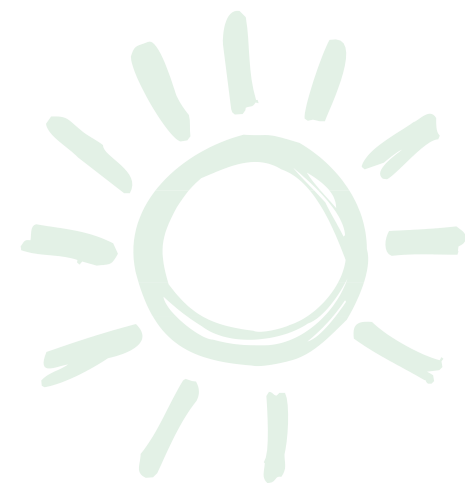




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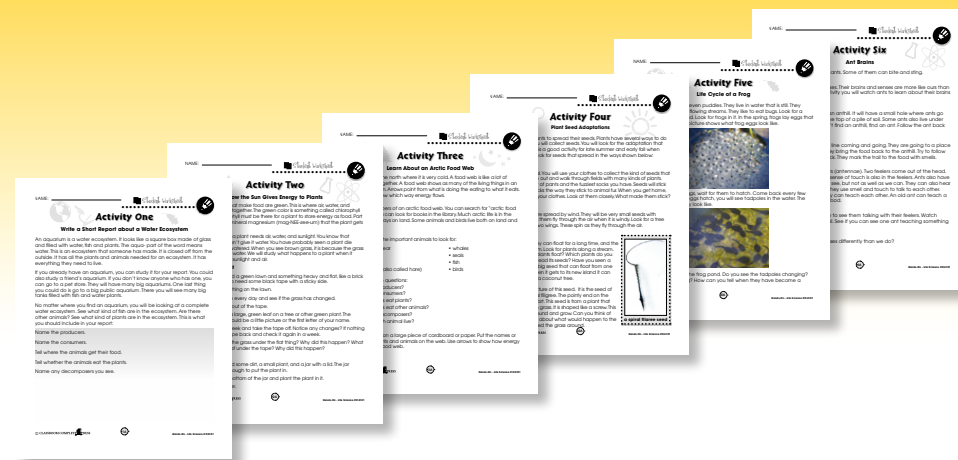
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Food and Energy

1. Circle **T** if the sentence is True or **F** if it is False.

- T F a) Plants get energy from the Sun.
 T F b) Animals get energy from plants.
 T F c) Too many plants make the air hard for us to breathe.
 T F d) Animals need air but plants don't.
 T F e) Animals and plants both need water.

2. Put a check mark (✓) next to the answer that is the most right.

a) What can't move around to look for food?

- A birds
 B fish
 C plants
 D snakes

b) What do plants and animals NOT need to live?

- A air
 B energy
 C rocks
 D water

c) Which group shows all living things?

- A dog, tree, cloud
 B cat, fish, grass
 C water, mouse, fly
 D cow, mountain, daisy



Food and Energy

A Almost all plants and animals need three things: air, water and **energy**. Energy is what we need to do things. We need energy to run, to lift things, and to keep our bodies warm. Some animals also need a place to live just as we do. Most plants also need dirt to sink their roots into.



Plants need air, water and sunlight to make food.

It all starts with the Sun. Plants get energy from the Sun. They store that energy as food. When we eat plants, we get the energy.

Plants, animals and people all need air. We use different parts of the air though. What animals and people breathe out is what plants take in to make food. Plants also take in water to make food. What plants give off to the air is exactly what animals and people need. We mix this part of the air with food to get energy.

So you see—it all works very neatly. Plants take water and what we breathe out to change sunlight into food. When they do this, they give off the part of the air we need. We then eat the food and give off more of what the plants need. What a nice system—an ecosystem!

What three things do plants need to make food?



Food and Energy

1. Circle **T** if the sentence is True or **F** if it is False.

- T F a) A plant can make food.
 T F b) Plants have thorns for bees to rest on.
 T F c) Plants know which way is up.
 T F d) Animals get energy from water.
 T F e) Some plants can turn to face the Sun.

2. With a straight line, match each word on the left with its meaning on the right.

- | | | | |
|---|---------------|---|---|
| 1 | energy | plants and animals | A |
| 2 | living things | something plants need from the ground | B |
| 3 | minerals | a group of living things working together | C |
| 4 | ecosystem | what is needed to do things | D |

Food and Energy

3. Answer the questions in full sentences.

a) Pick an animal. Why does it need to be able to move?

b) Pick a plant. How does it keep from getting eaten by animals?

Extension & Application

4. Think about what plants need to stay alive. Think about what animals need to stay alive. Go to a park or a forest and look at plants and animals.

a) Pick a plant that you see at the park or forest. Draw a picture of it. Find your plant on the internet or reference book. How does it get the things it needs to stay alive? Make an information sheet with what you find.

b) Pick an animal that you see at the park or forest. Draw a picture of it. How does it get the things it needs to stay alive? Make an information sheet with what you find.



Study a Terrarium

This experiment can be done in pairs, groups or alone. Study food and energy in a terrarium.

This is the next step in your terrarium experiment. In the first experiment, you saw how to make an ecosystem. In this part, you will see how energy and matter move through the ecosystem.

The terra- part of terrarium means earth or land. The aqua- part of aquarium means water. So a terrarium is a land ecosystem. An aquarium is a water ecosystem.

This is what you will need:
All you need is the terrarium you made in Experiment One.



This is what you do:

- How does energy flow through your terrarium?
 - Where does it come from?
 - Who gets it first?
 - What becomes of it?
- Watch the plants for a few days. How fast are they growing?
- Try leaving a light shining all day and all night for a while.
 - Did the plants grow faster with more light?
 - Did they grow slower?
 - Explain what you saw.
- Where are the bugs getting their energy? How can you tell?
- If there are no dead leaves on the top of the dirt, put some there. Watch what happens to the leaves over many days.
 - Are the leaves turning to dirt?
 - Are the worms helping turn the leaves to dirt?



Word Search

Find all of the words in the Word Search. Words are written across, up, down, on an angle, and some are even written backwards.

- adaptation
- chrysalis
- consumer
- decomposer
- ecosystem
- energy
- fossil
- life cycle
- matter
- nerve
- nervous system
- nutrients
- pollen
- pollination
- producer
- pupa
- sense
- sense organ
- survival trait
- tadpole
- trait

A	E	L	O	P	D	A	T	A	R	B	L
S	D	C	D	E	P	N	R	E	S	F	I
E	E	A	G	U	E	E	C	R	T	H	F
N	C	I	P	L	T	U	S	E	N	S	E
S	O	J	L	T	D	M	K	M	E	U	C
E	M	O	A	O	A	E	E	U	I	R	Y
O	P	M	R	L	M	T	N	S	R	V	C
R	O	P	O	L	S	S	I	N	T	I	L
G	S	P	Q	Y	I	Y	R	O	U	V	E
A	E	S	S	D	L	S	T	C	N	A	U
N	R	O	V	E	A	S	S	W	X	L	V
Z	C	A	B	T	S	U	C	O	D	T	E
E	N	E	R	G	Y	O	F	G	F	R	E
H	I	A	J	W	R	V	K	L	M	A	V
N	I	O	P	X	H	R	Q	R	S	I	R
T	T	U	V	Y	C	E	Z	A	B	T	E
C	P	O	L	L	I	N	A	T	I	O	N



Comprehension Quiz

Part C

Answer each question in full sentences.

- Tell about the life cycle of a frog. Name all the stages. 3

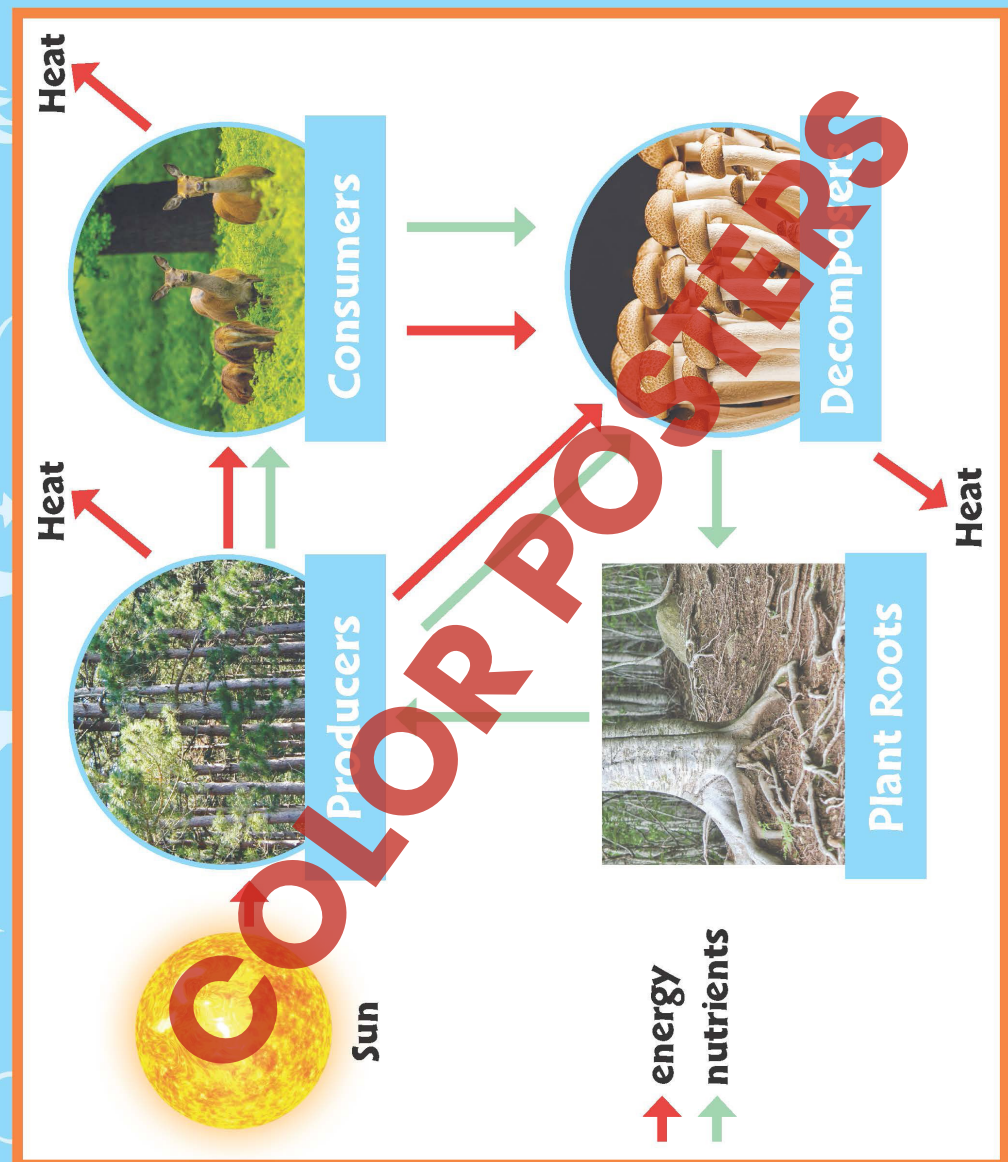
- You see a snake on a hiking trail and jump back. Two messages have been sent through your nerves. Where did each message start and where was it sent? 2

- The Sun sends energy to a food chain. What is the name of a producer, a first consumer, and a second consumer? How does each get its energy? 3

- Eagles eat small animals. Tell about two survival traits an eagle has that help it find food. Tell how each trait helps the eagle survive. 2

- What are parts of a forest ecosystem? Name two animals, two plants, and two things that aren't alive. 3

Energy Flow in an Ecosystem





Food and Energy



1. Circle **T** if the sentence is True or **F** if it is False.

- | | | | |
|---|---|----|---|
| T | F | a) | A plant can make food. |
| T | F | b) | Plants have thorns for bees to rest on. |
| T | F | c) | Plants know which way is up. |
| T | F | d) | Animals get energy from water. |
| T | F | e) | Some plants can turn to face the Sun. |

2. With a straight line, match each word on the left with its meaning on the right.

1	energy	plants and animals	A
2	living things	something plants need from the ground	B
3	minerals	a group of living things working together	C
4	ecosystem	what is needed to do things	D

1.

- a) **T**
- b) **F**
- c) **T**
- d) **F**
- e) **T**

3.

Answers will vary, but may include:

- a) A rabbit needs legs to run away from eagles.
- b) A cactus has thorns to poke things that try to eat it.

2.

1 D

2 A

3 B

4 C

4.

Answers will vary, but may include:

- a) Grass needs water, air, sunlight, and dirt. It needs nutrients that come from the ground.
- b) Grasshoppers need water, air, and food. It can eat grass. It gets nutrients from the grass too.

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11

