

Look Who Lives in the Desert!

Food Chain Pyramid

The desert is a unique ecosystem. An ecosystem is a biological community of interacting organisms and their environment. Sun, rain and soil help create a habitat but every plant and animal plays a specific and valuable role in keeping the ecosystem working. One of the most important elements of any ecosystem is the food chain.

This project can be done as a class or by smaller groups.

WHAT YOU WILL NEED:

Legal size piece of paper
10 paper cups
Masking tape
Pen

BUILDING A FOOD CHAIN PYRAMID

Across the sheet of paper, write the words: LARGE AREAS OF NATURAL LAND WITH HEALTHY SOIL.

Turn the cups upside down and using strips of masking tape (so the cups can be re-used), label each of them with one of the following 10 desert plants or animals: PRICKLY-PEAR CACTUS, SAGUARO, MESQUITE, AGAVE, KANGAROO RAT, JACKRABBIT, DESERT TORTOISE, COUGAR, HAWK and HUMAN.

Lay the paper flat and balance the cups in a pyramid formation on top of it. The bottom row of cups should be the four plants because they use the space and nutrients the land provides and they are the foundation of any ecosystem.

The second row should be the three herbivores, those animals who eat the plants that live on the land. They rely on both plants and land for survival.

The third row up should be the two carnivores who eat the herbivores who eat the plants that live on the land. The carnivores need everything below them for survival.

The top cup of the pyramid should be the human. Human life is dependent on stable ecosystems for food, oxygen, drinking water, waste management, a sense of beauty and so much more! We need carnivores, herbivores, plants and land for our survival.

The pyramid should look like this:

HUMAN			
COUGAR		HAWK	
KANGAROO RAT	JACKRABBIT	DESERT TORTOISE	
PRICKLY-PEAR	SAGUARO	MESQUITE TREE	AGAVE

(LARGE AREAS OF NATURAL LAND WITH HEALTHY SOIL)

KEEPING THE BALANCE

Like the cups, everything in the natural world is dependent on all the other things. There must be balance. If one animal disappears, others are affected, perhaps even destroyed.

Try to pull a single cup out of the pyramid. Try to slip the paper out from under the stack. Does the pyramid stay standing? Notice what happens to the HUMAN cup when any other creatures, plants or natural land are removed from the stack.

Discuss the results.