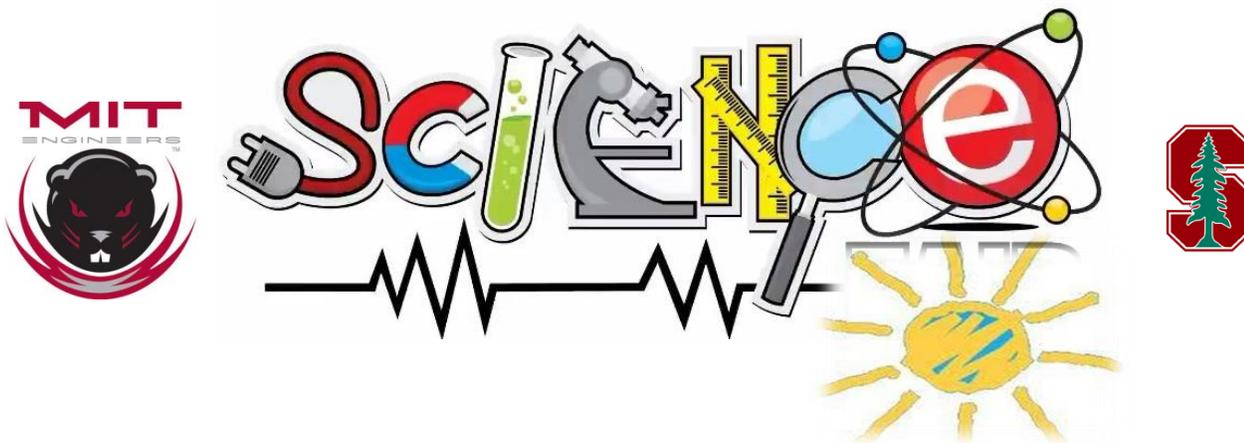


Name _____

5th Grade Science Remote Learning Packet

Week 6



Dear Educator,

My signature is proof that I have reviewed my scholar's work and supported him to the best of my ability to complete all assignments.

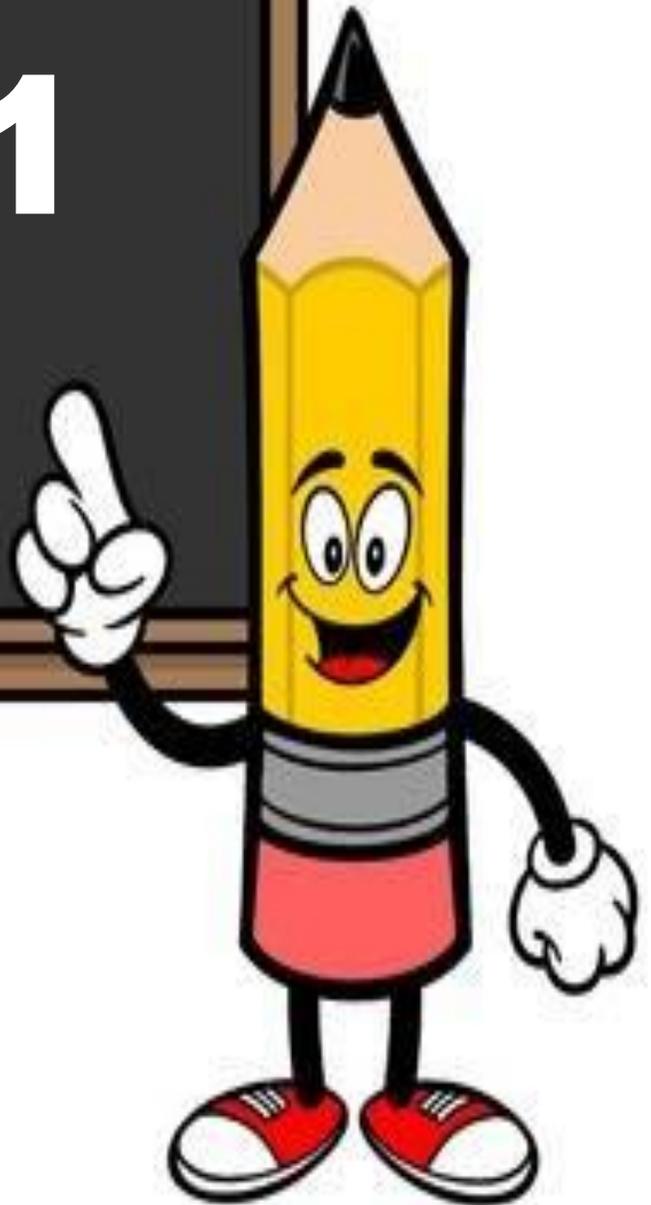
(Parent Signature)

(Date)

Parents please note that all academic are also available on our website at www.brighterchoice.org under the heading "Remote Learning." All academic packet assignments are mandatory and must be completed by all scholars.



Day # 1



Name: _____ Week 6 Day 1 Date: _____

BCCS-B

MIT Stanford

Guided Notes—What do animals eat?

Vocabulary:

1. **Predator:** an organism that obtains food by _____ and _____ other organisms; **apex predator** is at the top of the _____, also known as the _____ predator
2. **Prey:** an animal that is _____ and _____ by another for food
3. **Food Chain:** a series of organisms dependent of each other to _____; shows the path of energy from one living thing to another. Decomposers like bacteria are necessary for all food chains.
4. **Food Web:** a system of interlocking and interdependent _____

During the reading of the article, annotate/underline key information to help you answer the question, what do animals eat.

Animals losing fear, changing nature as big predators become scarce

By Washington Post, adapted by Newsela staff on 03.08.16 (available online at <https://newsela.com>)

Word Count **408**

Level **530L**



This raccoon is not afraid of predators—and that’s a bad thing, says scientist Justin Suraci. Because the largest predators are dying out and no longer a threat, smaller animals feel more secure and nature is thrown off-balance. Michael Clinchy

Some large animals hunt other animals. They are known as apex predators. Wolves and tigers are both apex predators.

Apex predators are important.

For example, wolves hunt elk. Elk are like large deer. By killing some elk, wolves keep elk herds from getting too large.

When there are too many elk, it causes problems. Trees cannot grow well because elk prevent them from taking root. Soon, birds have nowhere to live. One problem leads to another. The apex predators keep everything working.

Scientist Justin Suraci thinks apex predators are important for several reasons. It is not just that they kill other animals. It is important that other animals are afraid of them.

Too Much Time to Eat

Suraci says other animals spend much of their time worrying about apex predators. They hide and run. They carefully look and listen.

Fearful animals spend less time eating. More of the animals they eat then stay alive.

Suraci says all that is changing. Apex predators are quickly disappearing. Smaller animals are no longer afraid. They are eating more of the even smaller animals they hunt. The change is leading to big problems.

Suraci decided to test his idea. His plan was to go to a place with no apex predators. Then, he would try to bring fear back. He wanted to see what might change.

A Beach Experiment

Suraci traveled to the Gulf Islands in British Columbia, Canada. He decided to study the raccoons living there.

The raccoons were once hunted by big cats and bears. Now those predators are all gone. They are no longer scared.

Raccoons end up eating more fish and crabs. The fish and crabs may start disappearing.

Putting Fear Back into Raccoons

Suraci wanted to make the raccoons fearful again. He set up speakers near the shore. The speakers played the sounds of dogs barking.

The raccoons started to act differently. They came out in the open less. They checked for danger more. Because of that, they had much less time to hunt for fish and crab.

Soon there were more fish and crab around.

Of course, recordings of barking dogs would not work for long. The raccoons would realize the danger was not real.

Suraci says we must bring apex predators back. It is the only way to make things right again.

Using the article, answer the following questions in complete sentences. You will have 5 minutes to answer the questions.

1. What do animals eat? _____

2. Why is the apex or top predator so important? _____

3. When the ecosystem (where the animals live) is off-balanced, as was the case in the article, what happens with the animals that are not at the top of the food chain? _____

4. How can we solve this problem? _____

Watch the next 2 videos, *What if There were no Sharks* and *What Happens if all the Bees Die*. Take notes that will help you answer the question, what do animals eat.

Notes for What if There were no Sharks: _____

Notes for What Happens if all the Bees Die: _____

Background Reading for What do animals eat from PBS. Annotate/underline the key words or phrases to help you answer the question, what do animals eat.

No matter what the activity, everything an animal does requires energy. Giraffes need energy to run; monkeys need energy to climb; children need energy to play. But where does all of this energy come from? All animals acquire energy from the food they eat. Depending on the type of animal, this food may consist of plants, animals, or a combination of both.

Animals that eat only plants are called herbivores. Most herbivores, including the giraffe, macaw, ground squirrel, and elephant in this video segment, eat a wide variety of plants and plant parts. Some herbivores, however, are very particular about the plant matter they eat. Wild pandas have evolved to eat nothing but bamboo plants—a food that is plentiful where they live but not particularly nutritious for bears. Because of their inefficiency digesting plant material pandas need to eat a lot. Adult pandas spend 10-12 hours each day eating and consume about 40 pounds of food during that time.

Animals that eat only other animals are called carnivores. Polar bears, sharks, woodpeckers, and anteaters are all carnivores. Like herbivores, however, carnivores may generalize and eat a wide variety of animals, or specialize and eat only one type. Bald eagles, for example, are not very particular about the type of meat they eat. They eat road-killed animals or the occasional rabbit plucked from a field, fish they've caught fresh or rotting fish on the bank of a river. They are known to scavenge for food in city dumps. In contrast, anteaters are highly specialized creatures. These animals eat little else besides ants and termites, and their sticky tongue and powerful front legs (for tearing into insect mounds) are perfectly adapted for doing just that.

Omnivores are the least choosy about what they eat. These animals, which include raccoons, opossums, and black and grizzly bears, eat both plants and animals, and often eat a wide variety of each. A typical grizzly bear, for example, will eat just about anything it can catch and get its mouth around. Grizzlies are known to kill their own food, including deer, but will also scavenge the carcasses of dead animals. They also eat fish, crustaceans, amphibians, small mammals, insects, berries, tree buds, and grass.

Answer the questions in full sentences:

1. What are some similarities and differences in how these animals eat? _____

2. What did you find particularly interesting about how these animals eat? _____

3. Which animal eats most like the way you eat? _____

Exit Ticket:

Take the knowledge that you learned from the readings and videos and answer our question for the day. Your answer should show thought and be in a complete sentence. You should be thinking about food chains/webs, what would happen when an ecosystem is off-balance, and truly the types of food animals eat.

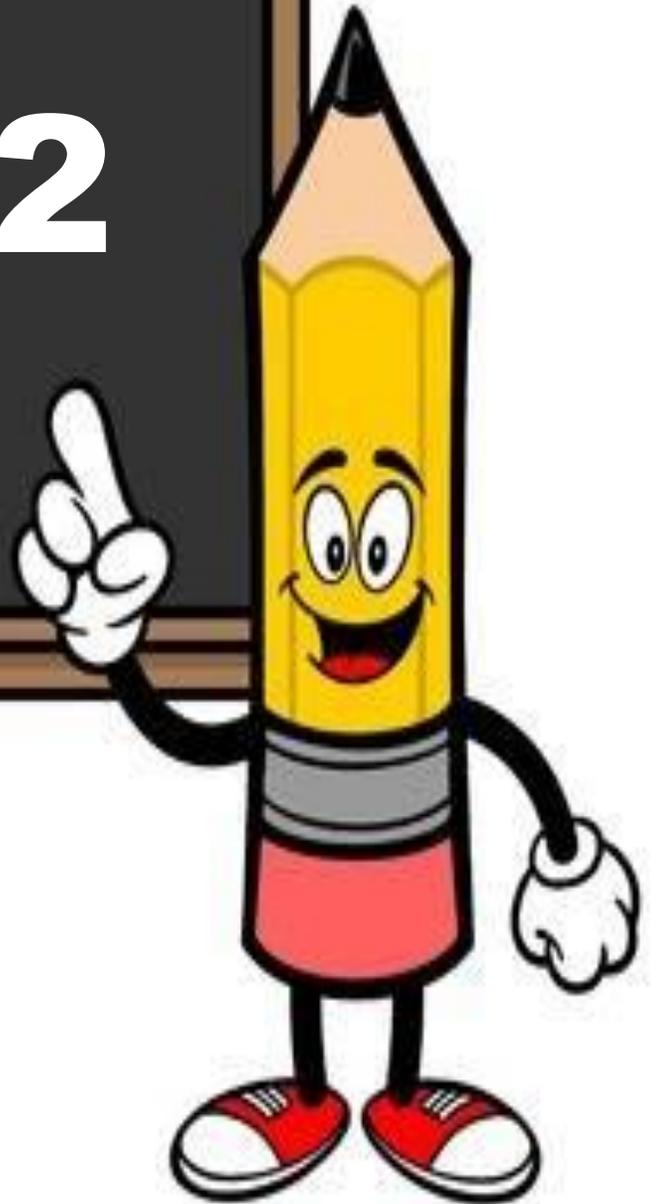
What do animals eat? _____

Write down a basic food chain starting with grass and ending with you.

Grass → _____ → _____ → You



Day # 2



Name: _____ Week 6 Day 2 Date: _____

BCCS-B

MIT Stanford

Guided Notes—How does the process of photosynthesis work?

Vocabulary:

1. **Photosynthesis:** the _____ by which a green plant turns _____ and carbon dioxide into _____ when the plant is exposed to light
2. **Chloroplasts:** a green pigment, present in all _____ plants, that is responsible for the _____ of light to provide _____ for photosynthesis
3. **Carbon Dioxide:** a _____ that is produced when people and animals breathe out or when certain fuels are burned and that is used by _____
4. **Convert:** to _____, or change into a different, or another form, _____, or state

During the reading of the article, annotate/underline key information to help you answer the question, how does the process of photosynthesis work.

A Plant Puzzle



Living things like plants, animals, and people need energy to survive and grow. People eat food for energy, but most plants use energy that they get from sunlight.

When you look at plants such as a tree, flower, or grass, what do you see?

You might notice their stems, trunks, branches, leaves, roots, or flowers, but how do they grow?

What are they made from? How did the plant make those parts?

Life is a puzzle in many ways. People don't all agree on how life started or why it exists. Yet a simple way of thinking about how plants grow is to think of the plant itself as a piece of a larger puzzle.

Each plant is part of its unique environment. Different environments could be oceans, forests, deserts, or cities. Each environment also has its own climate, which is partially based on how much sun and rain an area receives every year.

Since only certain plants grow in hot, cool, wet, or dry climates, each environment is made up of different types of plant life. A desert may grow palm trees and cacti, while a forest may grow tall pines or oak trees.

In order for a plant to grow, it needs three very important puzzle pieces: water, carbon dioxide, and light. Plants use their roots to take in water from the ground. They use their leaves to take in sunlight and carbon dioxide from the air.

Plants use three pieces to make their own food in a process called photosynthesis. Using the energy from the sun, plants convert water and carbon dioxide into sugar. This sugar feeds the plant's growth from a seedling into an adult. In the process, the plant releases oxygen into the air.

Another important piece to the growth of many plants is soil. Using their roots, plants take in nutrients from the soil that helps them grow. Giving a plant a spot in clean soil is important to make sure it doesn't absorb anything harmful from the dirt.

Plants make their food from carbon dioxide, water and light. They use this food to grow stems, trunks, roots, branches, leaves, and flowers. Now when you look at a tree, flower, or even a blade of grass, you can see all the pieces of the plant and how the entire puzzle fits together.

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NOVA | Photosynthesis

Watch the video and then discuss.

1. Why did von Helmont think that plants got their nourishment from soil? _____

2. Why did he eliminate soil as a source of nourishment and focus on water? _____

3. What did he measure to find out if the willow plant got its nourishment from soil? _____

4. Do you think that the factory is a good analogy for the process of photosynthesis in plants? Why or why not? _____

Flocabulary: Photosynthesis

Watch and listen to the song. During the second listen, answer the following questions:

1. What three things does a plant need to photosynthesize? How does each enter the plant? _____

2. Why does the rapper say that photosynthesis is “good for you and for me”? _____

3. How are the processes plants and animals use to get energy similar? How are they different? _____

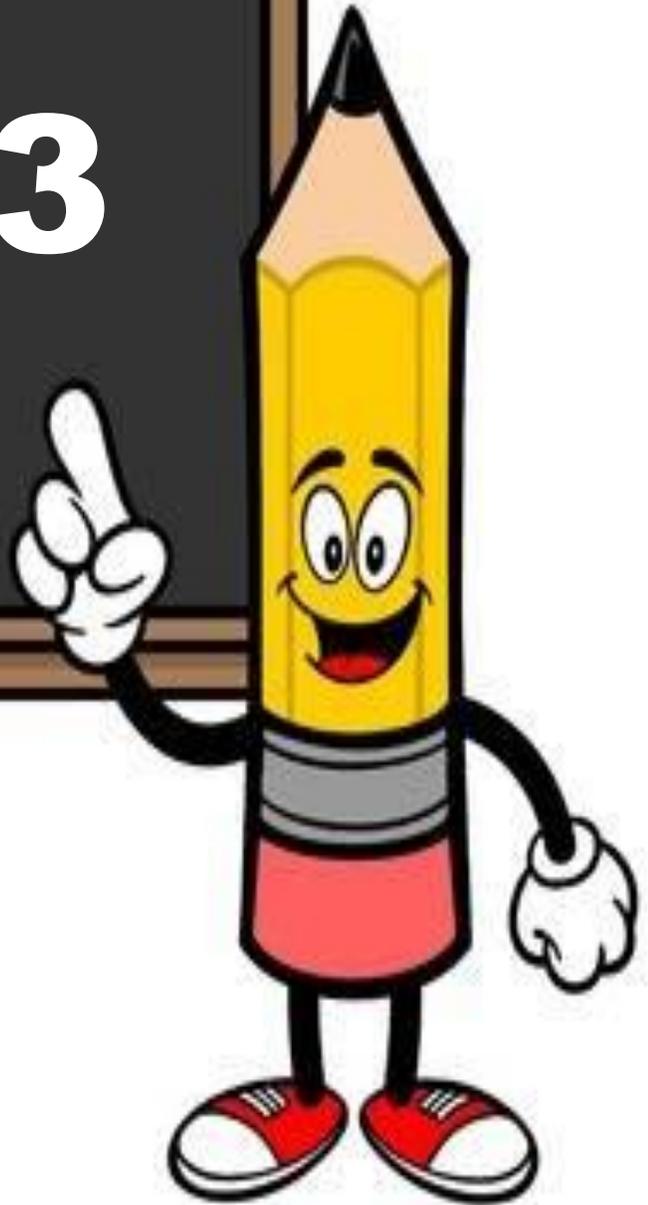
4. Imagine that plants stopped photosynthesizing. What do you think would happen? Why? _____

Exit Ticket:

Describe the process of photosynthesis and how it works. You can draw a diagram—be sure to label. Then make sure you describe on the lines what is happening. _____



Day # 3



Name: _____ Week 6 Day 3 Date: _____

BCCS-B

MIT Stanford

Guided Notes: What do plants eat?

What do plants eat? What do you think? _____

Vocabulary:

1. **Soil:** the top _____ of earth in which _____ grow
2. **Jan van Helmont:** was a _____, physiologist, and physician from the Spanish Netherlands
3. **Stomata:** plural for _____
4. **Stoma:** a tiny _____ or pore that is used for gas _____

Video Notes and Discussion Questions:

As you are watching the video explorations, take notes or answer the discussion questions.

Exploration 1: Notes-- _____

Exploration 2: Discuss—already completed before during the PowerPoint. We are skipping straight to Exploration 3.

Exploration 3: Discuss—How could you find out? _____

Exploration 4: Notes-- _____

Exploration 5: Discuss—Go ahead and guess; write it down. If the tree had been eating the soil, then what do you think the scientist (Jan van Helmont) will notice? Why do you think this? _____

Exploration 6: Notes-- _____

Exploration 7: Discuss—Do you think that air weighs anything? _____

What could you do to find out? Can you think of an experiment that would let you weigh air? _____

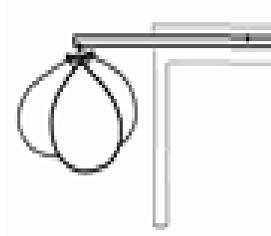
Exit Ticket:

Answer the question in a complete sentence.

After watching and discussing briefly what plants eat, we still don't know what plants eat or how they gain weight. Make a hypothesis, an educated guess, about what plants eat and how they gain weight.

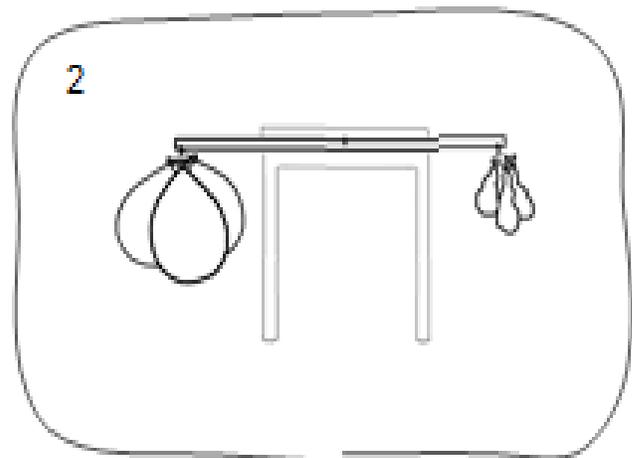
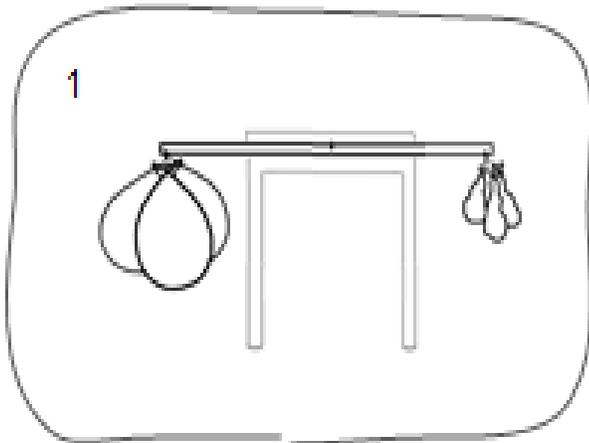
Weighing

Air Right now, your set-up looks like this. But soon your teacher will let out all the air from one side. What will happen? Answer the questions below, then find out!



1. Add arrows to the picture below to show how you think the scale will move if air **DOES** weigh something. Why do you think that?

2. Add arrows to the picture below to show how you think the scale will move if air **DOESN'T** weigh anything. Why do you think that?



3. Which drawing did the experiment look like in the end? (Drawing 1 or drawing 2?) What does that mean about air?