

Taxonomy Teacher Loan Trunk

Contents:

Books and Teaching Resources:

- Resource Binder with Lesson Plans
- “Spot the Difference”
- “Animals Like Us”
- “Invasion Ecology” Teacher Guide
- “Invasion Ecology” Student Guide
- “Biodiversity, Can We Balance Resource Conservation with Economy”
- “Biodiversity, from Sea to Shining Sea” Poster Kit
- “Environmental Action” Teacher Guide
- “Animal Drawing and Anatomy”
- “A Key-Guide to Mammal Skulls and Lower Jaws”
- “Animal Skulls” A Guide for Teachers, Naturalists and Interpreters
- “Field Guide to Skulls and Bones of Mammals of the Northeastern United States”

Activity Kits:

- Tree Identification Kit
- Sort Key Mineral Identification Kit
- Classification for Beginners Kit
 - 10 balls
 - 1 shark toy
 - 2 lobster toys
 - 4 bug toys
 - 4 “squirt” toys
 - 3 tentacle toys (orange, purple and green)
 - 5 silver fish toys
 - 4 dinosaur toys

Biofacts:

- American Opossum Skull
- Rabbit Skull
- American Beaver Skull
- Coyote Skull
- Raccoon Skull
- Striped Skunk Skull
- Armadillo Skull
- White-tailed Deer Skull

Great website to check out!

http://www.bioedonline.org/presentations/dom_IV_a/presentation.cfm

Who Am I?

Grade Level: Grade 2

*A lesson submitted by Mrs. Ramirez-Raab
Valley Center Lower Elementary School, Grade 2*

Purpose:

To encourage children to ask good, meaningful questions to identify animals that may be seen or have been seen on a visit to any zoo or aquarium. Teaches some basic taxonomy (grouping) of different animal groups.

Materials:

- Postcards with pictures of animals posted on the back
- Yarn
- Hole Punch

Preparation:

Make a long necklace with the postcards/animal pictures and strands of yarn.

Activity:

1. Hang one card around each student's neck, so that the picture is face up on the student's back. Be sure the student cannot see his or her animal picture.
2. Students are instructed to ask one question of each of the other students, one question per student, in an attempt to identify the animal they have on their back. Questions must have a "yes" or "no" answer ("Do I fly?," "Am I covered with fur?"). You may want to practice asking questions with the students before the activity begins.
3. How long does it take for each student to learn their own identity? Which questions gave the most information? Did it make sense to ask questions like, "Am I a lion?" at the beginning of the activity? Were questions like "Do I have fur?" or "Do I live in Africa?" better to start with?

Classification for Beginners

Subject and Grade Level: 5th Grade and Up

Overview:

Students will be introduced to the method and need for classification.

Objectives:

- To understand the practical meaning of classification
- Discover the importance of classification
- Begin to arrange items in logical groupings through classification
- Begin developing skills to create a dichotomous key to classify items

Resource and Materials:

Classification for Beginners Kit which includes:

- 10 balls
- 1 shark toy
- 2 lobster toys
- 4 bug toys
- 4 “squirt” toys
- 3 tentacle toys (orange, purple and green)
- 5 silver fish toys
- 4 dinosaur toys

Procedure:

Prior to activity discuss classification and what a dichotomous key is and how to use one.

Students are to pretend they are aliens from another planet who are visiting earth for the first time and decide to begin to classify all the strange beings they see.

1. Separate students into small groups each group with a paper and pencil/pen.
2. Give each group a small assortment of the items featured in the Classification for Beginners Kit.
3. Ask each group to group items in any way they choose, i.e. color, shape, texture, like-items with like-items, etc
4. Once they have finished with their groups they must begin to write a dichotomous key on each of their items.
 - ***It is good before you begin the activity to do a small sample with just a few items so they can get the hang of writing keys.***
5. After each group has finished their keys they are to pass their key and items to another group and they are to label each item by using the dichotomous key to key out the items.

I Can Name That Thing

Subject & Grade level: for use by middle and high school teachers

Overview:

The following activity will help students understand the need for taxonomy in the real world and in their backyard or school yard. Students will do a variety of activities that will make taxonomy real to them.

Purpose:

We will be enhancing observation skills, learning how to use a taxonomy key, experience how organisms are interconnected & the ecology of your area.

Objectives:

Knowledge and use of a taxonomy keys. Being able to identify the Interrelationships between organisms

Resources/Materials:

Taxonomy keys, Internet, a field or forest area, meter sticks, clipboards, collection jars, bags

Activities & Procedures

** Prior to day 1 - have a lecture about taxonomy or classification**

Day 1:

Assign students to groups of 2-3 per group (pick heterogeneous groups)

Step 1

- plot out an area near the school for as many groups as your class needs (size of the plot 1 m X 1 m or 2 m X 2 m)
- Assign each group a specific plot
- Give each group a data sheet to record information
- At the plot area the group will identify all the plants and animals that live in or Cross their plots - by common name

Step 2

- After identifying all the plants and animals in their plot they are to come up with new names for all the organisms. (Warning - do not share information between groups)
- Collect Data sheets at the end of the hour
- Make a concept map

Day 2:

Give back the data sheet to each group

- Have each group write a short story about their plot using only the new names they have given each organism
- This will take 1/2 the class period or less

- After each group is done, they will read their story to another group or the class depending on the time
- The goal is to listen to the story and record how many of the organisms they can identify
- Take the last 5 - 10 minutes to get reactions of the new names and direct the conversations as to need and use of taxonomy

Day 3:

Explain how to use the taxonomy keys and to go back to plot area and correctly identify the organisms

- Record the results in the final column of the data sheet

(Stop here or add an additional day to your activities)

Day 4:

Expand the activity by going back to the plot and include the interactions between organisms and their environments

- Some activities:
- Make a concept map
- Have each group create a question or problem for each area
- Have a different group solve the problem posed by the 1st group
- Students can experiment, collect data, or use testing for a solution, research on the internet
- Do a sketch or painting of the plot area

Closure:

Students will be able to use taxonomy keys in a real-world setting. (in the Field)

Students will be able to record interactions of organisms.

On the final day get the student's reaction to using the Keys.

Assessment Strategies:

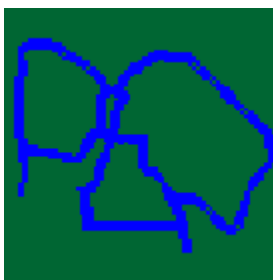
Students will turn in their data sheets

Students will correctly identify plants and animals using taxonomy keys

Standards Addressed:

Constructing New Scientific Knowledge

Using Scientific Knowledge in Life Science



Plot Area: Each group will have a specific plot area

Separate areas with dowels, sticks, neon field tape, stones etc.

Plot areas will be _____m X _____m

1	2
3	4
5	6

Group 1 : _____

Group 2: _____

Group 3: _____

Group 4: _____

Group 5: _____

Group 6: _____

Data Sheet

Group # _____

Names: _____

#	Common Name	New Name	Scientific name
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

**** Make a concept map on the back of the pg.**

Ecology/ Interactions of the Plot

Creating a question or Problem from Plot # _____

Solutions to problem or testing:

Research/ Internet Search:
