40. CASTAWAY CREATURES ON A DESERT ISLE

Overview: Students consider the diversity and limits of an ecosystem when Leo Lizard is trapped on a rock island in the middle of the Yuma Conservation Garden pond!

Objective: Concepts relating to ecosystems, such as interdependence, food web, population, and survival will be introduced or reinforced.

Time needed: 30 minutes to 1 hour

Group Size: The size of your class will work nicely.

Age appropriateness: 1-12 will work best, other grades may wish to avoid this activity.

Site: Initially pondside at YCG.

Background:

Materials:

Provided at the Garden

Castaway Creatures on a Desert Isle, by B. Campbell

Provided by the classroom teacher

None

Preparation: The teacher needs to familiar with environmental concepts.

Pre Activity: This activity is designed to be part of an ecosystems unit. It can be a good introduction to the unit, or used as a reinforcement of what already has been studied. The degree and type of "paperwork" is entirely up to the teacher.

Procedure:

1. Read Castaway Creatures on a Desert Isle to the class.
2. As you read the story, stop and discuss the problems Leo faces.
3. Follow up activities in the extensions may be assigned.

Extensions:

Primary: 1. Draw Leo's dream island. 2. Make a desert food chain.. 3. List Leo's friends and food. Create animal math problems (two lizards visit Leo but one is eaten by a hawk...).

Intermediate: 1. Make a food web. 2. Work animal algebra problems. (If 1 lizard needs 1000 bugs to support it, how many lizards will 200,000 bugs support?) 3. Compare and contrast the desert ecosystem to others. 4. Trace predator-prey population cycles.

Middle Grades/Junior High: 1. Make a food web and speculate how changes such as the introduction of a new species will effect the living things in the web. 2. Calculate biomass for a given area. 3. Trace pesticides through a food chain. 4. List ways people have helped the environment. 5. Explain how adaptations help living things survive. 6. Compare and contrast similar species from different environments.

High School: 1. Identify possible plant and animal species from the story. 2. Design a completely enclosed ecosystem. 3. Predict population trends based on past data. 4. Study the impact of one introduced species on an ecosystem. 5. Calculate area needed to support a certain species.

Reference List:

Time of Year: any time

**This activity was created by Bruce Campbell.

CREATURE CASTAWAYS OF A DESERT ISLE

One night the wind started to blow hard. Leo, a lizard, was sleeping under a fallen tree branch. The wind began to shake the tree branch and Leo woke up. He sluggishly grabbed the branch as to was hitting him in the head and he wanted to make it be still. A big gust of wind flipped the branch over, and Leo with it! Leo tried hard to hold the branch down, but soon the branch and Leo were blowing across the night desert.

The next day Leo slowly woke as the sun warmed his body.

"I'm all alone on this barren rock," Leo cried.

"You're not alone, we were on that tree branch too," said a small voice at Leo's feet.

Leo looked down. Three red ants looked back up at him.

"Boy am I glad to see you guys," said Leo. Then he ate the ants.

His hunger satisfied, Leo surveyed his surroundings. He was on a large rock in the middle of a pond at least twelve feet from shore.