Question 31 (page 291)

A Incorrect. The arrows point from younger stages to older stages, so the direction of the arrows in the model is correct.

B Incorrect. A froglet is a younger stage than a young frog. A froglet still has a short tail, but a young frog does not. The order of the froglet and the young frog in the model is correct.

C Incorrect. If you started the numbering with the tadpoles, this would suggest that a tadpole is the earliest stage in a frog's life. However, an egg, not a tadpole, is the first stage in a frog's life.

D Correct. In science a model is used to represent something in nature. One way to improve this model would be to add more information. The length of each stage in this frog's life cycle would help viewers understand the life cycle better.

Question 32 (page 291)

A Incorrect. A lily pad leaf may or may not have these cuts. Even without the cuts, the leaf would still float.

B Correct. When an object is less dense, it will float on the more dense substance.

C Incorrect. The water in the pond would have much more mass than the lily pad.

D Incorrect. The temperature of the lily pad would not affect its ability to float.

Cluster 2

Question 33 (page 293)

A Incorrect. Very few plants grow on the top of high mountains because of the cold temperatures and thin soil.

B Incorrect. Grazing animals feed on plants, but very few plants grow on top of high mountains. So grazing animals will not live where they can't find food.

C Correct. Many high mountain peaks are very cold. Water at the top of high mountains is often frozen into ice or snow throughout much of the year. Plants cannot take in water through their roots if the water is frozen.

D Incorrect. Trees need water to grow. Trees would be more likely to grow in an area that received a lot of rainfall. High mountain peaks, however, do not receive much rainfall. Most of the water that falls on high peaks is in the form of snow.

Question 34 (page 293)

A Incorrect. Many liquids, such as pure water, are not solutions. If a liquid does not contain a dissolved substance, it is not a solution.

B Correct. The chemical weathering of rock causes many minerals and salts to gradually dissolve in water. When one substance dissolves in another, a solution is formed.

C Incorrect. Types of sediment such as sand and clay do not dissolve in water. A mixture of water and sediment is not a solution because the sediment can be separated from the water with a filter.

D Incorrect. A solution is a mixture that contains one substance dissolved in another. A compound is a single substance made up of two or more elements.

Question 35 (page 293)

A Correct. The moving water of the rivers picks up rocks and sediment from the hills and deposits them downstream or in the ocean. Over time this action can change the shape of nearby hills.

B Incorrect. Rivers flow downhill. They carry rock and sediment from the slopes of the hills and deposit them downstream or in the ocean.

C Incorrect. The glacier in this drawing is near the top of a high mountain peak. Rivers flow downhill, so they carry water away from the glacier rather than toward it.

D Incorrect. A fault is a break in Earth's crust where large sections of rock move past one another. Faults are formed by strong forces within Earth's crust, not by rivers.

Activity

Which traits do you have? (page 294)

You should have circled the traits that you have. You should have circled five traits in all, one from each pair.

The way your chart looks depends on the traits of the people you studied. Here is an example of part of a completed chart.

Name	Can curl tongue	Cannot curl tongue	Free earlobes	Attached earlobes	Hair on fingers	No hair on fingers	Widow's peak	No widow's peak	Dark eyes	Light eyes
1. Michelle	✔		✔			✔		✔	✔	
2. Robert	✔			✔	✔			✔		✔

Which traits are more common? (page 296)

You should have underlined the more common trait in each pair. If both traits in a pair were equally common, you should not have underlined either of them.

Share your traits! (page 296)

Which of the common inherited traits do you have? You should have listed the common traits that you share.

What are some of your other inherited traits? There are many inherited traits, so there are many that you could have listed. Here are just a few examples: naturally curly hair, dimples, and freckles. Make sure that you didn't list any traits that are *not* inherited. Remember, inherited traits are passed from parents to children in genes.

What are some of your traits that are not *inherited?* There are many traits that you might have listed. Here are a few examples of traits that are *not* inherited: having pierced ears, knowing how to read Spanish, and having painted fingernails. These are traits that you weren't born with.

Pets have traits, too! (page 297)

Make a list of inherited traits for cats or dogs. There are many inherited traits you might have listed. Here are a few inherited traits of cats: whiskers, clawed paws, eye color (yellow, green, or blue), tail width (thick or thin), and nose color (pink or dark). And here are a few inherited traits of dogs: pointed teeth, good sense of smell, eye color (dark or light), size (small, medium, or large), and nose color (black or brown).

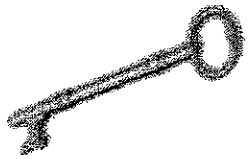
The way your chart looks will depend on the type of pet you chose and on the traits of the pets you looked at. Here is an example of part of a completed chart.

Pet's name or place where you saw the pet	Light fur	Dark fur	Short fur	Long fur	Striped fur	No stripes	Thick tail	Thin tail	Pink nose	Dark nose
1. Mittens (Mr. Wilson's cat)	✔			✔		✔	✔			✔
2. Cat on Mighty Meow TV ad	✔		✔		✔			✔	✔	

Which pet traits were more common? You should have listed the traits that were shared by more than half of the pets you looked at.

VOCABULARY

Key Vocabulary

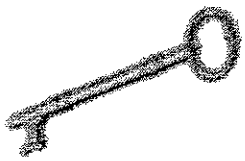


Course Title: ___Science_____

Grade Level: ____2nd Grade_____

Amphibian	Germinate	Moonlight	Rock	Water cycle
Artic	Gravity	Motion	rotation	Water vapor
Boulder	Habitat	Muscles	Saliva	Weather
Cactus	Heart	Music	Sand	Wind
Centimeter	Heart rate	Natural resource	Season	Woodland forest
Cirrus	Insect	Nonliving	Seed coat	Air
Constellation	Irreversible	Nutrient	Seedling	Attract
Crater	Life cycle	Orbit	Skeleton	Force
Cumulus	Liquid	Paleontologist	Soil	Balance
Desert	Litter	Permanent teeth	Solar energy	Bargraph
Digest	Living	Pitch	Solid	Camouflage
Dinosaur	Location	Pollution	Sonar	Change
Drought	Loudness	Pond	Sound	Climate
Energy	Lungs	Property	Stomach	Compass
Environment	Mammal	Rain forest	Stratus	Conclusion
Evaporate	Mass	Reconstruct	Sun	Conservation
Extinct	Matter	Recycle	Temperature	Dissolve
Food chain	Milliliter	Reptile	Thermometer	Earthquake
Forest	Mineral	Resource	Transportation	Friction
Fossil	Mixture	Reuse	Triceratops	Hibernation
Gas	Moon	Reversible	Vibrate	Heat

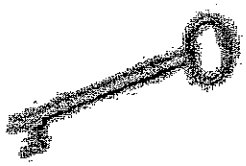
Key Vocabulary



Course Title: **Science**_____

Grade Level: **3rd Grade**_____

Amphibian	Energy pyramid	Interact	Precipitation	Solid
Atmosphere	Environment	Landform	Predator	Solution
Atom	Erosion	Leaf	Prey	Star
Axis	Evaporation	Lever	Prism	Stem
Bird	Fish	Liquid	Producer	Telescope
Canyon	Flood	Mammal	Recycle	Temperature
Chemical change	Food chain	Mantle	Reflection	Thermometer
Chlorophyll	Food web	Mass	Refraction	Trait
Clay	Force	Matter	Reptile	Valley
Comet	Forest	Mineral	Resource	Volcano
Community	Fossil	Mixture	Revolution	Volume
Condensation	Freshwater	Motion	Rock	Water cycle
Conductor	Gas	Mountain	Rock cycle	Weather
Conservation	Germinate	Orbit	Root	Weathering
Consumer	Gills	Phases	Rotation	Weight
Contour plowing	Glacier	Photosynthesis	Salt water	Wind
Core	Gravity	Physical change	Scales	Work
Crust	Habitat	Physical property	Seed	
Desert	Heat	Plain	Seedling	
Earthquake	Incline plane	Planet	Simple machine	
Ecosystem	Inherit	Plateau	Soil	
Energy	Insulator	Population	Solar system	



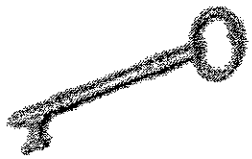
Key Vocabulary

Course Title: **Science**

Grade Level: **4th**

Absorption	Conduction	Front	Magnet	Simple Machine
Acceleration	Conductor	Fuel	Mammal	Solar System
Air Mass	Conservation	Fulcrum	Mantle	Solid
Air Pressure	Consumer	Fungi	Mass	Solubility
Amphibian	Crust	Gas	Matter	Solution
Anemometer	Density	Gravity	Metamorphic Rock	Species
Artery	Dissolve	Greenhouse Effect	Migration	Star
Arthropod	Earthquake	Habitat	Mimicry	succession
Asteroid	Echo	Hibernation	Mineral	System
Atmosphere	Ecosystem	Humidity	Nerve	Temperature
Axis	Energy	Igneous Rock	Nutrient	Telescope
Barometer	Environment	Inclined Plane	Orbit	Tide
Brain	Erosion	Instinct	Organ	Tissue
Camouflage	Esophagus	Insulator	Oxygen	Troposphere
Camouflage	Evaporation	Invertebrate	Pitch	Vein
Charge	Fault	Kingdom	Planet	Vertebrate
Circuit	Fertile	Lava	Precipitation	Volcano
Classification	Focus	Lever	Producer	Volume
Climate	Force	Liquid	Pulley	Wedge
Comet	Fossil	luster	Reptile	Weight
Condensation	Friction	magma	Sedimentary Rock	Work

Key Vocabulary



Course Title: Science
Grade Level: 5th

laboratory	graduated cylinder	camouflage	landforms	
investigation	food web	metamorphosis	sediment	
experiment	food chain	habitats	erosion	
field investigation	weather vane	tundra	weathering	
chemicals	rain gauge	carnivores	nonrenewable	
calculator	centimeter	biomes	minerals	
microscope	millimeter	consumers	renewable	
hand lenses	kilometer	adaptation	lunar	
thermometer	Celsius	reflection	orbit	
compass	air pressure gauge	refraction	atmosphere	
balance	traits	lens	water cycle	
meter stick	infer	telescope	carbon cycle	
timing device	learned characteristics	circuit	nitrogen cycle	
magnet	organism	electromagnet	precipitation	
electromagnet	migration	carbon dioxide	earthquakes	
collecting net	hibernation	physical properties	glaciers	
safety goggles	adaptive characteristics	mixture	deposition	
mass	environment	constructive force		
volume	photosynthesis	destructive force		