

Activity 2: Are You Me?

-Aquatic WILD-

**Ages:**

K-12

Time:

5-10 minutes

Setting:

Inside

State Essential Learning Requirements:

Communication: 1.1, 1.2, 2.5, 3.1, 3.2, 3.3

Science: 1.1, 1.2

**Materials:**

Aquatic WILD Activity provides illustrations of aquatic life cycle stages.

Overview:

Using pairs of aquatic cards provided, students match the young stages of aquatic animals with the corresponding adult stages.

Washington adaptation:

Match the description of the salmonids with the illustration.

Objectives:

- To identify 5 species of salmon
- To recognize life stages of aquatic life.

Critical Questions Addressed:

1. Value of Salmon

ARE YOU ME?

OBJECTIVE

Students will recognize various young stages of aquatic animals and match them with corresponding adult stages.

METHOD

Using picture cards, students match pairs of juvenile and adult aquatic animals.

BACKGROUND

Many animals look significantly different in their earliest stages of development when compared to adulthood. This is obviously true for some aquatic insects. Many aquatic insects undergo metamorphosis. Metamorphosis means change during growth. Some insects experience simple metamorphosis while others undergo complete metamorphosis. In simple metamorphosis, the insect egg hatches to produce a **nymph**. Nymphs may begin to resemble adults but they still may vary considerably from their adult form.

Insects that experience complete metamorphosis are characterized by eggs that hatch into **larvae**. The larva grows through several stages and then changes into a **pupa**. Pupae are usually encased in a protective cover for their next stage of growth. From the pupae emerge the soft-bodied, often pale-colored, adults. They differ remarkably in appearance from their earlier forms but are not yet completely formed. Gradually the soft pale body develops firmness and color. In

Age: Grades K-2

Subjects: Science

Skills: analysis, classification, communication, comparing similarities and differences, matching, recognition, small group work

Duration: one or two 20-minute periods; preparation time for students to bring family pictures to class

Group Size: small groups of three or four students each; card masters are provided; duplicates may be used if needed, or fewer cards if the class is smaller

Setting: indoors

Conceptual Framework Reference: I.B., I.B.1., I.B.3., I.B.4., III.C.

Key Vocabulary: aquatic animals, grow, change, adult, young

Appendices: None

complete metamorphosis, there is little resemblance between the adult and earlier forms.

There are also remarkable similarities and differences between other aquatic animals in different life stages. The eggs of many animals hide their eventual form (alligators, turtles, birds). Pelican hatchlings, for example, may be the closest image of miniature dinosaurs to be found on the planet. Aquatic mammals often are easy to recognize. They frequently do not change as dramatically as some other animals in overall appearance as they grow from young to adult stages.

The major purpose of this activity is for students to recognize that there are differences in the life stages of aquatic animals as they grow. The students will increase their appreciation of the diversity of wildlife as well as their understanding of growth and change in animals.

MATERIALS

cardboard for making picture cards; marking pens or crayons

PROCEDURE

1. Make pairs of aquatic animal cards. The animals in the pair should be the same kind. For example, one might be a pair of beavers; another might be a pair of pelicans. One animal in the pair should be an adult, the other should be at a younger stage of development. The pairs might include adult, larva, nymph, hatchling, juvenile, infant and/or egg forms of aquatic animals. You may use the masters provided.
2. Ask the children to bring two pictures from home. One should be of an adult, the other should be a picture of a child. The pictures should be pictures of the same person as an adult and as a child. For example, the pair may be of the student's parent as an adult and in a childhood picture, or it may be a school picture of the student and a picture of the student as an infant.
3. Divide the class into small groups of three or four students each. Have them hold their own set of paired

pictures in their hands. Assign each group a single table or station. Ask them to stand in a circle around that station.

4. Have the students at each station place their pairs of pictures on the table and mix them randomly. Once the adult-child pictures are mixed at each table, have the entire group shift to another table so there will not be anyone at the tables where their own pictures are placed.

5. At the new table, have the group attempt to match pairs of adult/child or student and infant photos.

6. When the students at each table have completed their efforts to match the pairs, ask all of the groups to return to their original tables—the places they left their own pairs of pictures. Are the matches correct? Ask the students to change any pairs that are not correctly matched. Talk about how difficult or easy it was to correctly match pairs. Introduce the idea that many animals look remarkably different as adults than they appeared in younger forms. Tell the students that they are about to learn how to match young and adult forms of many different kinds of aquatic animals.

7. Introduce the aquatic animal cards and divide the class in two. Designate one half of the students "adults" and the other half "young animals." Give each student in the "adult group" an "adult" animal image. Give each student in the "young animal" group a "young animal" image. Make sure there is a corresponding match, adult or juvenile, for each card given. Instruct the students to look for their "match"—pairing the appropriate adult and juvenile forms.

NOTE: You can attach each animal card to a string loop so the pictures can be hung around the students' necks as they try to match the pictures.

8. When all the students have made their choices and think they have a match, let everyone help to see if the matches are correct. Some are more difficult than others and may be confusing. You may show the students the matched images on the master.

9. Have all of the students look at all of the correctly matched pairs. Look at similarities and differences in how different kinds of aquatic animals grow and change.

NOTE: This activity can be repeated several times by shuffling the adult and young images and passing them to new "animals" so that each student becomes familiar with a wider array of animals.

EXTENSIONS

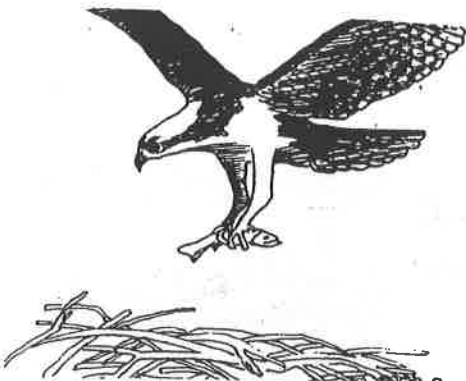
1. Find out as much as possible about some of the habitats in which these animals live.
2. If possible, visit some of the habitats where the animals are actually found.
3. Pick a pair of images and find out more about the life cycles of the animals shown.
4. Discuss and/or pantomime the concept of metamorphosis.

EVALUATION

Pick two aquatic animals. Draw a picture of each animal as an adult and another picture of each animal as it looks when it is young.



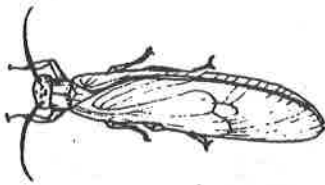
Osprey



Osprey Hatchlings



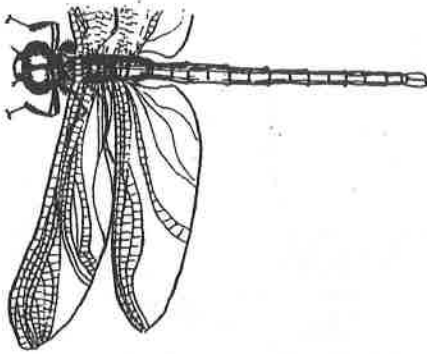
Stonefly



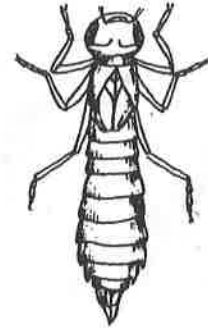
Stonefly Nymph



Dragonfly



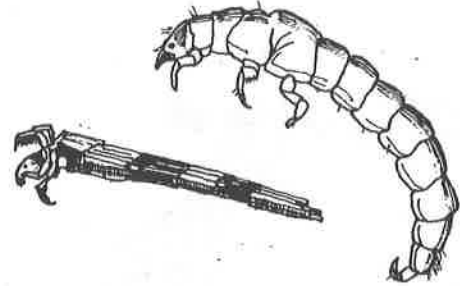
Dragonfly Nymph



Caddisfly



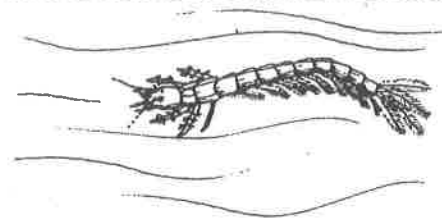
Caddisfly Larvae



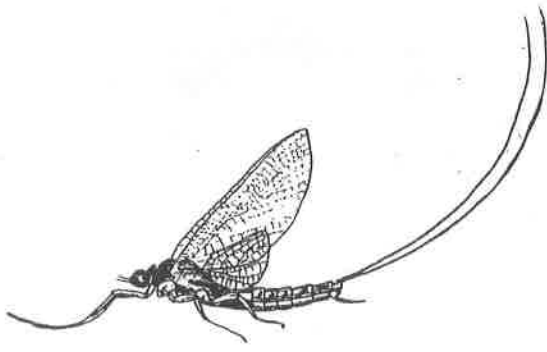
Whirligig Beetle



Whirligig Larva

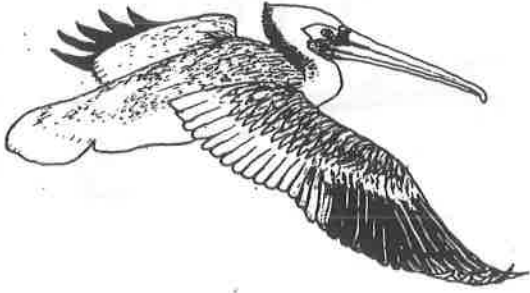


Mayfly



Mayfly Nymph

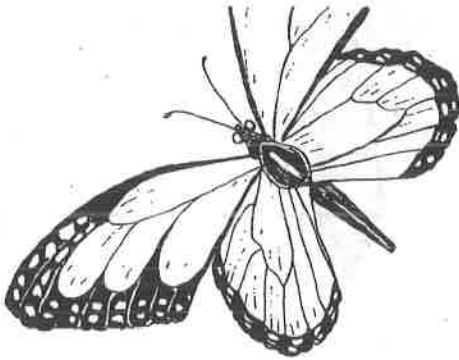
Pelican



Pelican Nest and Eggs



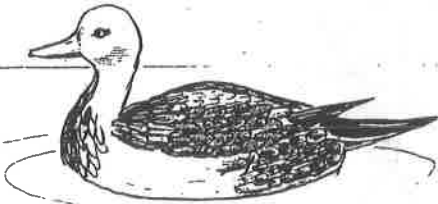
Butterfly



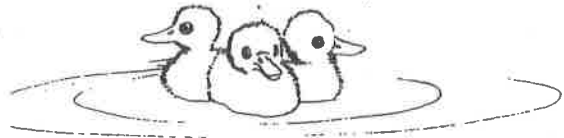
Butterfly Larvae



Duck



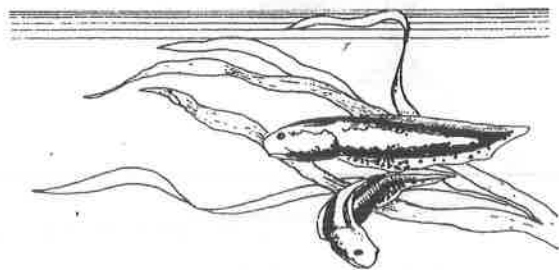
Ducklings



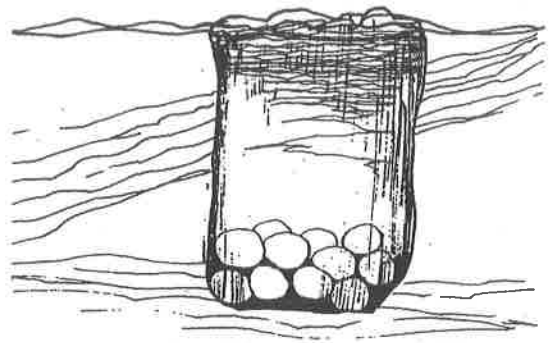
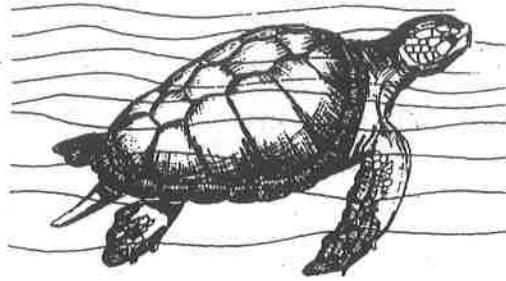
Frog



Tadpoles

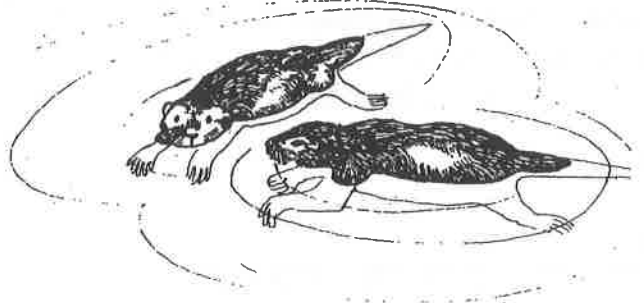


Sea Turtle



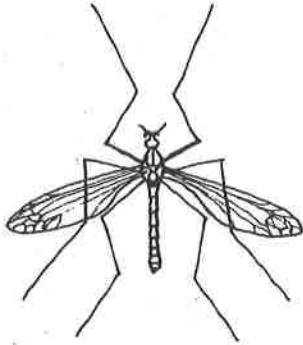
Sea Turtle Eggs

Sea Otter



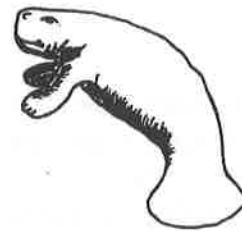
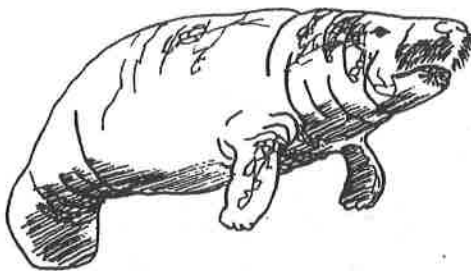
Young Sea Otters

Cranefly



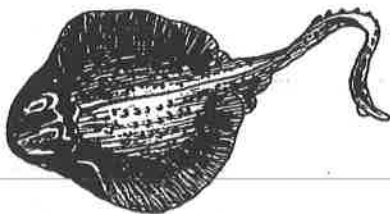
Cranefly Larva

Manatee



Young Manatee

Skate

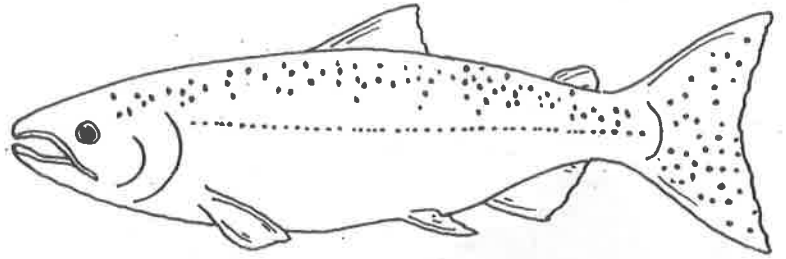


Skate Egg Cases

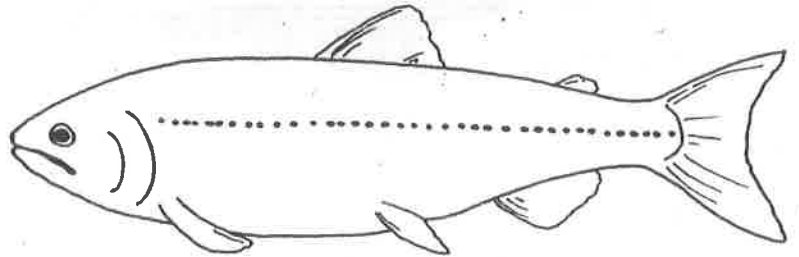
Are You Me?



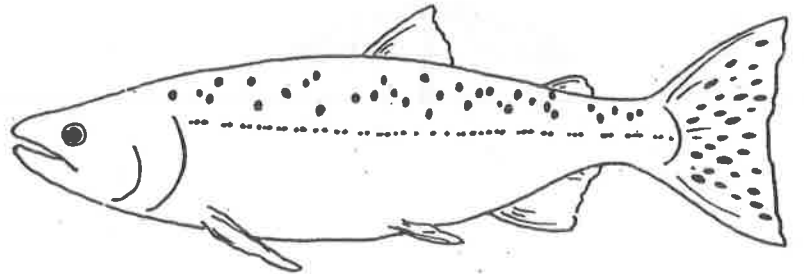
"Hi! I am the 'King' Chinook because I am the biggest salmon. I have lots of spots all over my back. I am sometimes called a blackmouth because my teeth grow from black gums. This is what I look like."



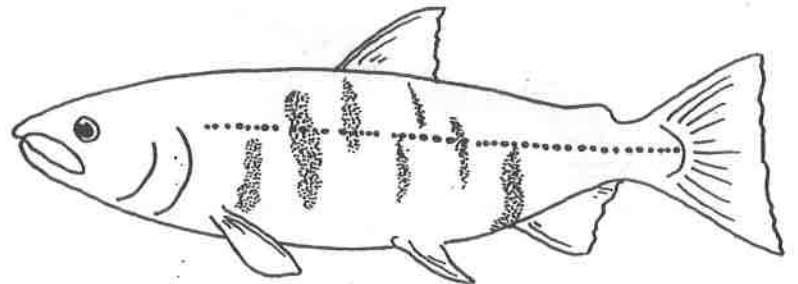
"Hi! I am Susan Sockeye Salmon. My back is a shiny dark blue. I have very few spots like other salmon. This is what I look like."



"Hi! I am Penny Pink Salmon. I have large oval spots all over my tail and part of my back. My fish scales are very small. This is what I look like."



"Hi! I am Charles Chum Salmon. Did you know I have no spots on my tail and back. I have a pattern of bands on my side. This is what I look like."



"Hi! I am Cody Coho Salmon. I have some spots on my back and only the top of my tail. My teeth grow from a white gum line. This is what I look like."

