

- Collecting and analyzing data from investigations to construct explanations and communicate results
  - Using mathematical and computational thinking in collecting and communicating data
  - Using technology to collect data and in communication of results
- Students should be able to use science and engineering practices and understand the following content:

### Science and Engineering Practices

- Development of habits of mind that are necessary for scientific thinking and that allow students to engage in science in ways similar to those used by scientists and engineers
  - Asking and answering questions about the natural world
  - Developing and using models to (1) build understanding of
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### Earth Science (Water Cycle, Weather and Climate Patterns, Astronomy)

- Demonstrate an understanding of the water cycle and weather and climate patterns
- Describe some of the gases of the atmosphere
- Describe and develop models that help explain the composition of the atmosphere where weather occurs
- Develop and use models to describe the water cycle
- Distinguish between weather and climate
- Describe weather conditions that lead to severe weather
- Develop weather awareness and safety preparedness
- Describe the kinds of information that are used to predict the weather
- Construct explanations for differences in climate in a region
- Demonstrate an understanding of the locations, movements, and patterns of stars and objects in the solarvosjstemDeschowncDeelle locastppee suseons,jects in kyts roughoutng of and )J1.2 -1.3seasocasjstem
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## Books:

- Arnosky, Jim. *Crinkleroot's Guide to Walking in Wild Places*
- Asimov, Isaac. *Why Does the Moon Change Shape?*
- Cole, Joanna. *The Magic School Bus Inside a Hurricane*
- Cole, Joanna. *The Magic School Bus In The Haunted Museum: A Book About Sound*
- Gold, Becky. *Chasing Tornadoes*
- Nankivell-Aston, Sally and Dorothy Jackson. *Science Experiments with Light*
- Stille, Darlene R. *Tropical Rain Forests*
- Taylor, Barbara. *Look Closer: Desert Life*

## Web Sites:

- AAAS Science Netlinks - [www.sciencenetlinks.com](http://www.sciencenetlinks.com)
- SC Department of Natural Resources - [www.dnr.state.sc.us](http://www.dnr.state.sc.us)
- eNature - [www.eNature.com](http://www.eNature.com)
- Franklin Institute - [www.fi.edu](http://www.fi.edu)
- NASA's space website for children - <http://kids.msfc.nasa.gov>
- National Weather Service: [www.nws.noaa.gov](http://www.nws.noaa.gov)