From Start to Finish

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 it will help reinforce the program and meet the State Standards listed on page 2.

Terms to Introduce to Students:

- Direct development-when born the animal has close to the same appearance it will have as an adult (humans, dogs, cats, rabbits, etc.).
- Egg-a shelled protective covering containing nutrients for an embryo
- Indirect development-when born the animal looks completely different than it will as an adult; it goes through stages (mealworms, frogs, and toads)
- Larva- the earliest stage of development of an animal that goes through metamorphosis
- Metamorphosis-a change in form during development of an organism
- Pupa-the nonfeeding stage between the larva and adult in metamorphosis

Ideas covered in program:

- What metamorphosis is along with direct and indirect development
- The general metamorphosis of a butterfly (egg, larva, pupa, adult) and/or a frog (egg, tadpole, frog)
- Born vs. hatched
- How plants are important in the life cycle of a butterfly, as well as other animals
- What a marsupial is and why it is included in this topic

Activities for students:

READ

-Read books about metamorphosis or encourage students to read and turn in book reports (ex. Of books: *The Very Ordinary Caterpillar* by Gary Fleming, *The Very Hungry Caterpillar* by Eric Carle, *Butterfly Kiss* by Vicki Chruchill and Charles Fuge) D.K. Publishing also has a whole series of books called "Watch Me Grow"

DRAW METAMORPHOSIS STAGES

- Have students draw pictures of the various insects that go through a metamorphosis (butterfly, diving beetle, dragonfly). They can draw and label the different stages so that they become familiar

WHAT COMES FIRST

- Bring in chicken eggs for students (you can break them into groups of 2-4). Explain about the different parts of the egg and why they are important. Have the students crack the egg into a bowl and identify the parts. They can sketch what their egg looks like and label it.

LIFECYCLE ORDER

- Cut out pictures of lifecycles (butterflies, frogs, etc) and have students place them in the correct order.

State Standards met by:

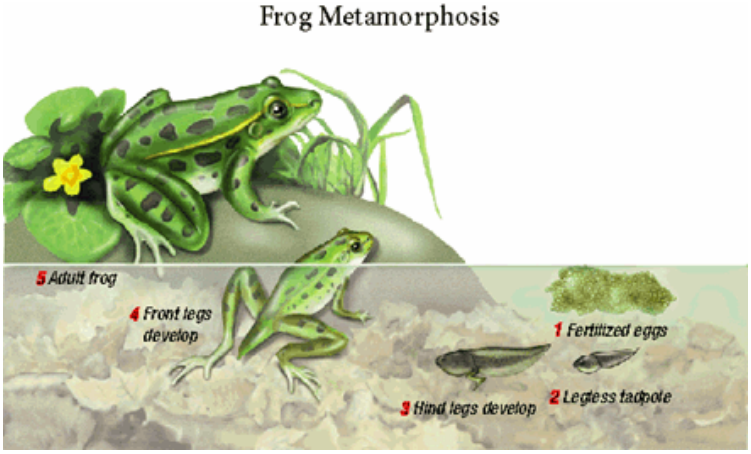
Listening to the program-
4.A.1a-d; 12.A.1a-b; 12.B.1a-b; 12.C.1b; 13. A.1a
4.A.2b-c; 4.B.2b; 13.A.2c

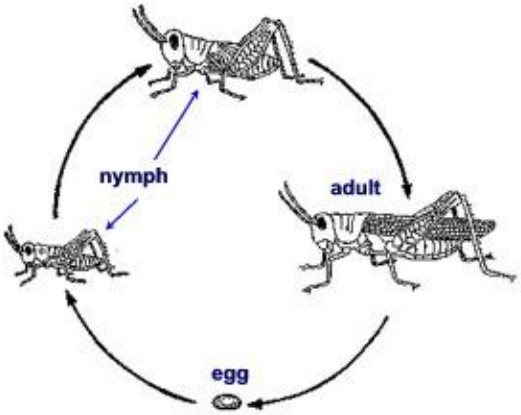
Write about what they saw in the program/draw metamorphosis stages
3.A.a.1; 3.B.1a-b; 5.A.1a-b; 5.B.1a-b; 5.C.1a-b
3.B.2; 3.B.2a-d; 5.A.2a-b; 5.B.2a-b; 5.C.2a

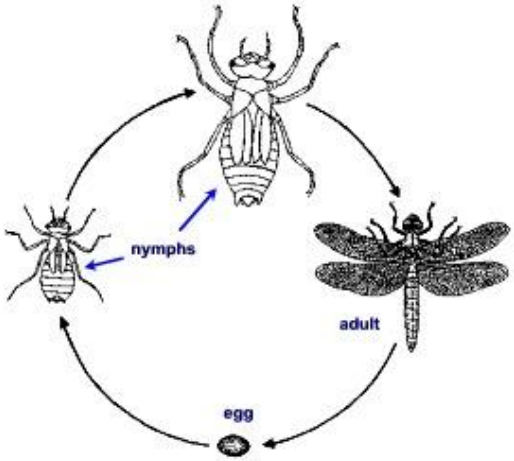
Read
1.B.1a; 1.B.1c; 1.C.1d; 1.C.1f; 2.A.1a-b
1.B.2a; 1.B.2c-d; 1.C.2a-c; 2.A.2c

What comes first
12.A.1a-b
11.A.2b-c; 12.A.2a

Lifecycle order
11.A.1a; 11.A.1e
11.A.2c; 12.A.2a; 12.B.2b







Grasshopper Dragon fly

Incomplete metamorphosis: The immature stages look quite like the adults. Each time they molt they look a bit more like the adult. The last parts to develop are the wings and reproductive organs.

Direct development