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<p>Description: Students learn that wildlife, such as birds, use seeds for food. Students consider beak adaptations for feeding on certain types of seeds. They then build small feeding stations for wildlife using native plant seeds and place them in the garden and make wildlife observations.</p>	<p>Vocabulary Adaptation: <i>modification of an organism or its parts that makes it more fit for existence under the conditions of its environment</i> Cones: <i>a mass of reproductive scales or bracts in trees of the pine family.</i> Wildlife: <i>animals that are neither human nor domesticated</i></p>
<p>Objectives:</p> <ul style="list-style-type: none"> • Students understand that seeds are important for wildlife habitats. • Students understand that animals have adapted to eat certain types of seeds. • Students assemble seed feeding stations and make predictions about their use. 	<p>Washington State EALRs Science 2.1.2 Understand how to plan and conduct simple investigations. 2.1.3 Understand how to construct a reasonable explanation using evidence. 2.2.2 Understand that observations and measurement are used by scientists to describe the world. 3.3.4 Understand how humans and other living things depend on the natural environment. Describe what organisms obtain from their environment. Understand how humans and other living things depend on the natural environment and can cause changes in their environment that affect their ability to survive.</p>
<p>Print Materials:</p> <ul style="list-style-type: none"> • ‘How-to-do Activity: Making Feeding Stations’ • Images: ‘Audubon Bird Paintings’ <p>Kit Materials:</p> <ul style="list-style-type: none"> • Model beaks: Nutcracker, awl, tweezers: 1 each <p>Teacher supplied:</p> <ul style="list-style-type: none"> • Seeds samples: Hazelnut (unshelled), cone, seedhead (grass, goldenrod, etc.): 1 each • Feeding station supplies (see ‘How-to-do Activity’) <ul style="list-style-type: none"> • Divided paper plates: 6; plastic knives and spoons: 1 per student • Hazelnut butter: approx. 2 cups • Chopped sunflower seeds: approx. 2 cups • Native grass and flower seed: approx. 1 cup • Dried cones (Douglas fir, western hemlock, spruce or pine): 1-2 per student • Cotton thread or string (not polyester): approx 2’-4’ per student • Student journals and pencils: 1 per student 	

<p>Activity:</p> <ul style="list-style-type: none"> • Go to habitat area and point out seeds on plants. Review what students have learned about seeds in the habitat area. • Discuss with students: “Why are there so many seeds from one plant? Do all seeds grow? Why don’t they all grow? What happens to them to prevent them from growing?” (weather, growth requirements not met, and wildlife eat them) • State that “Seeds from plants are very important for animals. They are a primary food for animals including humans.” • “What animals eat seeds in our habitat site? (squirrels, birds, ants, voles, etc.) What seeds?” • Show Images: ‘Audubon Bird Paintings’ along with seed samples. Point out beak shapes and sizes for each bird. Discuss how beaks function. Show the model beaks (nutcracker, awl, tweezers) and demonstrate their use with the following: <ul style="list-style-type: none"> ○ Show sample hazelnut seed. “Who might eat this seed?” Show ‘American Crow’ painting. Demonstrate using a nutcracker to crack a hazelnut. Compare to crow beak. Show ‘Steller’s Jay’ painting. Demonstrate using an awl to try to break apart the shelled hazelnut. Compare to jay’s beak. ○ Show cone. “Who might eat this seed?” Show ‘Red Crossbill’ painting. Use tweezers to fit between cone scales to reach seeds. ○ Show seed cluster. “Who might eat this seed?” Show ‘American Goldfinch’ painting. Demonstrate using tweezers to ‘peck’ at seeds. ○ Show other images and have student guess their beak type and the foods they might eat. • Summarize: Birds have different sizes and shapes of beaks to eat specific types of seeds and other foods. • Tell students that, “Now we will make a feeding station to provide seeds for many different types of birds”. Show the various seeds and supplies that will be used. “What birds do you think might eat these seeds?” Consider all answers. • Organize students to assemble ‘feeding stations’ (see “How-to-do Activity”). Have students hang their completed feeding stations on a tree or shrub in the restoration habit. • Student journals: Predict what will happen to your ‘feeding stations’. What birds might come and feed on them? What kinds of beaks would they need? What other animals might feed on them? How long before this happens? • Return to stations after one day and again after one week and make observations about the feeding stations. Ask students to explain what happened to their feeding stations, and to provide any evidence they have for how this happened. <p>Extension:</p> <ul style="list-style-type: none"> • Make additional ‘feeding stations’ as gifts or for fundraising for habitat stewardship projects. • Research the urban bird species of Seattle and their food sources and create a presentation, poster, report, etc. • Create a ‘Wildlife Uses’ booklet or posters on the plants in the habitat site.
