



Grebe Breeding Behavior- Raising Young

Overview

Students will learn about Western and Clark's Grebe chick rearing.

California Science Standards

Grade 2: 4.c.-I&E
Grade 5: 6.c, 6.g.-I&E
Grade 6: 7.b-I&E
Grade 7: 7.a.-I&E

Oregon Science Standards

Grade 3: 01,05-L.S.
01-04-S.I.
Grade 5: 01-L.S.
01-03-S.I.
Grade 8: 01,02-S.I.

National Standards

Content Standard A:
Science Inquiry

Materials Included

- * Student Journal
- * Binoculars
- * Clipboards
- * Pencils

Materials Needed

- * Spotting Scope

Activity Time

Preparation: 15 min.
Activity Time: 40 min.

Best Season

Late May-July

Vocabulary

- * Brood
- * Brood rearing
- * Back brooding
- * Free swimming

Grade Level: 2nd-8th (O.S.S.: 3rd-8th) (C.S.S.: 2nd-7th)

Learner Objectives

Student will:

- Demonstrate an understanding of grebe chick rearing
- Make field observations of grebe behavior
- Formulate questions about Western and Clark's Grebe mating behavior
- Summarize observational data

Background Information

A brood is the term for the group of chicks of a bird, and brood rearing is the time when adult birds are raising (feeding and protecting) their chicks. Raising young is not an easy job. There are many threats to the successful rearing of chicks: predation by other birds, separation from adults, and starvation from lack of food or inexperienced parents, to name a few.

Western and Clark's Grebes may have 1-2 chicks in each brood. The chicks leave the nest within minutes of hatching and are then cared for by both of their parents. They climb onto the parents' backs (back brooding) where they remain until they are old enough to swim and find food on their own. They leave the backs of their parents from time to time to defecate, and as they get older, to practice swimming on their own (free swimming). Parents help their chicks climb on their backs by extending a foot to the side to act as a step for young chicks.

While chicks are brooded, the parents feed them small fish and invertebrates. As the chicks beg for food, a red patch of skin can be observed on the top of their heads as they call to their parents. Sometimes an adult will feed the chick directly, other times it will pass the food to the parent with the chick on its back, who then turns and feeds the chick. Adults feed the chicks until they are 8 weeks old and may feed them one to several times per minute. The chicks may be seen pecking each other as they compete for food.

If a predator threatens the adult or chicks, the adult issues an alarm call sending the chicks hiding under its wings. The adult may dive below the water as a last resort but chicks often fall off when this happens.

Lesson Plan

Getting Ready!

1. Read over background information section.
2. Make copies of the *Student Journal: Grebe Breeding Behavior– Raising Young*.
3. Make preparations for going on a field trip to Moore Park or the Link River Trail.

Discuss!

1. Review part one of *Grebe Breeding Behaviors*.
2. Review student-generated questions and answers and address any follow-up questions.
3. Ask the students if they know anything about how challenging it can be for birds to raise their young.
4. Let them know that they are going to learn about grebe chick rearing and have a chance to go on a field trip to observe grebes raising their young.

Investigate!

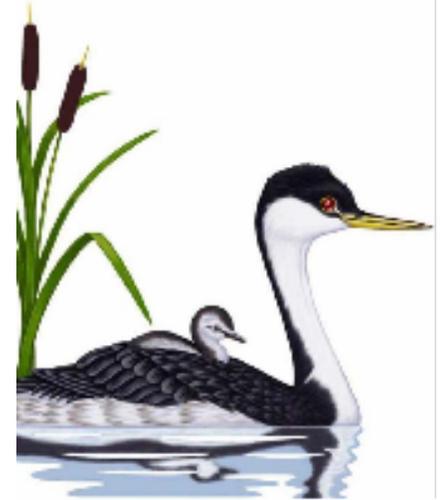
1. Have a discussion on grebe chick rearing using the background information.
2. Have students work in groups of 2-3 to generate questions about grebe chick rearing that they may see in the field.
3. Generate a class list of questions.

Go Outside!

1. Schedule a field trip for late May, June and July to observe breeding grebes at a place like Moore Park or Link River Trail.
2. Have students take their binoculars, questions, and Student Journal about grebe chick rearing with them in the field.
3. Have the students spread out at the site and observe grebes rearing their chicks for 20 minutes.
4. Encourage students to take detailed notes on chick rearing observations using the Student Journal with behaviors listed as a reference.
5. Challenge the students to identify the grebes as either a Western or Clark's Grebe and write this in their Student Journal.

Follow-up!

1. In the classroom summarize common behaviors that were observed by the group. Note similar and unique observations.
2. Tally observations and discuss questions that were asked and answered from these observations.
1. Ask students 2-3 questions to re-cap the lesson (see right panel).



Suggested Questions

What is back brooding?

How long do the adult grebes feed their chicks?

What was the most commonly seen chick rearing behavior?