Who's Who At the Zoo?

This packet is to help introduce your students to terms and ideas that will be discussed during your visit to Peoria Zoo. It is designed to enhance your program experience, either through class prep or follow-up.
By using the vocabulary, activities and ideas covered during the program, it will help reinforce the program and meet the State Standards listed on page 3.

Terms to introduce

- Aquatic- living or growing in, on, or near the water
- Gills- the respiratory organ of most aquatic animals that breathe water to obtain oxygen
- Invertebrate- lacking a backbone
- Vertebrate- having a backbone
- Taxonomy- the classification of organisms in an ordered system that indicates natural relationships
- Metamorphosis- a change in the form and often habits of an animal during normal development after the embryonic stage
- Cold-blooded- an animal with an internal temperature that varies according to the temperature of the surroundings
- Lungs
- Respiration
- Scales

Ideas covered in program

- Classification is a way for scientists to place animals/plants in groups, making it easier to study and understand them.
- Taxonomy was introduced so scientists would have a "common" language. Everyone will call the caterpillar the same thing, instead of one person calling it caterpillar another wooly worm, etc.
- Invertebrate vs. vertebrate, looking at which animals fit into which category
- Introduce the six main groups of animals (Fish, Amphibians, Reptiles, Birds, Mammals, and Insects).
- **Characteristics of mammals**: live birth, covered with hair, babies fed milk, and breath oxygen (important because of mammals like dolphins and whales)
- **Characteristics of birds**: feathers, hollow bones and lays hard-shelled eggs
- **Characteristics of reptiles**: scales, lays eggs, cold-blooded
- **Characteristics of amphibians**: goes through metamorphosis, has moist thin skin but no scales, uses gills, lungs and skin to breathe, uses external fertilization
- **Characteristics of fish**: cold-blooded, water breathing
- **Characteristics of insects**: exoskeleton, six legs, antennae, 3 body parts (head, thorax and abdomen)

Activities for students

DISCUSSION:
Talk to the students about the animals they saw during the program, which ones they liked/didn't like. Have them write about the animals they saw, then write about their favorite animal.

CLASSIFICATION:
Scientists put things into groups to make it easier to study. Using several pictures of familiar animals (or even small plastic animals/stuffed animals), place the animals in the scientific groups- reptiles, mammals etc, explaining why scientists have grouped them this way.
Now have the students become "scientists" and put the animals into groups that make sense to them (it does not necessarily have to be by class, it could be by color, where they live, what they eat, etc.)
After getting the animals into the groups have the students talk about similarities/differences and why they grouped them the way they did.

You can also obtain pictures of rare or unusual animals that students may not be familiar with (Okapi, Echidna, Platypus, Kiwi, Pangolin, etc.). Then have the students classify these animals into their appropriate groups, these can be tricky since they are usually the exception to the rule for scientists.

CLASS SYSTEM:
Introduce the class system, kingdom, phylum, class, order, family, genus, and species. Use an animal they know to show how the system is used.

House Cat-	Kingdom:	Animal
(example)	Phylum:	Chordata
	Class:	Mammalia
	Order:	Carnivora
	Family:	Felidae
	Genus:	*Felis*
	Species:	*domestica*

Kingdom is the largest most general group and each gets more specific. This sounds confusing and is a lot of memorization, but you can use the students as an example.
Pick a student and have them come to the front of the room. Explain that you are going to classify this student by where they live. If someone asks them where they live, it all depends on who is asking, how they would answer; if it was a friend, they might give the house number; meeting someone who lives in their town they might give the street name; and so on.
Example:

Kingdom:	North America
Phylum:	United States
Class:	Illinois
Order:	County
Family:	City
Genus:	*Street*
Species:	*House Number*

This helps put it in perspective on how the system works. For practice, you can have the students practice classifying each other and then pick an animal and use the system to classify them.

MURAL:
Using pictures from magazines, have students create murals placing the animals in appropriate groups.

State Standards met by:

Listening to the program-
4.A.1a-d; 12.A.1a-b; 12.B.1a-b; 12.C.1b; 13.A.1a
4.A.2b-c; 4.B.2b; 13.A.2c

Writing about the animals they saw-
3.A.a.1; 3.B.1a-b; 5.A.1a-b; 5.B.1a-b; 5.C.1a-b
3.B.2; 3.B.2a-d; 5.A.2a-b; 5.B.2a-b; 5.C.2a

Discussing what animals they liked best-
4.B.1a-b
4.B.2a; 4.B.2c-d; 5.C.2b

Creating a mural of animal groups-
12.A.1a-b; 13.B.1c; 26.A.1e; 26.B.1d
11.A.2a-e

Classification-
4.B.1.a-b; 5.A.1a-b; 5.C.1a-b; 12.A.1a-b
4.B.2a-d; 12.B.2a-b

Class System-
11.A.1b; 11.A.1e-f
11.A. 2a-e