

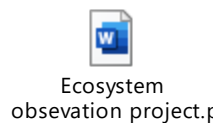
*** All assignments are to be completed digitally (answers on word documents, photo, video) and emailed to me at jiennings@tusd.net or if you chose to do so, pick up a hard copy at the school on April 24th between 9am -- 4:30pm. See page 2 below for all pickup and return dates for the rest of the year.

Distance Learning Assignments for Weeks 2&3 April 27 – May 8

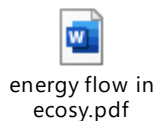
Ecosystems

Teacher: Joe Jennings Subject: 7th Science

1. **Complete project packet: Observe an Ecosystem** – Over the next 10 days, choose a location and complete the drawings, sketches, definitions, and answer any questions from project packet. (to open the PDF—put mouse pointer on PDF, right click, open with Adobe Acrobat)



2. **Answer the notebook pages** (to open the PDF—put mouse pointer on PDF, right click, open with Adobe Acrobat)

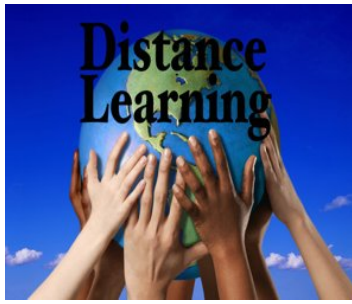


Questions on assignments or clarifications? (or just want to say “Hello”) join in the Zoom video conference meetings daily (Mon-Fri) from 11 - 12am (click link & join)

*** Join Zoom Meeting Meeting ID: 959 120 729 Password: 672098

<https://zoom.us/j/959120729?pwd=K3BzUFRkZkY4QVFhNm4rS2RTWDZQU09>

or just email questions to me jiennings@tusd.net between 1:00 to 3:00



Distance Learning Calendar 2020 for Students

When

What

| | |
|-------------------------------------|---|
| Thursday, April 9, 2020 | School Sites to Distribute Work to Students – Week #1 |
| Friday, April 10 – Friday, April 17 | SPRING BREAK |
| Monday, April 20, 2020 | Daily Teacher Office Hours to begin – *Continues Throughout Duration of Distance Learning Week #1 of Distance Learning for Students |
| Friday, April 24, 2020 | School Sites to Distribute Work to Students – Week #2 - #3 |
| Monday, April 27, 2020 | Week #2 of Distance Learning for Students |
| Monday, May 4, 2020 | Week #3 of Distance Learning for Students |
| Friday, May 8, 2020 | School Sites to Distribute Work to Students – Week #4 and #5 Student Work Collection Weeks #1 and 2 – Due to School Sites |
| Friday, May 15, 2020 | Student Work Collection – Weeks #3 and 4 – Due to School Sites |
| Friday, May 22, 2020 | Last Day of the 2019-2020 School Year |

Student tips for successful **VIDEO CALLS**



1



Check in with your teacher. Gather your materials.

2



Be on time. Check in thru the chat when you arrive.

3



Stay engaged (nod or thumbs up) if others are talking.

4



Mute your mic if you're not speaking.

5



Use the chat or raise hand to share ?s/ideas.

6



Wait for teacher to call on you or unmute your mic.

7



Take notes in a doc or on paper for reference.

8



If using video, look at the camera, not the screen.

Observe an Ecosystem

This is an ecosystem observation journal. Observe an ecosystem at least 10 different times, at least 15 minutes each time.

Write the date, time, and location of each observation. Write and draw what you notice. You can also include photos (optional).

If you observe the same location every time, you can look for changes over time. If you observe different locations, you can look for similarities and differences between them.

Observation 1 Date: _____ Time: _____ Location: _____

Describe and draw a sketch of your ecosystem. Label the different things in your drawing.

Obs. 2 Date: _____ Time: _____ Location: _____

Start a list of abiotic (non-living) factors of your ecosystem. You can add to this list as you continue your observations on future observations. If you observe in more than one location, you could make different lists for the different locations to compare.

Draw and describe anything that you notice today. How do you think the abiotic factors you have listed affect the organisms in your ecosystem?

Obs. 3 Date: _____ Time: _____ Location: _____

Start a list of organisms (biotic factors) you observe. You can add to this list as you continue your observations on future observations. If you observe in more than one location, you could make different lists for the different locations to compare.

Draw and describe anything that you notice today. Do you notice any of the organisms interacting with one another? Describe how they interact.

Obs. 4 Date: _____ Time: _____ Location: _____

Identify the following in your ecosystem. For each one, draw and describe the organisms in the category.

☐ Producers

☐ Consumers - Herbivores

☐ Consumers - Carnivores

☐ Decomposers

Make drawings and observations about your ecosystem today.

Obs. 5 Date: _____ Time: _____ Location: _____

Are there any biotic interactions from these categories that you have observed in your ecosystem? Or that you see evidence of in your ecosystem? As you see examples of each one, draw and describe it. Make a note of any that you think fall into more than one category.

☐ Pollinator-flower

☐ Mutualism

☐ Competition

☐ Parasite-host

☐ Predator-prey

☐ Other (anything that does not fit the above categories)

(Obs. 5 Continued)

Make drawings and observations about your ecosystem today.

Obs. 6 Date: _____ Time: _____ Location: _____

Describe and draw any changes to your ecosystem. Which are natural changes, and which were caused by humans? What are the human disturbances in your ecosystem?

Is your system in balance? What are the ways in which your system is in balance, and what are the ways it is out of balance? Is it missing any important components (decomposers, predators, etc)?

Obs. 7 Date: _____ Time: _____ Location: _____

Think about the food chains that exist in your ecosystem. How do they fit together to make a food web? Draw a large food web of the organisms in your ecosystem. Your observation # 4 might be helpful in thinking about this.

Obs. 8 Date: _____ Time: _____ Location: _____

Notice any changes, or things you didn't notice before. Draw and describe these new observations.

Describe the biodiversity of your ecosystem. How many species did you observe in your ecosystem? Would you say your ecosystem is rich in biodiversity, or lacking? Why?

Obs. 9 Date: _____ Time: _____ Location: _____

Draw and make observations about your ecosystem today.

List 3 big questions you have about your ecosystem(s) now that you have spent a lot of time observing.

What was the most surprising thing you learned from your observations?

What could you do to help this ecosystem become healthy? Or healthier?

Obs. 10 Date: _____ Time: _____ Location: _____

Draw and make observations about your ecosystem today.

On the following page, draw a large food web of the organisms in the ecosystem you are observing. Use arrows that are two different colors to show the flow of energy vs. the cycling of matter in your system.

Food Web showing cycling of matter and flow of energy:

Chapter 10 Ecosystems ▪ Section 3 Summary

Energy Flow in Ecosystems

Key Concepts

- What energy roles do organisms play in an ecosystem?
- How does energy move through an ecosystem?
- How much energy is available at each level of an energy pyramid?

An organism's energy role is determined by how it obtains energy and how it interacts with the other living things in its ecosystem. **Each of the organisms in an ecosystem fills the energy role of producer, consumer, or decomposer.**

Plants, algae, and some bacteria can carry out photosynthesis. In this process, the organism uses the sun's energy to turn water and carbon dioxide into sugar molecules. An organism that can make its own food is a **producer**. Producers are the source of all the food in an ecosystem.

Other organisms cannot make their own food. They depend on producers for food and energy. An organism that obtains energy by feeding on other organisms is a **consumer**. Consumers are classified by what they eat. Consumers that eat only plants are called **herbivores**. Consumers that eat only animals are called **carnivores**. A consumer that eats both plants and animals is called an **omnivore**. A **scavenger** is a carnivore that feeds on the bodies of dead organisms. An organism may play more than one role in an ecosystem.

Organisms that break down wastes and dead organisms and return the raw materials to the environment are called **decomposers**. As decomposers obtain energy for their own needs, they return simple molecules to the environment to be used again by other organisms.

The transfer of energy from organism to organism in an ecosystem can be shown in diagrams called food chains and food webs. A **food chain** is a series of events in which one organism eats another and obtains energy. The first organism in a food chain is always a producer. The second organism, called a first-level consumer, eats the producer. The next consumer, called a second-level consumer, eats the first-level consumer. A food chain shows just one possible path of energy through an ecosystem.

Most producers and consumers are part of many food chains. A more realistic way to show the flow of energy through an ecosystem is a food web. A **food web** consists of the many overlapping food chains in an ecosystem.

When an organism makes its own food or eats other organisms, it obtains energy. The organism uses some of this energy to move, feed, grow, and reproduce. Only some of the energy will be available to the next organism in the food web. A diagram called an **energy pyramid** shows the amount of energy that moves from one feeding level to another in a food web. **The most energy is available at the producer level of the pyramid. As you move up the pyramid, each level has less energy available than the level below.** In general, only about 10 percent of the chemical energy at one level of a food web is transferred to the next higher level. As a result, there are usually few organisms at the highest level in a food web.

Ecosystems ▪ *Reading/Notetaking Guide***Energy Flow in Ecosystems** (pp. 404–409)

This section explains the different roles that organisms play in the movement of energy through an ecosystem. The section also describes how organisms in the different roles interact to form food chains and food webs.

Use Target Reading Skills

Look at the illustration titled A Food Web on page 407 of your textbook. In the graphic organizer below, ask three questions that you have about the illustration. As you read about food chains and food webs, write the answers to your questions.

| A Food Web | |
|------------|--|
| Q. | How is a food chain related to a food web? |
| A. | |
| Q. | What do the levels of a food web represent? |
| A. | |
| Q. | What is the role of decomposers in a food web? |
| A. | |

Energy Roles (pp. 404–405)

Match the energy role with its definition.

| Energy Role | Definition |
|---------------------|---|
| _____ 1. producer | a. Organism that breaks down wastes and dead organisms |
| _____ 2. consumer | b. Organism that obtains energy by feeding on other organisms |
| _____ 3. decomposer | c. Organism that can make its own food |

Ecosystems ▪ *Reading/Notetaking Guide*

4. What types of organisms are producers?

5. Is the following sentence true or false? Energy enters all ecosystems as sunlight. _____

6. Is the following sentence true or false? Producers are the source of all the food in an ecosystem. _____

7. List two major groups of decomposers.

a. _____ b. _____

8. Complete the compare/contrast table.

| Types of Consumers | |
|--------------------|-------------------------|
| Type of Consumer | Type of Food |
| a. | Only plants |
| Carnivore | b. |
| c. | Both plants and animals |
| d. | Dead organisms |

9. Is the following sentence true or false? Decomposers return raw materials to the environment.

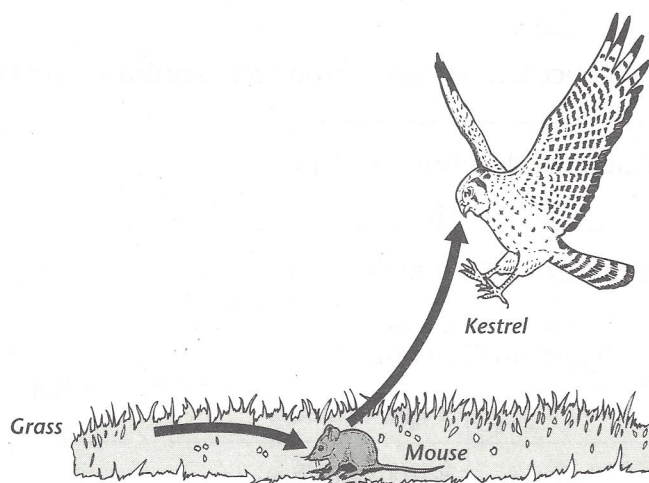
Food Chains and Food Webs (pp. 406–407)

10. A series of events in which one organism eats another and obtains energy is called a(n) _____.

Ecosystems ▪ Reading/Notetaking Guide

Energy Flow Ecosystems (continued)

11. Label the producer and the first-level and second-level consumers in the food chain illustrated below.



12. The many overlapping food chains in an ecosystem make up a(n) _____.
13. Circle the letter of each sentence that is true about a food web.
- a. Producers are at the top of the food web.
 - b. All first-level consumers are carnivores.
 - c. Second-level consumers may be carnivores or omnivores.
 - d. An organism may play more than one role in a food web.

Energy Pyramids (pp. 408–409)

14. What does an energy pyramid show?

15. Circle the letter of each sentence that is true about an energy pyramid.
- a. The greatest amount of energy is available at the producer level.
 - b. At each higher level of the pyramid, there is more energy available.
 - c. About half the energy at one level is transferred to the next.
 - d. Scavengers and decomposers are part of the energy pyramid.

16. Why are there usually few organisms at the top of a food web?
