NORMANDY SCHOOLS COLLABORATIVE

6th Grade Science

In 6th grade students engage in the core science ideas of *Earth materials, Earth's systems, Earth and Human Activity, Earth's Place in the Universe and Engineering Design*. Activities include, but are not limited to, using models, providing arguments with evidence, obtaining and analyzing data about relationships and interactions among observable components of different systems.

6th Grade Science provides an introduction to the extraordinary world of science. Your child will explore earth science in addition to space through various investigations. By the end of 6th Grade Science your child will be able to:

- Analyze rock strata to determine geologic time.
- Investigate water cycles, energy and matter to explain Earth processes
- Present evidence to support the claim that gravity depends on interactions of masses
- Create a model illustrating the water cycle's significance on all matter.
- Explain how weather and climate are influenced by the sun, oceans, landforms and atmosphere
- Ask questions to frame a hypothesis.
- Employ scientific principles to formulate a conclusion

The Normandy Schools Collaborative will prepare your child with outdoor learning experiences and field trips as well as classroom learning labs. They will also explore online science simulations to enrich learning. These opportunities will allow your child to investigate the Earth with a wider lens. Science connects all living and non-living things with the space around them. Your child will appreciate the amazing dynamics of the Earth.

Examples of Your Child's Work at School:

- Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.
- Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.
- Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
- Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.
- Plan an investigation to determine the relationships among energy transfer, type of matter, mass, and change in the energy of the particles as measured by the temperature.
- Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity

How to Help Your Child at Home:

- Encourage finding answers to questions through research and experimentation.
- Visit local observatories and planetariums with your child.
- Encourage observations of the sun, moon, and stars at home.
- Encourage the playing of "maker" games and apps such as Minecraft that develop engineering

and collaboration skills.
- Join a club or group that offers activities such as robotics and computer programming.
- Keep track of weather data at your home and compare with local news weather data.

21st Century Skills Learned by the End of 6th Grade

- Ability to plan, organize and prioritize work
- Ability to communicate verbally with classmates and teacher
- Ability to obtain and process information
- Ability to identify general laboratory equipment
- Proficiency with computer software programs
- Ability to create and/or edit written reports