Chaos to Order

Students will learn how to classify flora and fauna, and will demonstrate their skills on a graph.

Objectives:
Students will be able to divide alphabet cards into two or more groupings (classification schemes), and graph their work.

Materials:
Colored pencils or crayons, 6 sets of alphabet picture cards-two complete copies each of the colored and the black and white card sets plus the original set, and one copy/student of the graph on the last page of this activity.

Methods:
Students will role play scientists and devise classification schemes for the plants and animals of the Everglades.

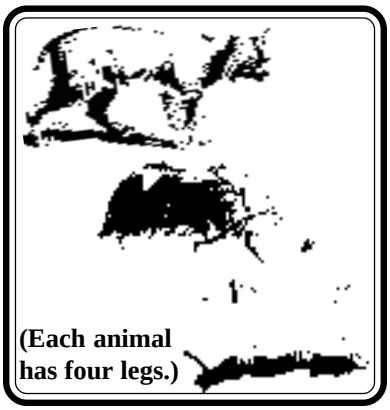
Subjects:
Science

Duration:
30 to 45 minutes

Location:
Outdoors or classroom

Related Activities:
Web of Life, Mosquito Swat, Mangrove Island

Florida Sunshine State Standards:
SC.H.1.2.2 SC.H.1.2.3



Background

How do scientists worldwide know they are discussing the same plant, animal, or item? Scientists have grouped items that share common **adaptations** or **characteristics** together, working from general to very specific details and vice versa. For example, an adaptation and charactistic (a distinguishing feature) of birds is that they have feathers. Some common scientific groupings of plants include angiosperms vs gymnosperms, and decidous vs coniferous trees. Elementary students may suggest flowering and non-flowering plants or trees with broad leaves compared to trees with narrow (needle-like) leaves. Looking closer at wildlife, scientists have devised broad groupings including insects, amphibians, mollusks, fish, reptiles, birds, and mammals. In this activity, students working in groups will role play scientists and devise their own **classification** (to put in order) schemes. Students may choose color, the number of legs, wings or no wings, teeth or no teeth or some other way to group the cards. As long as their justifications accurately back up their groupings, they can procede with the activity and make a graph.

Procedure

1. Before you begin the activity, make two copies of each set of alphabet cards so you will have a total of 6 sets (26 cards/set).

2. Explain the terms **adaptations, characteristics,** and **classification.**

3. Divide students into 6 groups and give each group a set of 26 cards. Explain to students that they are acting as scientists and they have to group their cards into two categories. Give them five to ten minutes to discuss and divide the pile. Have each group explain what classification schemes (groupings) they devised.

4. Switch sets of cards or mix each set up and ask the students to now group their picture cards into three, four, or more distinct piles. Have each group explain how they divided their cards. Let students come up with their own classification schemes (groupings). If they are stumped, have them brainstorm.

5. Give each student a sheet of graph paper. Have them write numbers on the vertical axis and list their groupings (types of classifications) on the horizontal axis. Have students complete their graphs using colored pencils or crayons.

Extension

This extension would be an effective wrap up for this activity. Discuss with students the broad categories that scientists use to group the animal kingdom, see the list below in "Important Words", starting with insects. Discuss what each group has in common. Put the seven animal group names on the chalk board.

Have students give you characteristics of the various animals, and write this information below each name. For example, insects have six legs and three body parts and include bugs, butterflies, and moths. Insects make up 70% of all animal species! Amphibians are cold-blooded and spend part of their life in water and part on land and include frogs, toads, and salamanders. Mollusks have soft bodies often enclosed in shells and include snails, oysters, clams, squid, and octopus. Fish are cold-blooded and have backbones, gills, fins, and scales, and include mosquitofish, garfish, mullet, and snook. Reptiles are cold-blooded, have a backbone, bony plates or scales, and include lizards, snakes, turtles, alligators, and crocodiles. Birds are warm-blooded, have a backbone, feathers, and include song birds, herons, hawks, and a variety of other species. Mammals are warm-blooded, have fur or hair, raise their young on milk, and include deer, raccoons, panthers, dolphins, and a number of other of species.

As a class, give each student a blank sheeet of graph paper and have them graph all the animal alphabet picture cards, colored and black & white, using scientific groupings.

Bird:
Snail Kite

Important Words

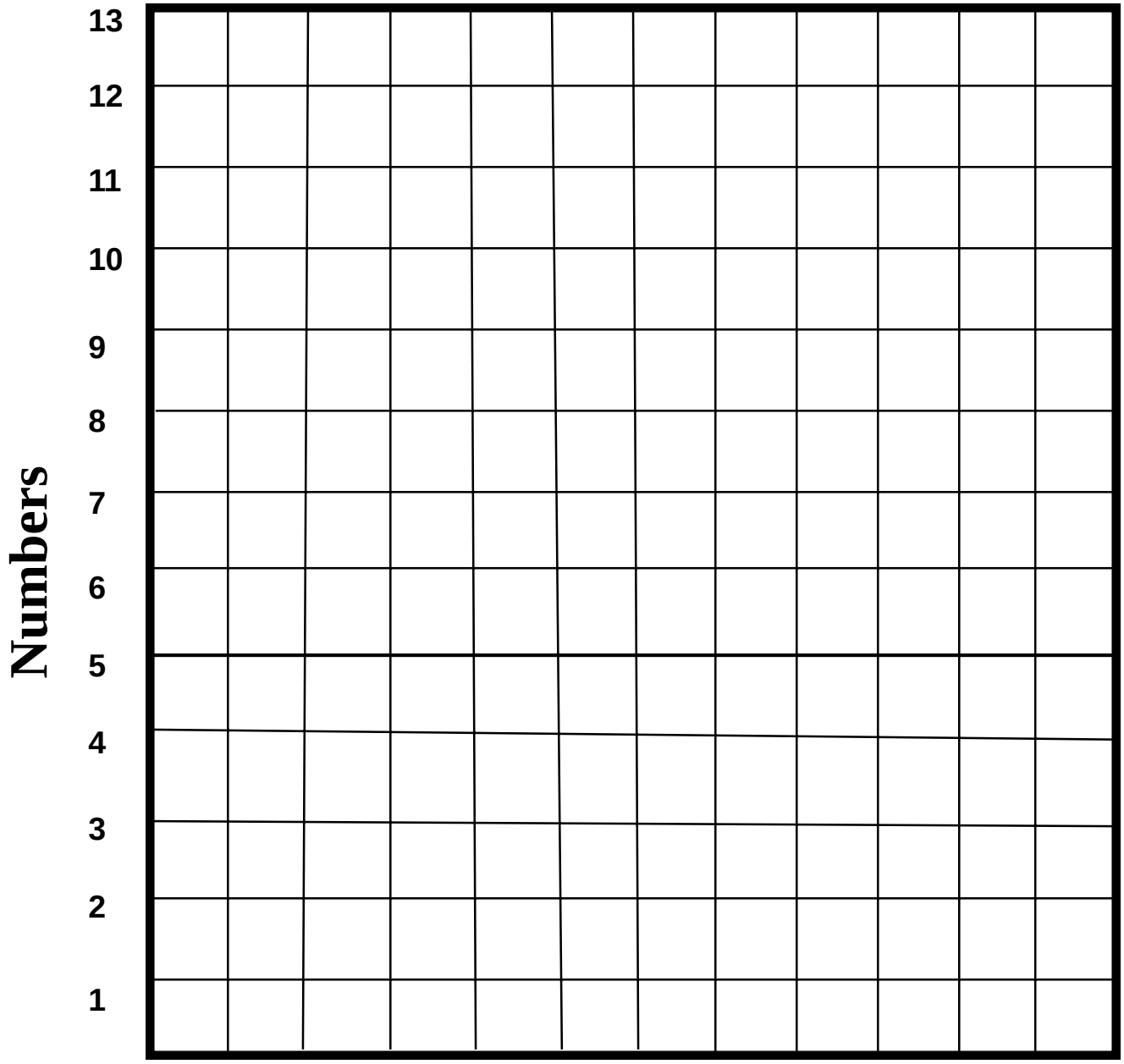
Adaptation
Classification
Characteristics
Chaos
Order
Insects
Amphibians
Mollusks
Fish
Reptiles
Birds
Mammals

Mollusk:
Florida Tree Snails

Mollusk:
Apple Snail

Graph

Title: Everglades Classification



Types of classifications (groupings)