Name_____

5th Grade Science Remote Learning Packet

Week 12

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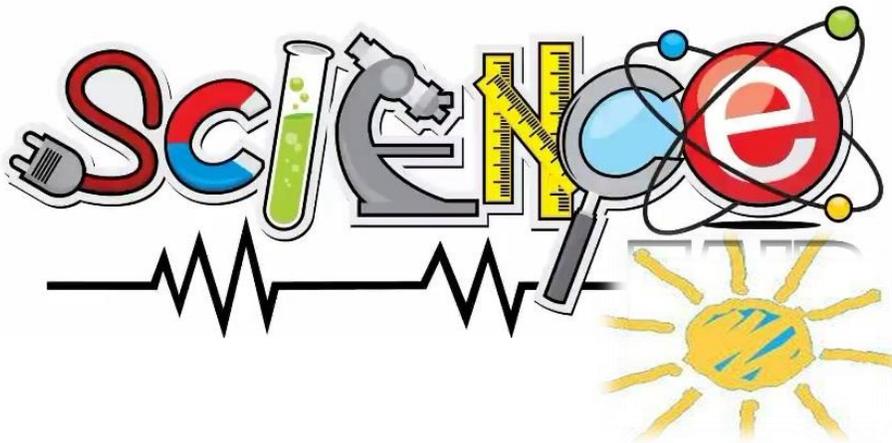
Dear Educator,

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.

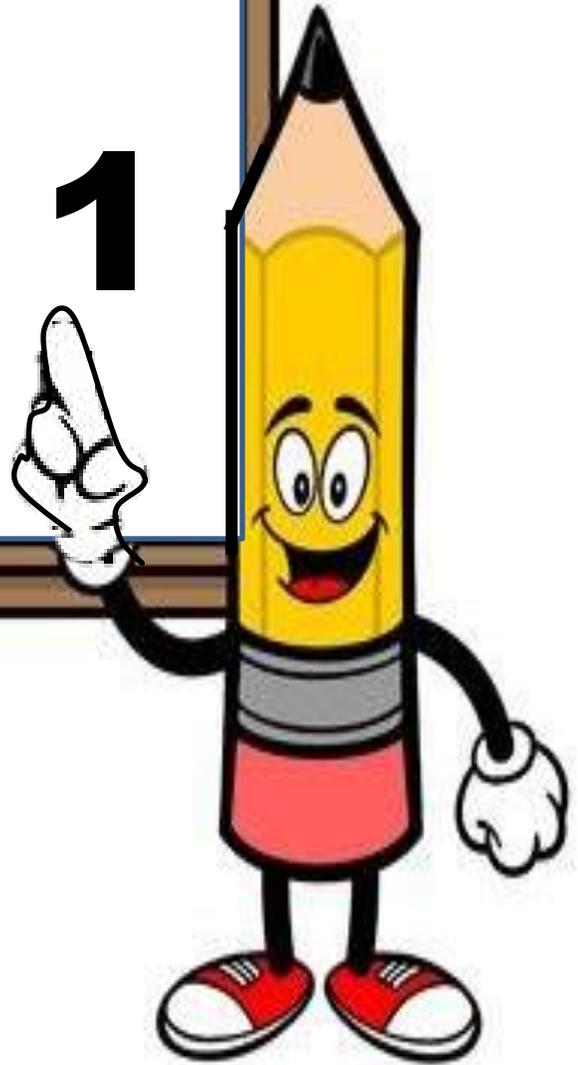_____   _____
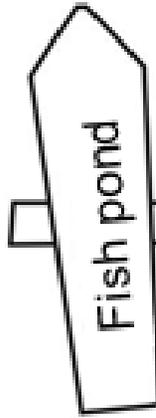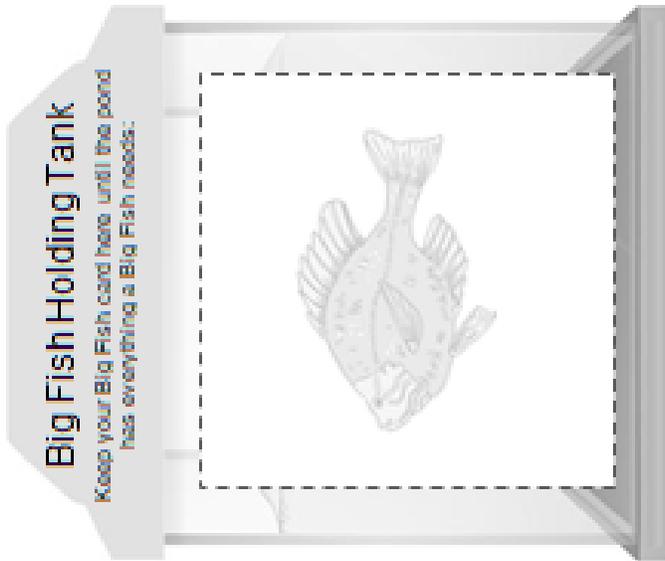(Parent Signature)   (Date)

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.
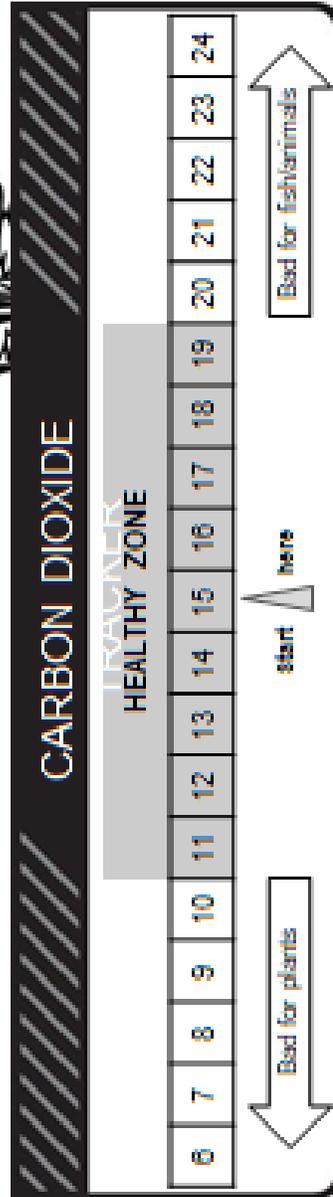
Day # 1

FISH-O-METER

Fish pond

Big Fish Holding Tank

Keep your Big Fish card here until the pond has everything a Big Fish needs.

BIG FISH'S
At least three

PRODUCER
As many as you want

DECOMPOSE
At least two

CARBON DIOXIDE

TRACKER

HEALTHY ZONE

| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

Bad for plants

Start here

Bad for fish/animals

Big
Fish

+6

carbon
dioxide
points

A Big Fish needs:
• at least 3 Big Fish
  Foods and 2
  Decomposers
• a healthy carbon
  dioxide level

Underwate
Plants
(Producers)

−3

carbon
dioxide
points

These plants take
all their carbon
dioxide from the
water.

Underwater
Plants
(Producers)

−3

carbon
dioxide
points

These plants take
all their carbon
dioxide from the
water.

Phytoplankton
(Producer)

−2

carbon
dioxide
points

These microscopic
plants take carbon
dioxide from the
water.

Phytoplankton
(Producer)

−2

carbon
dioxide
points

These microscopic
plants take carbon
dioxide from the
water.

Phytoplankton
(Producer)

−2

carbon
dioxide
points

These microscopic
plants take carbon
dioxide from the
water.

Underwater
Plants
(Producers)

−3

carbon
dioxide
points

These plants take
all their carbon
dioxide from the
water.

Fungi
(Decomposers)

+3

carbon
dioxide
points

Fungi break down
fish waste to make
carbon dioxide and
nutrients.

Fungi
(Decomposers)

+3

carbon
dioxide
points

Fungi break down
fish waste to make
carbon dioxide and
nutrients.

Bacteria
(Decomposers)

+3

carbon
dioxide
points

Bacteria break
down fish waste to
make carbon
dioxide and
nutrients.

Bacteria
(Decomposers)

+3

carbon
dioxide
points

Bacteria break
down fish waste to
make carbon
dioxide and
nutrients.

BIG FISH

Ecosystem Cards
Page 2

Algae (Producers)

-3 carbon dioxide points
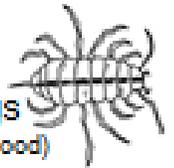
Algae take all their carbon dioxide from the water.

Algae (Producers)

-3 carbon dioxide points

Algae take all their carbon dioxide from the water.

Aquatic Sowbugs (Big Fish Food)

+ carbon dioxide points

Your pond needs plants, algae, or phytoplankton for these aquatic sowbugs to eat.

Snails (Big Fish Food)

+2 carbon dioxide points

Your pond needs plants, algae, or phytoplankton for these snails to eat.
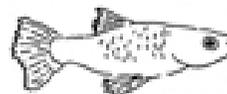
Tadpoles (Big Fish Food)

+2 carbon dioxide points

Your pond needs plants, algae, or phytoplankton for these tadpoles to eat.

Guppies (Big Fish Food)

+2 carbon dioxide points

Your pond needs plants, algae, or phytoplankton for these guppies to eat.

Freshwater Shrimp (Big Fish Food)

+2 carbon dioxide points

Your pond needs plants, algae, or phytoplankton for these shrimp to eat.

Duckweed (Producer)

-1 carbon dioxide points

This floating plant takes carbon from the air as well as the water.

Duckweed (Producer)

-1 carbon dioxide points

This floating plant takes carbon from the air as well as the water.

Duckweed (Producer)

-1 carbon dioxide points

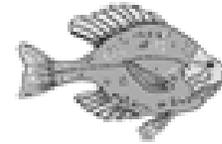This floating plant takes carbon from the air as well as the water.

Sludge Worms (Big Fish Food)

+1 carbon dioxide points

Your pond needs fish waste for these worms to eat.

Check the Pond!

To make sure the pond is ready for a big fish, answer the questions below.

1) Are there at least three foods for the big fish?   Yes   No

2) Are there at least two decomposers to clean up the waste?   Yes   No

3) Use this chart and the carbon dioxide double-checker at the bottom of this page to make sure the pond is healthy:

	Add up the carbon dioxide number on the cards write them in this column.	Move the pointer to track the carbon dioxide points.
Big Fish Food		Start at 15. Move the pointer to add these points.
Producers		Move the pointer to subtract these points.
Decomposers		Move the pointer to add these points.
Big Fish	6 points	Move the pointer to add these points.
	What's the final carbon dioxide level? (add the above numbers)	
	Is that a healthy level? Yes No	

Carbon Dioxide Double-Checker:

					HEALTHY ZONE													
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
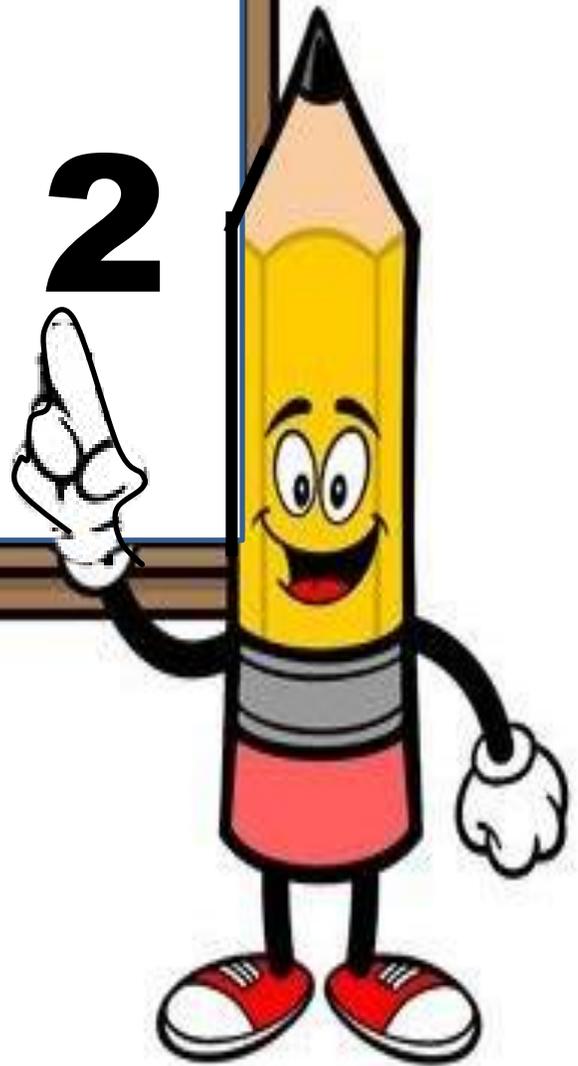
Day # 2

BCCS-B   **Standford   MIT**

End of Mystery Assessment

1. Producers…

    a. use carbon dioxide and release oxygen.
    b. include plants, algae, and phytoplankton.
    c. make their own food, rather than eating other living things.
    d. all of the above

2. Decomposers…

    a. are all microscopic (can only be seen under a microscope).
    b. create nutrients out of the air that help plants grow.
    c. break down waste and dead material into nutrients for plants.
   d. release oxygen for animals to breathe.

3. _____ take in carbon dioxide, but _____ release carbon dioxide.

    a. Decomposers and plants………………………… consumers
    b. Plants……………..………………………………….. decomposers and consumers
    c. Decomposers and consumers…………….……… plants
    d. Consumers……....…………………………….. decomposers and plants

4. TRUE or FALSE (circle one)   An ecosystem includes all the producers, consumers, and
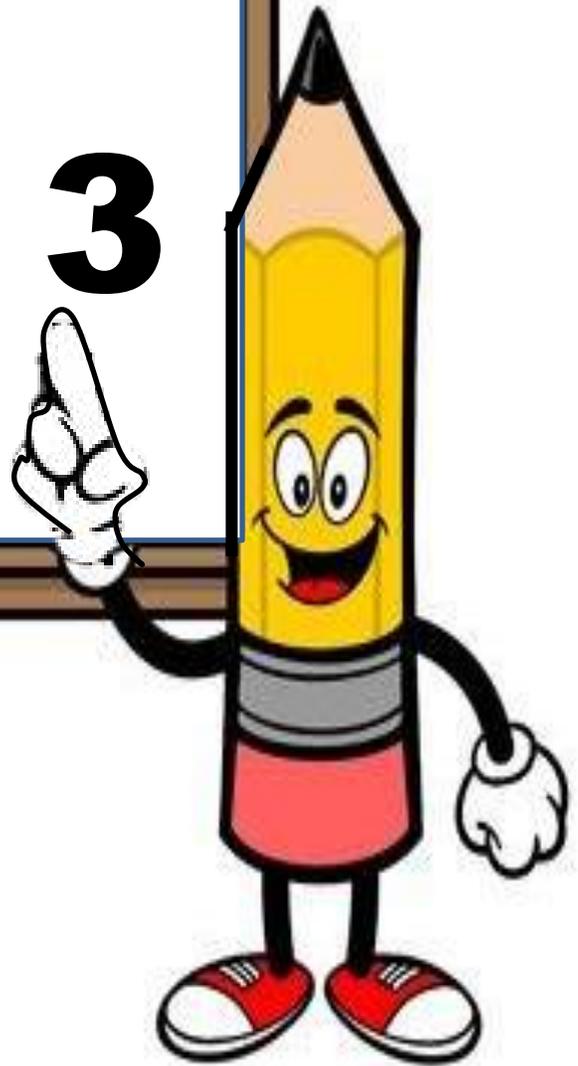
       decomposers in an environment.

5. Draw arrows on the ends of the connecting lines to show the directions of the movement of *matter* through an ecosystem. Then, **label each line** using the answer choices below.

A) get eaten by	B) die/excrete waste	C) release nutrients for	D) lose leaves/die

Producers
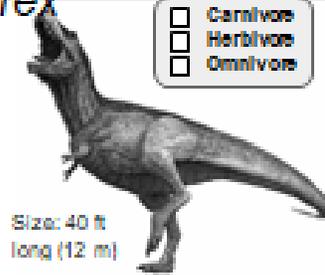
Consumers

Decomposers
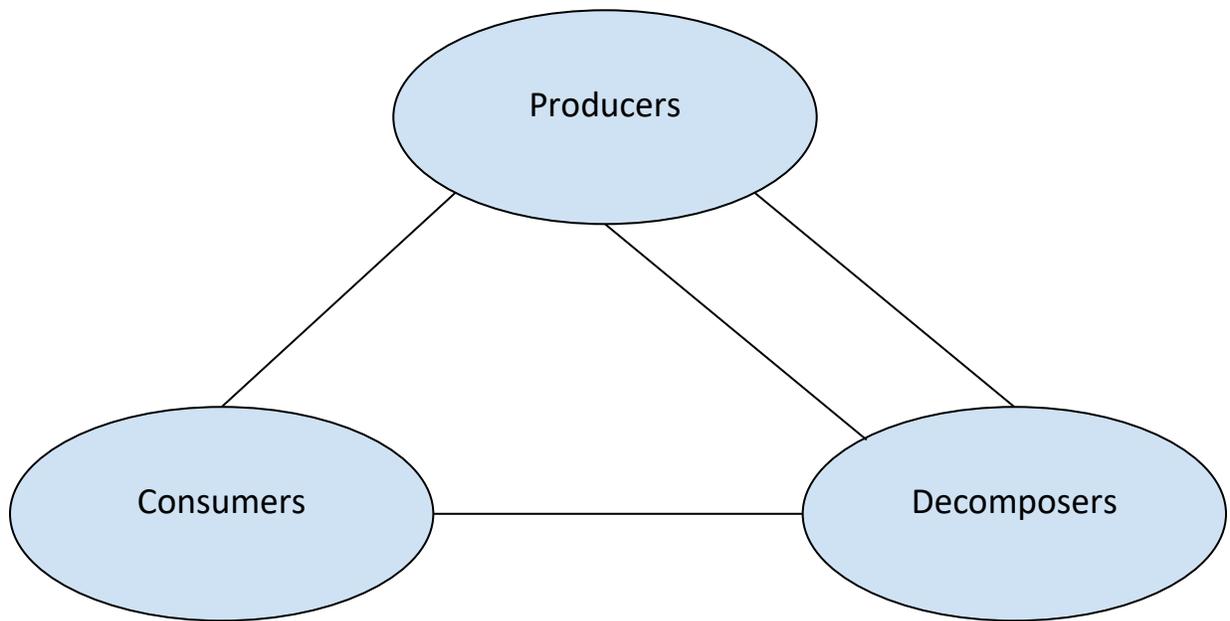
Day # 3

DINO DIE-OFF

a food web model

Tyrannosaurus rex

☐ Carnivore
☐ Herbivore
☐ Omnivore

Size: 40 ft long (12 m)

I get my energy by eating other dinosaurs. I like to munch on *Triceratops* or duckbill dinosaurs —but I'll eat smaller ones, too. I'm big, so I need a lot of food to keep going.

Didelphodon

☐ Carnivore
☐ Herbivore
☐ Omnivore

Size: 14 in long (35 cm)

I'm a mammal! I get my energy by eating crickets, beetles, and worms. I have jaws that will crunch through turtle shell—or through the bones of dead animals. I also eat berries, if they're available.

Duckbill dinosaur

(Corythosaur

☐ Carnivore
☐ Herbivore
☐ Omnivore

Size: 32 ft long (10 m)

I get my energy by eating twigs, leaves, and seeds from living plants. I always keep an eye out for *Tyrannosaurus*, who thinks I make a good snack.

Earthworm

☐ Carnivore
☐ Herbivore
☐ Omnivore

Size: up to 8 in (20 cm)

I get my energy from rotting wood, dead leaves, and rotting animals. I burrow underground.

Dracorex hogwartsia

☐ Carnivore
☐ Herbivore
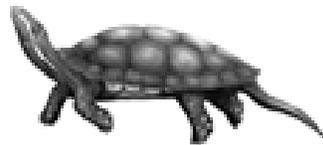☐ Omnivore

Size: 13 ft long (4 m)

I get my energy from leaves, seeds, and fruits of living plants. My name means "dragon king of Hogwarts." I got my name when the scientists who found my skull in 2016 donated me to a museum.

Prehistoric turtle *(Compsemys)*

☐ Carnivore
☐ Herbivore
☐ Omnivore

Size: 12 in (30 cm)

I get my energy by eating worms and crickets. Like modern turtles, I can hibernate underwater when the weather is cold.

Dryptosaurus

☐ Carnivore
☐ Herbivore
☐ Omnivore

Size: 21 ft long (6.4 m)

I get my energy from eating other dinosaurs. I hunt plant eaters that are my size or a little bit bigger.

Triceratops

Size: 30 ft
long (9 m)

☐ Carnivore
☐ Herbivore
☐ Omnivore

I get my energy by munching on living plants. And I'm big, so I need a lot of food to keep going. That means a lot of plants. Good thing that palm trees grow so well around here.

Sinornithoides

☐ Carnivore
☐ Herbivore
☐ Omnivore

Size: 3 ft
long (1 m)

I've got feathers. If you saw me, you'd probably say I was a bird. I get my energy by eating worms and crickets and other small animals.
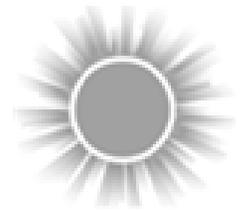
Prehistoric cricket

Size: up to
4 in (10 cm)

☐ Carnivore
☐ Herbivore
☐ Omnivore

I get my energy by eating seeds, berries, and leaves—either fresh off the living plant or dead on the ground. And I'm always hungry! Every day, I eat my own body weight in food.

MYSTERY SCIENCE

Sunlight

I'm the sun. My light and heat are both forms of energy. Every living thing—from palm trees to Tyrannosaurus—needs energy to move, to grow, to stay warm, and to heal when they are injured.

MYSTERY SCIENCE

Living green plants

We're the plants of the Cretaceous period: leafy palm trees, evergreen trees, ferns, flowering plants, plants that grow berries, and more! All of us plants provide abundant food and energy for herbivores.
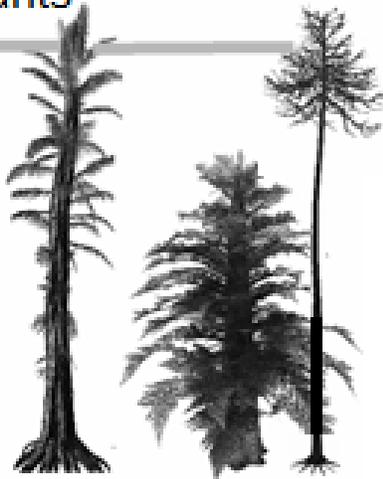
Dead plants & dead animals

Earthworms and crickets chow down on us dead plants—our fallen leaves and rotting wood make great food.
Didelphodon and other animals that scavenge for food munch on us dead animals. Our rotting meat and bones make great snacks.
All dead plants and animals store food energy that some animals can use later.

Dinosaur Food Web

1. What animals do you think *Tyrannosaurus rex* would eat? Why do you think that?

_____

_____

_____

_____

_____

2. List the animals you think can survive when the sunlight is blocked.

_____

_____

_____

3. Why did some animals go extinct while other animals survived? Construct an explanation using evidence from your food web.

_____

_____

_____

_____

_____

Day # 4
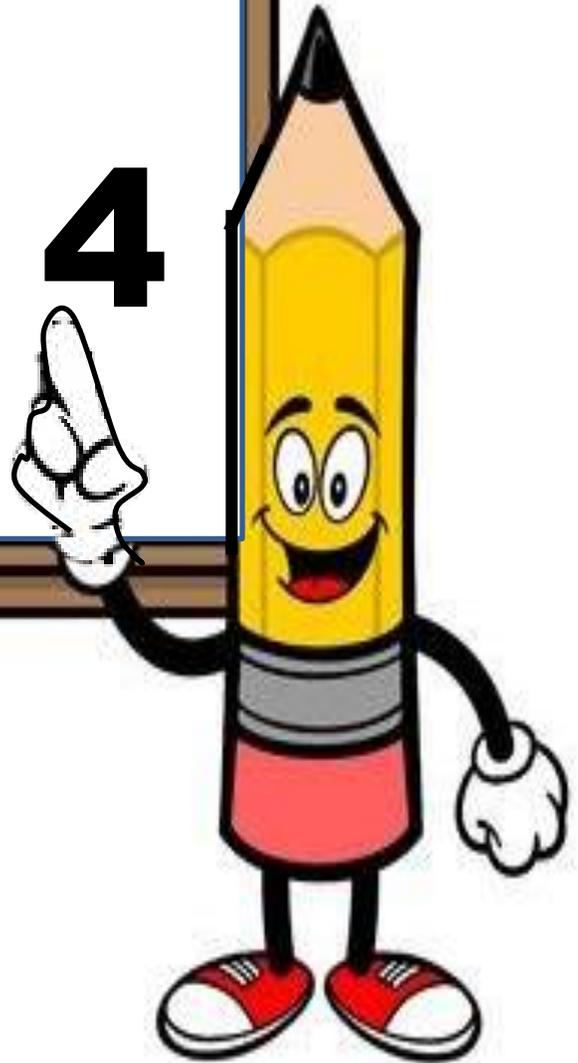
Name: _____ Week 12 Day 4 Date: _____

BCCS-B   **Stanford   MIT**

End of Mystery Assessment

1. Which correctly shows the flow of energy through a food web?

   a. Producers → decomposers → consumers

   b. Producers → consumers → decomposers

   c. Decomposers → consumers → producers

2. Choose the statement that <u>most accurately describes</u> why the dinosaurs died.

   a. The dinosaurs died from earthquakes set off by the asteroid impact.
   b. The dinosaurs burned up instantly from a giant fireball caused by the asteroid.
   c. Most dinosaurs starved due to the collapse of their food webs.
   d. Most dinosaurs suffocated because they couldn't breathe air full of asteroid dust.
   e. The dinosaurs froze to death when the sun was blocked out.

3. Which organisms were most likely to survive the Cretaceous extinction? Circle as many choices as you want.

   Omnivores   Herbivores   Small animals   Large animals

              Carnivores   Decomposers   Plants

For each of the answers you circled, explain why you chose it.

_____

_____

_____

_____

_____

_____

_____