forces of friction and gravity affect playing your favorite sport or doing your favorite activity.• Using your knowledge of forces and motion, create a presentation to the public concerning the need for seatbelt use.

References

South Carolina Department of Education. (2014). South Carolina Academic Standards and Performance Indicators for Science 2014. Retrieved March 17, 2020, from https://ed.sc.gov/scdoe/assets/file/agency/ccr/StandardsLearning/documents/South_Carolina_Academic_Standards_and_Performance_Indicators_for_Science_2014.pdf.

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South Carolina Department of Education. (2014). Adapted from Science and Engineering Practices Support Guide for the South Carolina Academic Standards and Performance Indicators. Retrieved March 17, 2020, from https://ed.sc.gov/scdoe/assets/File/instruction/standards/Science/Support%20Documents/Complete_2014SEPsGuide_SupportDoc2_0.pdf

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