

SCIENCE PARENT NEWSLETTER

SIXTH GRADE

UNIT 3

EARTH SCIENCE

IN SCHOOL...

Students will understand how Earth’s geosystems operate by modeling the flow of energy and cycling of matter within and among different systems. Students investigate the controlling properties of important materials and construct explanations based on the analysis of real geoscience data. Of special importance in both topics are the ways that geoscience processes provide resources needed by society but also cause natural hazards that present risks to society. A systems approach is also important here, examining the feedbacks between systems as energy from the sun is transferred between systems and circulates through the ocean and atmosphere

<p>STUDENTS WILL KNOW...</p> <ul style="list-style-type: none"> • Energy flows and matter cycles within and among Earth’s different systems 	<p>STUDENTS WILL BE ABLE TO...</p> <ul style="list-style-type: none"> • Develop and use a model to describe phenomena • Develop a model to describe unobservable mechanisms • Collect data to produce data to serve as the basis for evidence to answer scientific questions or test design solutions under a range of conditions • Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students’ own experiments) and the assumption that theories and laws that describe nature operate today as they did in the past and will continue to do so in the future
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AT HOME...

<p>ASK YOUR STUDENTS...</p> <ul style="list-style-type: none"> • How do weather patterns work and why are they important? • Why does weather change? • How do things change over time? • How do patterns affect weather? • What influences change? • Where or how does change begin? • What is change? 	<p>ENGAGE YOUR STUDENTS...</p> <ul style="list-style-type: none"> • The complex patterns of the changes and the movement of water in the atmosphere, determined by winds, landforms, and ocean temperatures and currents, are major determinants of local weather patterns. • Variations in density due to variations in temperature and salinity drive a global pattern of interconnected ocean currents. • Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. • Regardless of regional climate, weather patterns exist and they change and are predictable.
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IN THE COMMUNITY...

- Using a google map of your community make a list of the natural resources directly available. Is there any harvesting of resources such as trees or mining taking place? If so, how are these resources used by humans?
- The U46 community would be described by scientist as a “Temperate Deciduous Climate”. What does this mean? How does each compartment of geoscience contribute to this designation? In other words, how does the atmosphere, hydrosphere, biosphere and geosphere each contribute to the great U46 community being designated Temperate Deciduous?

STEM Expo...

- Develop either of the above into a STEM Expo project to teach people about local resources and climate.
- Enter the project you did to complete this standard perhaps your explanation was on weather prediction or on the sustainable use of local resource “Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students’ own experiments) and the assumption that theories and laws that describe nature operate today as they did in the past and will continue to do so in the future”