"May the Children in My Care"

a poem by Genie Graveline

May the children in my care learn so much more from me than what is contained in books.....

May I teach them by example that it's all right to make mistakes, for that is how we learn and how we grow.....

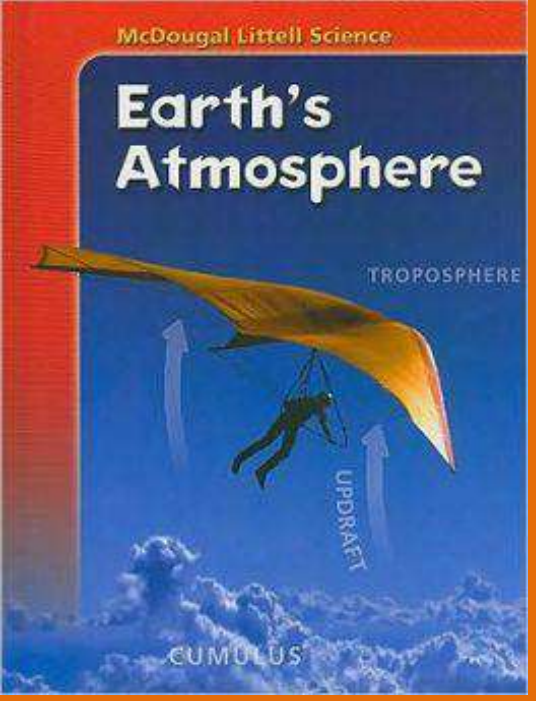
May they see me as patient and understanding, for then they will be more willing to take risks and try new things.....

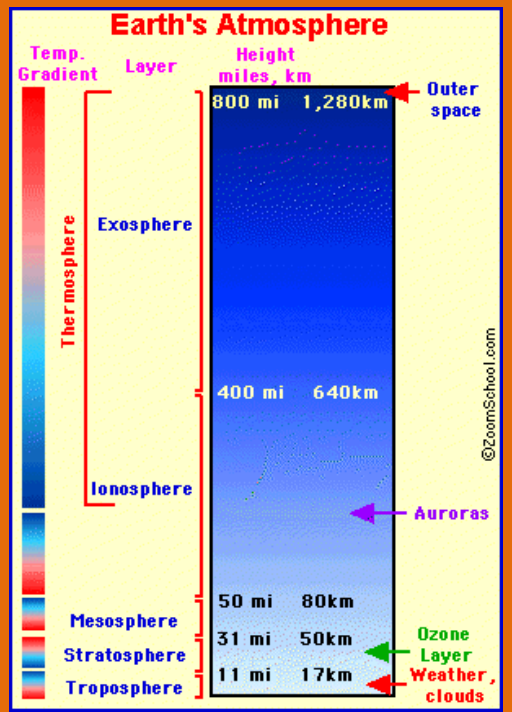
May they learn from me the importance of being compassionate and helpful, honest and fair, and may they come to practice these things in their own daily lives. May these precious children who have been entrusted to me, learn how to find the good in all people as I too, shall find the good in each and every one of them.....

May they learn from their experiences that they can succeed, and may their triumphs fill them with confidence and enthusiasm.....

May they learn how to dream and come to believe that they can make their dreams come true. May this year that we spend together be filled with warmth and laughter, and may all of the memories which they will take with them when they go, continue to nurture and inspire them, as they move forward, one step at a time, on their wondrous journey through life!


Welcome to 7th Grade
Science





•Describe the composition of the earth's atmosphere and how it differs in each layer.

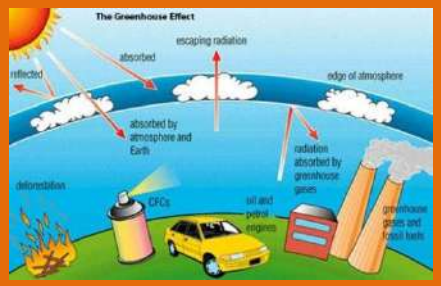
•Explain why air pressure and temperature changes with altitude.

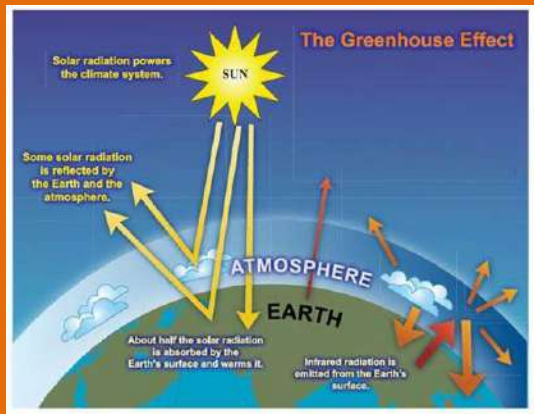
•Demonstrated how energy from the sun affects the earth's surface and atmosphere.

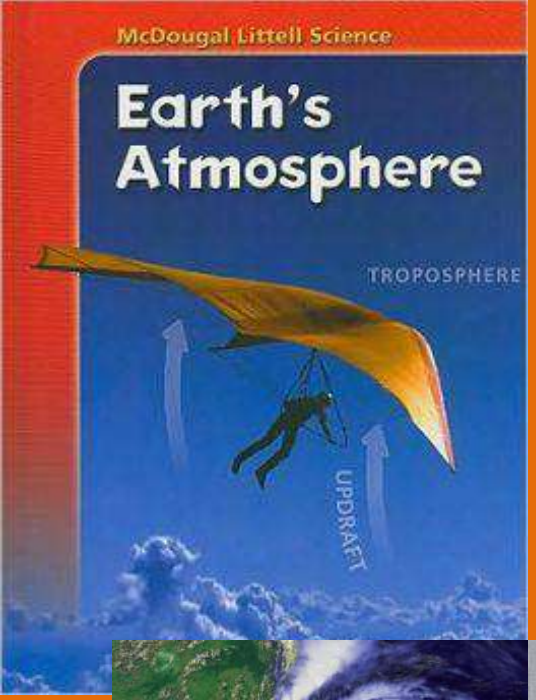
•Explain how energy is transferred into and throughout the atmosphere.

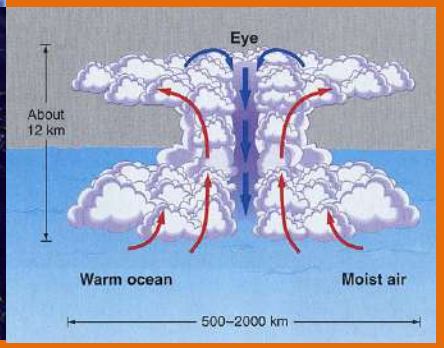
•Explain how the chemical composition of the atmosphere can affect radiation (i.e. greenhouse gases).

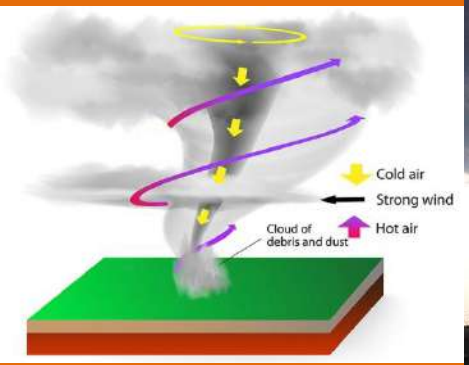
•Describe how humans have impacted the chemical composition of our atmosphere, and its consequences (i.e. global warming, climate change).



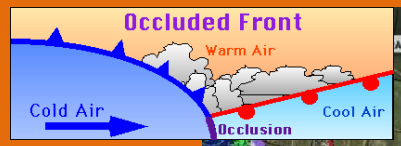


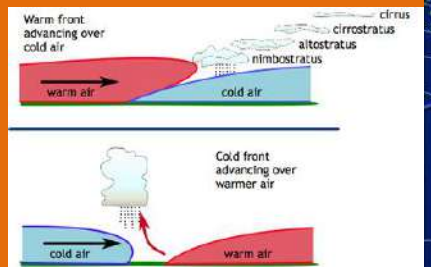


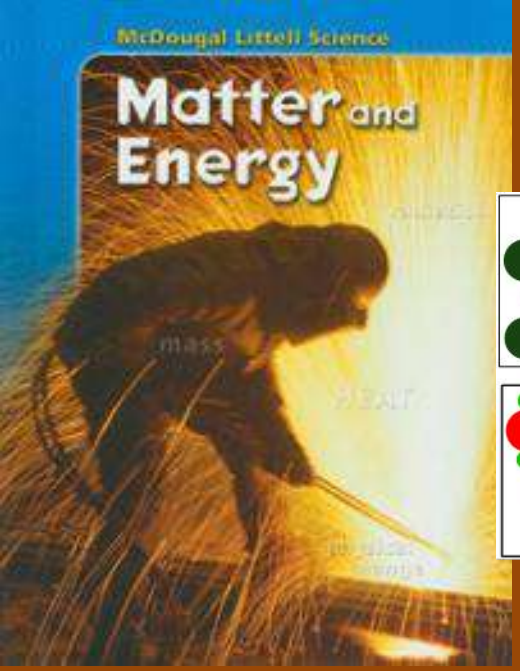


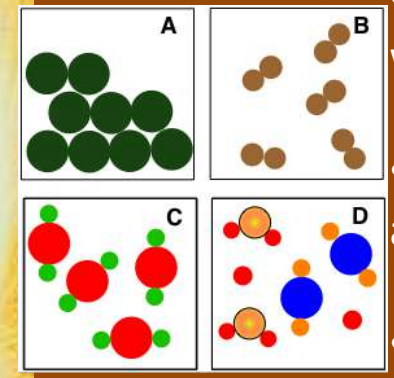


- Explain factors affecting local weather, including global winds, uneven heating of the earth's surface, and the rotation of the earth.
- Describe the types of air masses and their interactions (fronts).
- Explain factors that contribute to various storms (hurricanes, tornadoes, etc.)
- Compare and contrast climate and weather, and identify factors that affect them.
- Describe the various climate zones and how they are affected by environment and human activity.

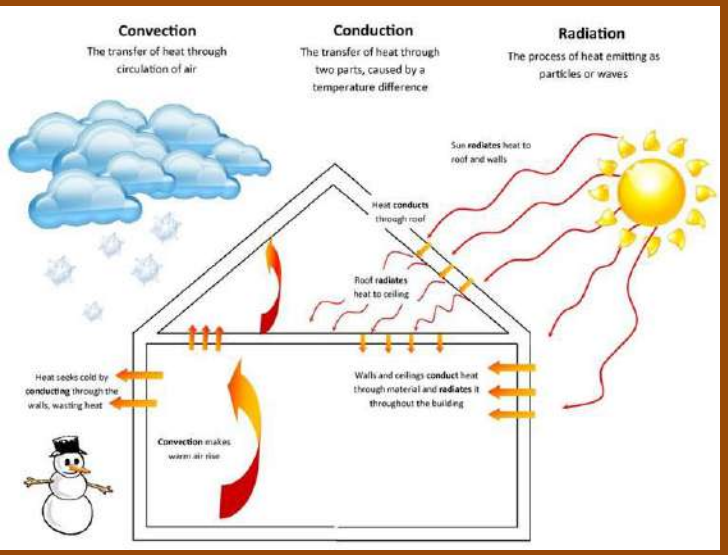


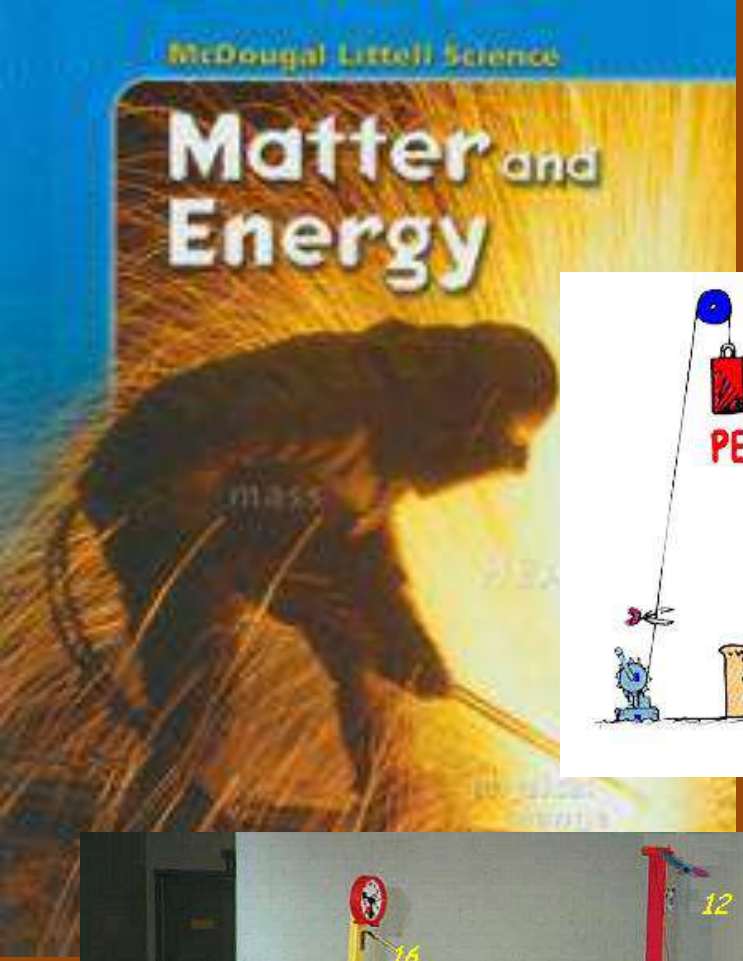


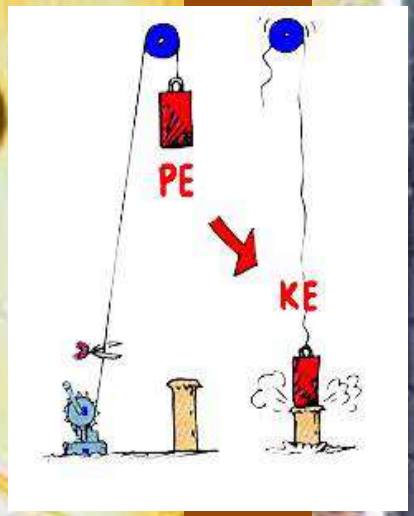




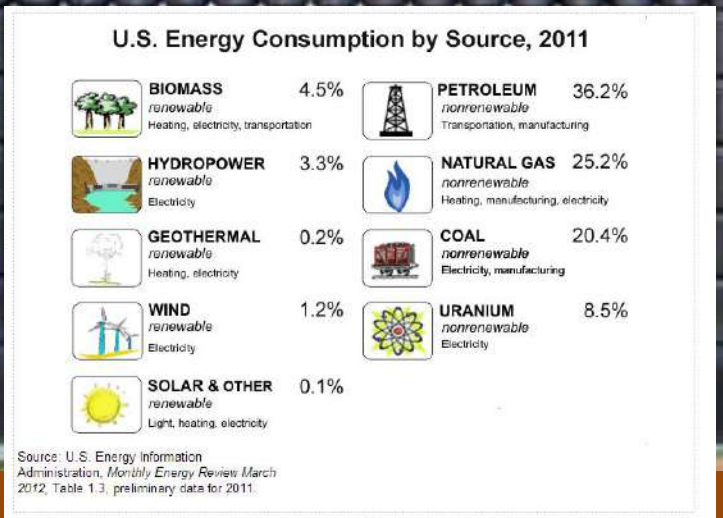
- Explain how mass and volume are related to matter.
- Explain that all matter is made up of atoms, of which there are different types or elements.
- Differentiate among molecules, mixtures, elements and compounds.
- Differentiate between the states of matter using their characteristics.
- Predict how changes in energy will affect matter and/or cause it to change state.
- Demonstrate that heat is transferred through convection, conduction & radiation.
- Describe ways that energy causes change.

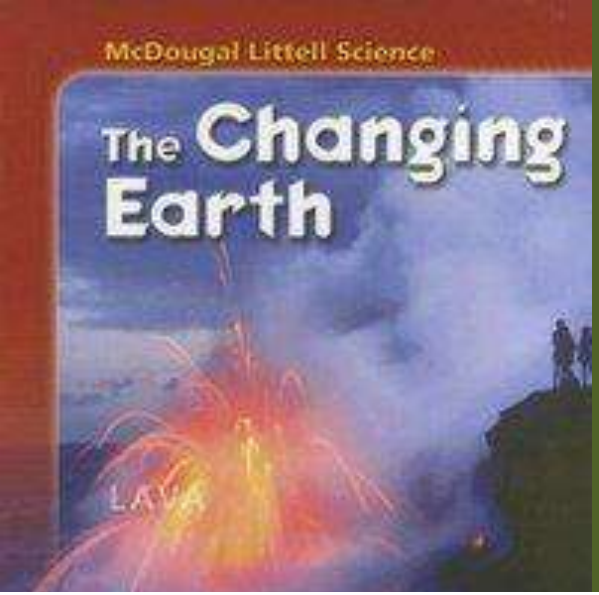




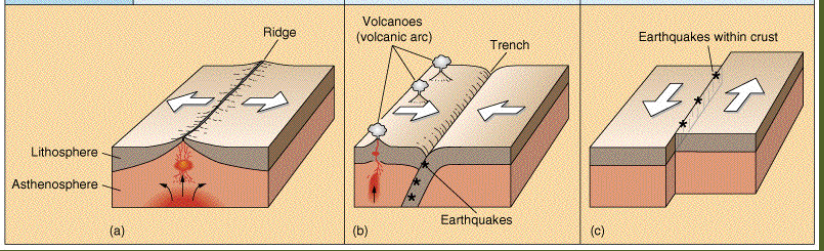


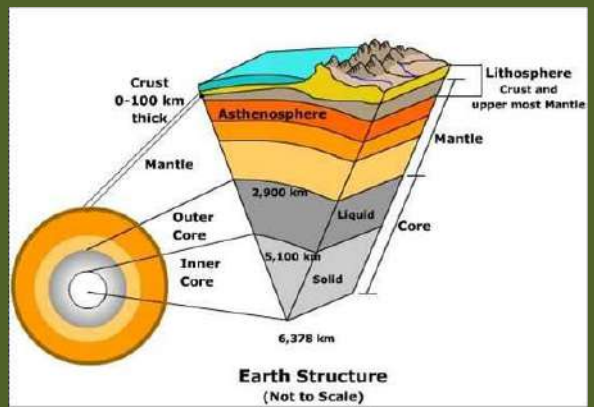
- Understand that energy is never created or destroyed, but only changes forms.
- Describe a way that the potential energy of an object can convert to kinetic energy.
- Describe examples of how energy conversions are often inefficient.
- Evaluate the pros and cons of different energy resources available to humans (solar, wind, fossil fuels, etc).



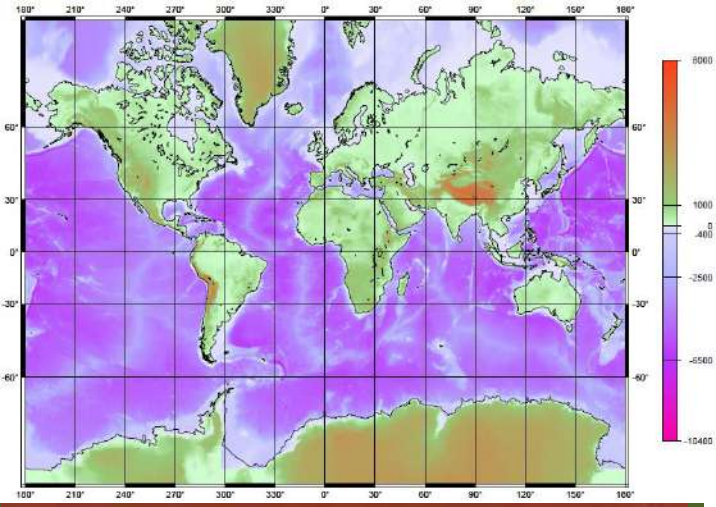


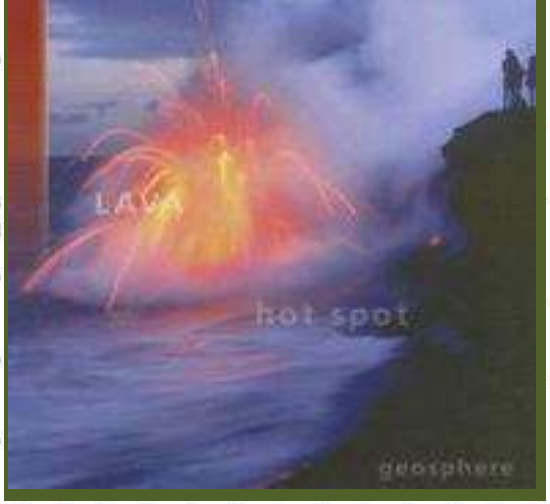
Type of Margin	Divergent	Convergent	Transform
Motion	Spreading	Subduction	Lateral sliding
Effect	Constructive (oceanic lithosphere created)	Destructive (oceanic lithosphere destroyed)	Conservative (lithosphere neither created or destroyed)
Topography	Ridge/Rift	Trench	No major effect
Volcanic activity?	Yes	Yes	No

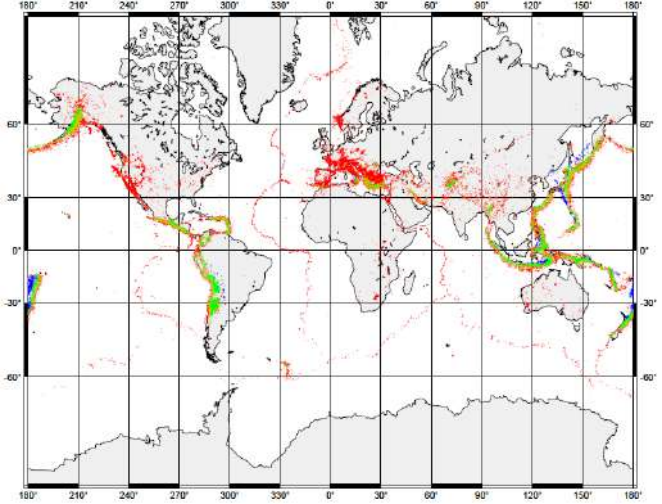


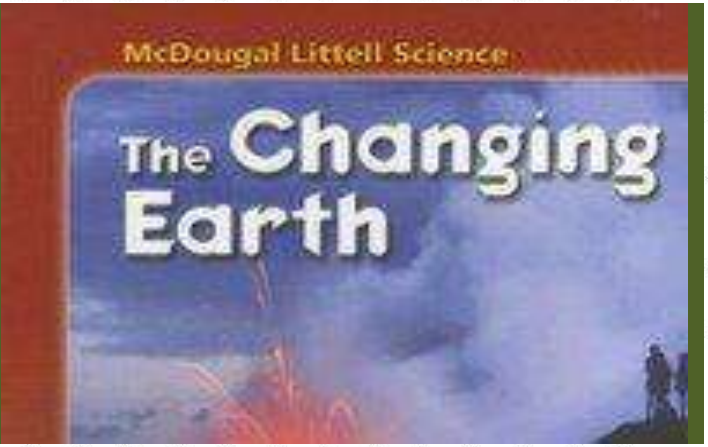


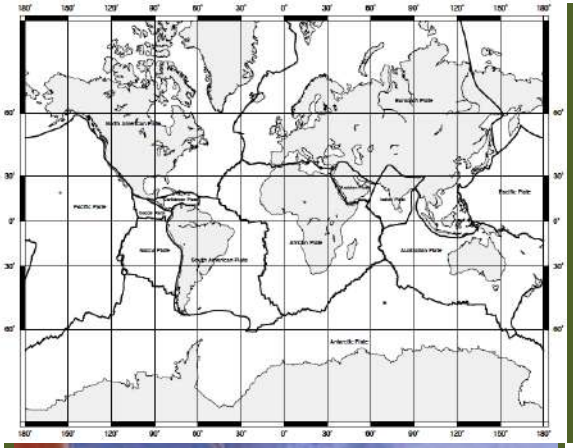
- Explain the factors affecting the rate of weathering of different landforms.
- Explain how the source of soil and its environment affect its composition.
- Describe the composition and characteristics of Earth's layers.
- Describe the plates that make up the Earth's outermost layers.
- Analyze evidence of plate boundaries and formation (i.e. continental drift).
- Identify the 3 types of plate boundaries and their common characteristics.
- Describe the effects of tectonic plate collisions and subductions.
- Explain how and why most earthquakes occur.
- Explain how movement along faults can form mountains and volcanoes.

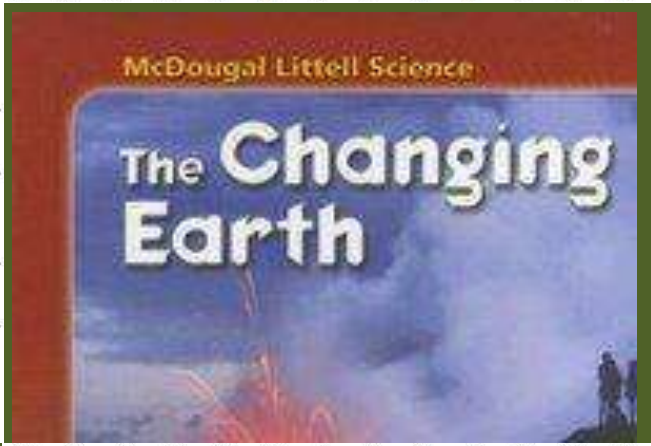



LAVA
hot spot
geosphere




McDougal Littell Science
The Changing Earth

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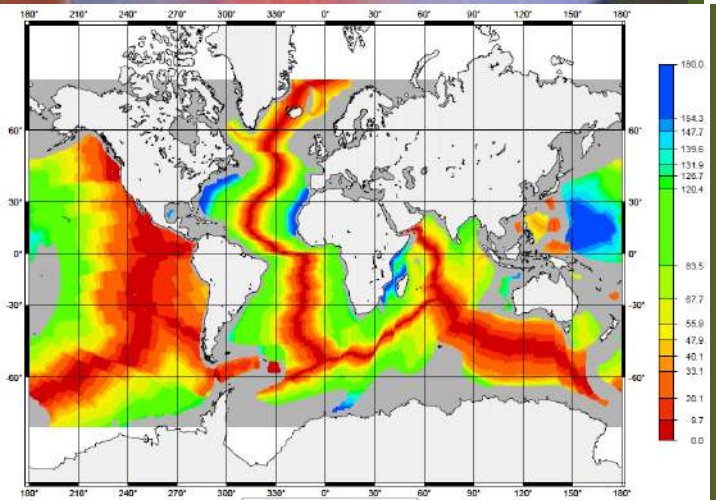


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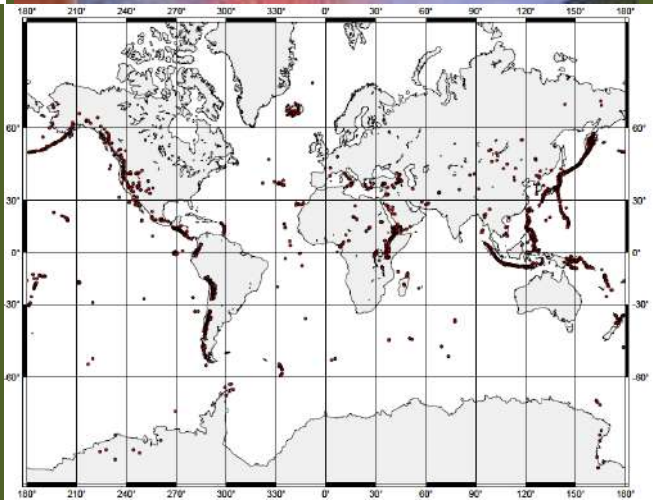
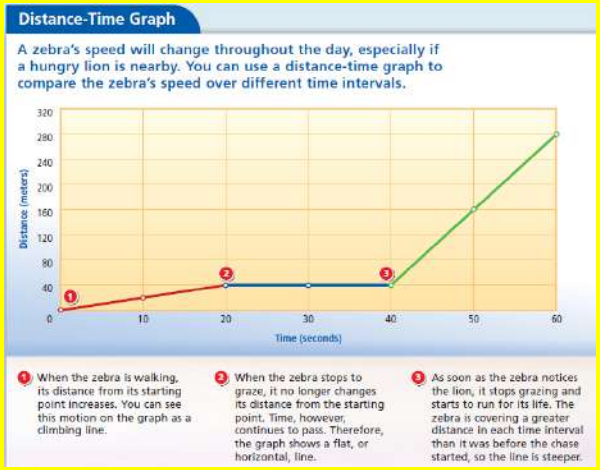
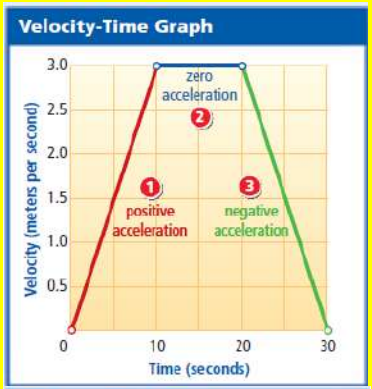
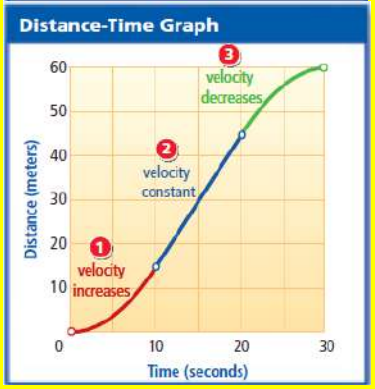
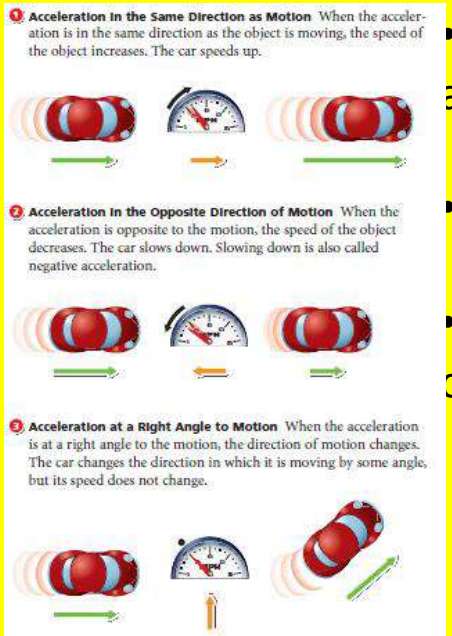


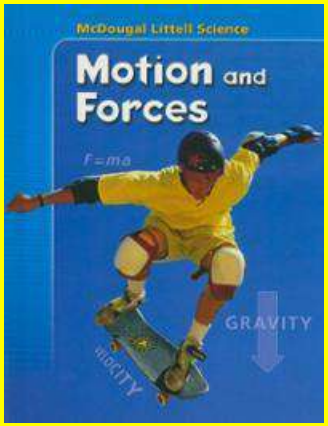


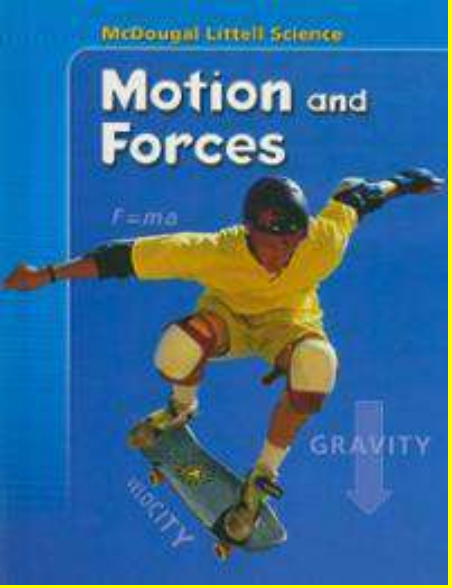






- Describe object's motion and position.
- Predict how the view of an object's motion will change based on the observer's frame of reference.
- Measure the distance and time an object travels then calculate its speed.
- Calculate speed and read a distance-time graph.
- Differentiate between speed, velocity, and acceleration.
- Acceleration is dependent on change in velocity.
- Recognize different types of forces that may act on an object.





- Compare balanced and unbalanced forces, and how they affect motion.

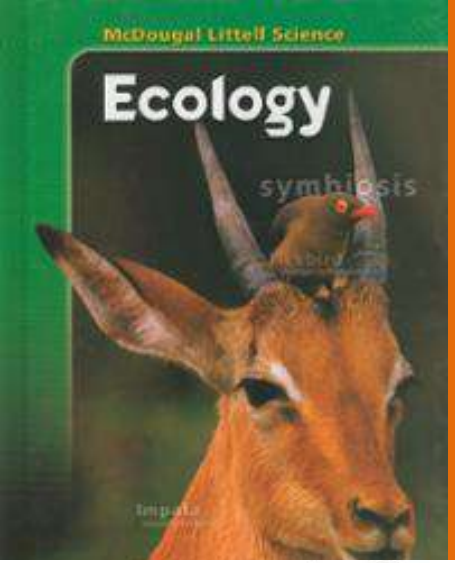
- Explain how the inertia of an object affects its motion.

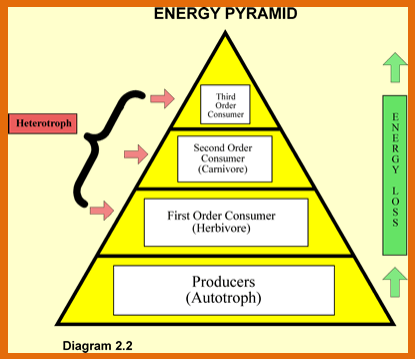
- Demonstrate that objects with different masses will travel at different speeds if the force applied is kept constant.

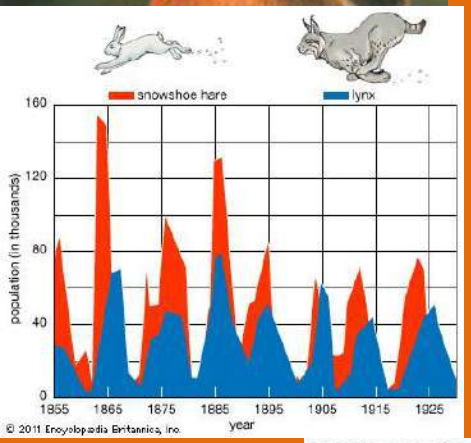
- Predict the impact of increasing and decreasing energy/force applied to an object (i.e. potential energy).

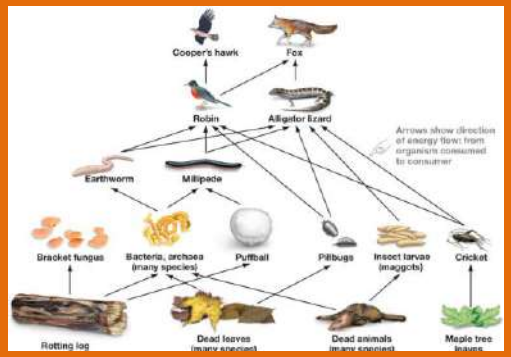
- Demonstrate that when objects collide, energy is conserved.

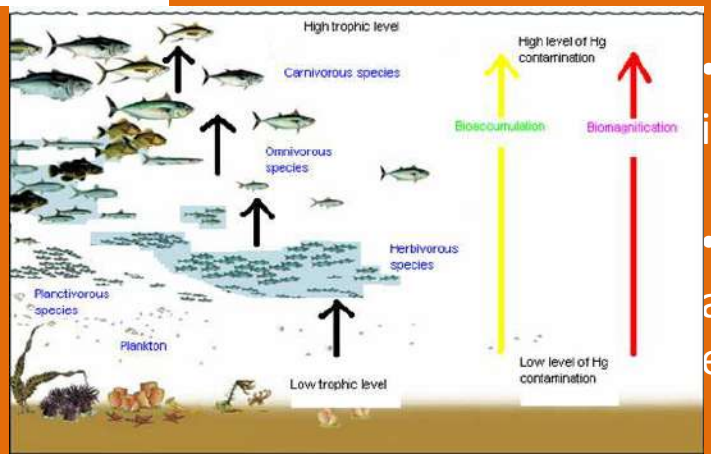
- Demonstrate how Newton's 1st, 2nd, and 3rd Laws of Motion affect moving objects, in a laboratory setting.



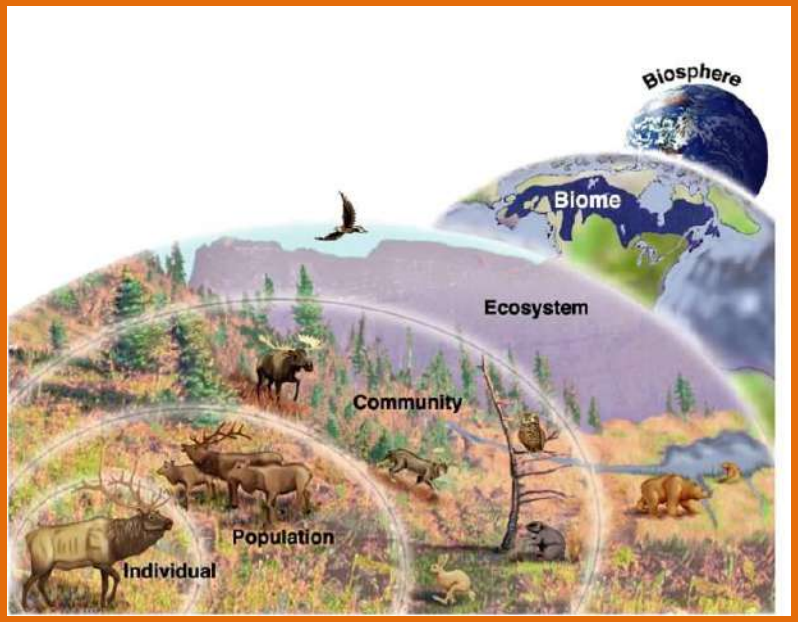


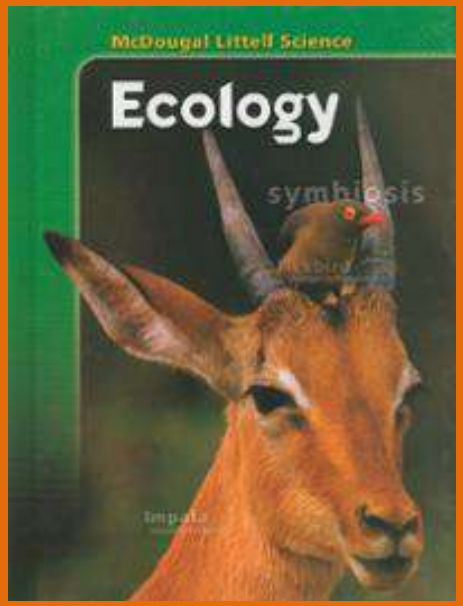






- Discuss the energy transformations that occur in a food web beginning with photosynthesis (producers)
- Discuss food webs and determine cause and effect of changes that might occur in the interrelationships of organisms
- Explain how living organisms transfer energy through an ecosystem via food webs, and how the amount of energy is affected as this happens.
- Analyze a graph depicting the rise and fall of organisms in a food web over time.
- Explain how feeding relationships are important in an ecosystem.
- Explain biomagnification , identify a source and describe how it might impact the environment.



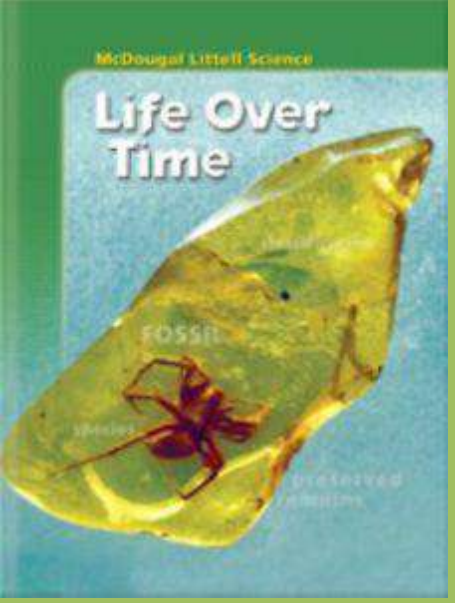


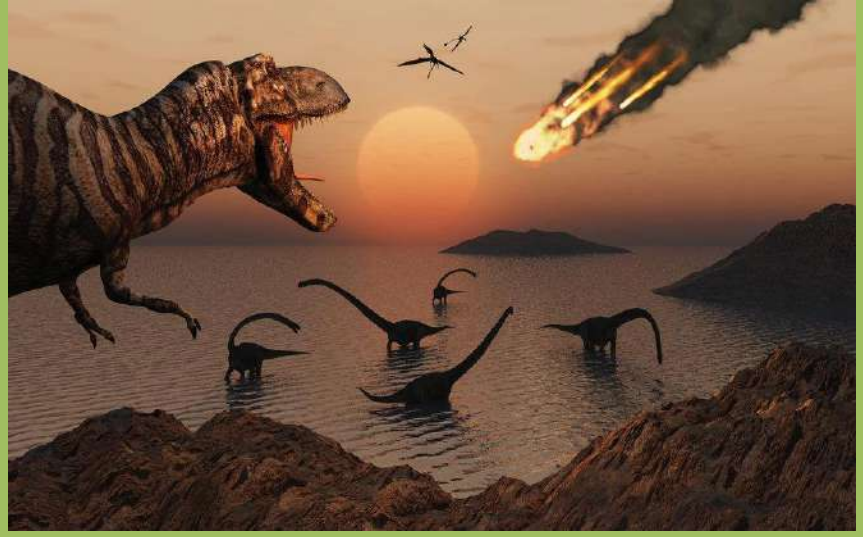
- Recognize how an organism is an integral part of environment at different levels of organization (e.g. niches, habitats, populations, communities, ecosystems, biomes, etc.)

- Describe the different types of interactions between organisms in an ecosystem.

- Describe 3 symbiotic relationships and how each species is affected.

Interaction	Species A	Species B
Commensalism	Receives benefit	Not affected
Mutualism	Receives benefit	Receives benefit
Parasitism	Receives benefit	Harmed



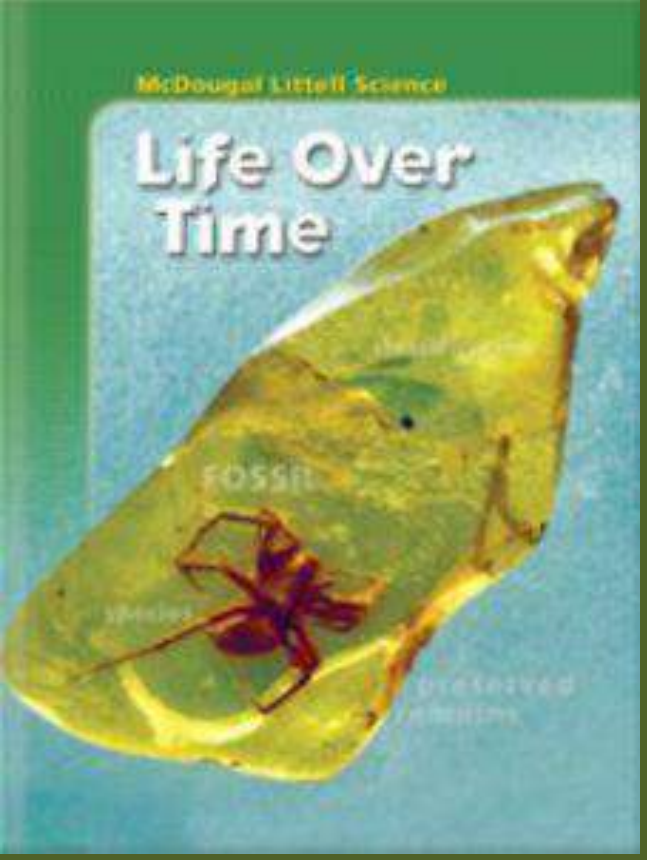


- Relate the conditions of the early earth to the development of unicellular and then multi-cellular organisms.

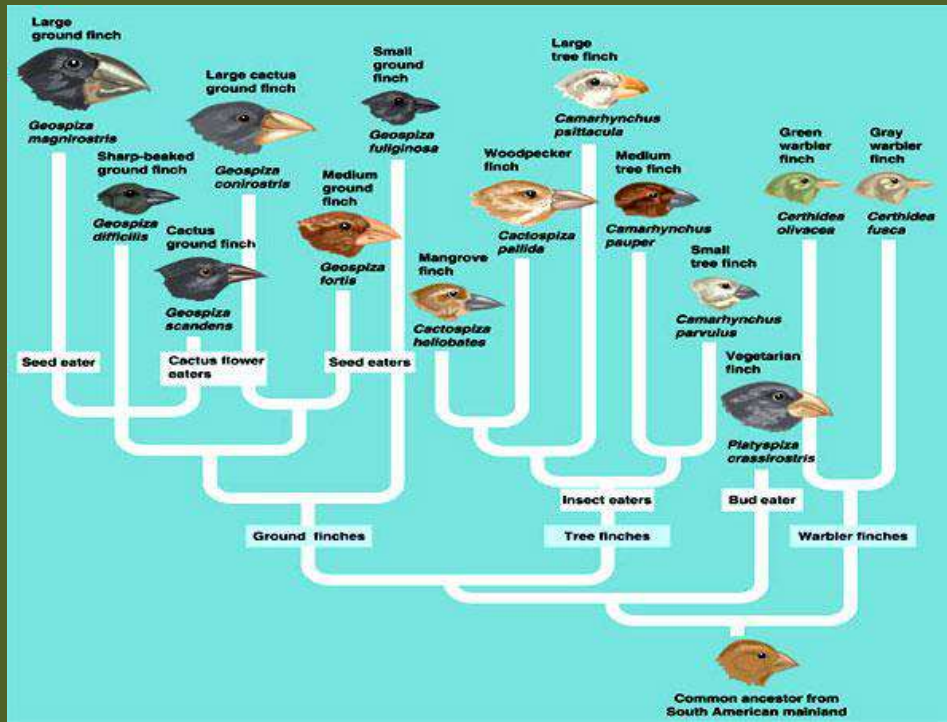
- Explain how scientists use clues and patterns from fossil records to collect evidence about the history of life.

- Suggest possible causes and examples of mass extinctions.

- Describe ways that new species arise from older species.



- Model the effects of natural selection in a population.
- Describe evidence that both Darwin and modern scientists used to support evolution.



J.P. Case Middle School

PARENT PORTAL

Search: GO

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Raymond Tasker

Welcome to Team 7-4 Science Homepage.

Email Address: rtasker@frsd.k12.nj.us
Phone Number: 284-5100

Team 7-4 science students are in need of emptied and rinsed 12oz aluminum cans for a future project.

"The ultimate test of man's conscience may be his willingness to sacrifice something today for future generations whose words of thanks will not be heard." G. Nelson

Raymond Tasker

- **A Day Homework**
- B Day Homework
- Overview
- Homework Policy
- McDougal Littel
- Calendar

September 9th: Read section 1.2 and complete the section review questions on page 21 in your journal.

September 11th: Read section 1.3 and complete the section review questions.

September 15th: Complete the *Investigate Greenhouse Gases* worksheet. Read section 1.4 and complete the section review questions in your journal. Review section 1.3.

September 17th: Review section 1.4. Also bring in rinsed 12oz aluminum cans only if you have them.

September 19th: Finish your challenge reading: *What Causes the Smell After Rain.* Also read section 2.1 and complete the section review questions.

September 23rd: Read section 2.2 and complete the section review questions.

Grades based on Point system

Extra Help:

Homeroom 8:10-8:29am

Tutorial: 1:21-1:51

Excel: 1:52-2:39