

## Seventh Grade Distance Learning Plan

Week of April 13 - 17, 2020

**Science Activities**  
(Suggested: 45 minutes of off-line activities)

### Monday

**Learning Objective:** The student will recognize the trophic levels on an Energy Pyramid.

**Engage:** Follow the link and explore producers and consumers through food chains and food webs.

<http://d3tt741pwxqwm0.cloudfront.net/WGBH/conv16/conv16-int-oceanfoodweb/index.html>

**Engage: Read the passage and follow the directions below.**

Energy Limits in Food Chains Less energy is available for consumers at each higher trophic level in an energy pyramid. Why is this? At the base of an Energy pyramid are the producers—plants. In a typical ecosystem, the herbivores eat only a small portion of all the plants available. In addition, they digest and absorb only a portion of what they eat. The rest passes out of their bodies as waste. Of the energy that an herbivore absorbs, most is used for life processes. Only what is left over goes into the biomass, or living matter, of the herbivore. This increase in biomass shows up in the growth of the herbivore or in its offspring. This is the only additional biomass that the next trophic level can use. The rest of the energy is lost. As a result, the amount of energy available to consumers at the top trophic level is much less than that what is available to those at the lower levels. For this reason, top-level consumers, such as wolves and eagles, require a large territory. It takes a lot of plants to support the top trophic level, which is several steps away from the level of production. At the top of an energy pyramid, populations are small and require a large territory. For example, because it takes many rabbits to feed a wolf, the population of rabbits must be larger than the population of wolves, and the number of plants must be larger than the number of rabbits.

**Directions:** Choose a group of producers and consumers and draw an energy pyramid with four trophic levels. Show the population of the producers and consumers at each level in proportion. Label the trophic levels.

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**Seventh Grade Distance Learning Plan**

**Tuesday**

Explain the terms genotype and phenotype. Explain the difference between heterozygous/homozygous and recessive/dominant. Use the definitions to write a short description of how a person's genes and chromosomes show different traits.

**Wednesday**

Write an essay explaining what the benefits of choosing genetics in farm animals would be. In your essay, explain what selective breeding is and how it is used to choose genetics.

**Thursday:**

Differentiate between abiotic and biotic factors. Make a visual representation of the biotic and abiotic factors in your own ecosystem. Define the following interactions between species: predator, prey, competition, mutualism, parasitism, and commensalism. Explain how interactions in various ecosystems would limit the species and keep the population constant.

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**Seventh Grade Distance Learning Plan**

**Math Activities**  
**(Suggested: 45 minutes of off-line activities)**

TEKS: 7.2a 7.3a 7.6e 7.11a

**Monday**

Student Holiday. No Assignments

(If the student missed any work on last week or would like to re do their classwork, the assignments will be open to accept them. Also, if needed, we will create a Zoom video in Google Classroom for live explanations.)

**Tuesday**

Solve.

$$X+12=108$$

$$5x+25=150$$

$$3x-2=31$$

**Wednesday**

Calvin can run 40 miles in 2 hours. Harold can run 60 miles in 3 hours. Who runs more miles per hour? Explain.

**Thursday:**

Dave went to the store with \$40. He bought two pairs of jeans that were the same price and a shirt on sale for three dollars. If there was no tax added and the change Dave received was \$13, how much did each pair of jeans cost?

**Friday:**

Log on to [www.ixl.com](http://www.ixl.com) and work on math for a total of 15 minutes.

Your login is your first initial and your last name @pva

Ex. bflowers@pva

Your password is your last name.