



Seed Balls for a Healthy Ecosystem



Duration: 1 hour

Grade Level: Ages 5 and up, younger ages may need an adult helper

Location: At home and around your backyard

Recommended Resources: [Plants that Attract Pollinators in the PNW](#), another recipe and fun video on [How to Make Seed Balls](#)

Seed ball Materials: 1 part potting soil or compost; 5 parts dry clay (look for traditional dry red clay or bentonite clay online or at craft supply stores); 1 part seeds*; water.

For assembly: a large tub, cups for measuring ingredients, cookie sheet, paper, pens or pencils

***A note about seed choice:** Native wildflowers are a good option; not only are they are hardy and lovely, they will be well adjusted to your local climate and native pollinator species. You can search online to determine which wildflowers are native to your area. Other seed ball favorites include cosmos, red poppies, coreopsis, and coneflowers. Above all, make sure any seeds species are not invasive in your region. Remember to make sure that you have permission to plant, wherever you plant your seeds!

Theme: An ecosystem is like a community where all members are connected and support each other.

Goals: Students will build habitat for pollinators using the seed ball method of seed distribution.

Students will survey and map their backyard (or another outdoor space), detailing flowering plants, pollinators, and bare soil they see.

Introduction (5 min):

Did you know your backyard or neighborhood is part of an **ecosystem**? Ecosystems are communities of living and non-living things within an area. Did you know you are part of an ecosystem too? You are an ecosystem community member, and so are rocks, ants, the clouds, flowers, and the grass under your feet! It is essential to know about your community, check in on them, and support them, because in an ecosystem, everything is connected.

Word Bank

Ecosystem | A community of living and non-living things within an area.

Compost | A mixture of broken down or decomposed food, plants, or natural materials. It looks like soil, and can be added to soil to make it healthier!

Pollination | The process that allows some plants to reproduce. Pollen moves from one flower to another; once pollen is transferred to the female reproductive part of the plant, the plant can develop fruits and/or seeds.

Pollinators | A group of creatures that support the pollination process. Some insects collect pollen on their legs while drinking nectar in flowers. Pollen gets distributed as they move from flower to flower.

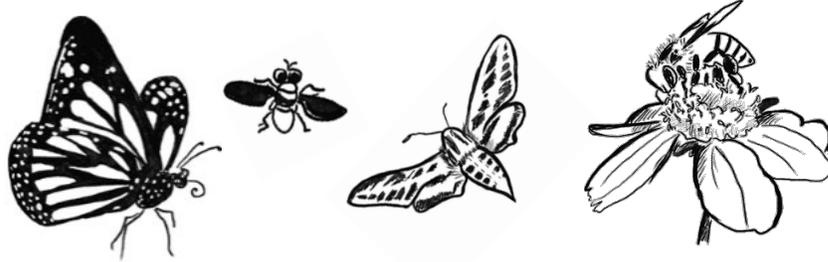
Nutrients | Important building blocks of life, found in food, soil, and water that support the health of all growing things!

Vulnerable | Capable of being injured; without protection.



Above: Oxbow Campers loved making seed balls. They even got creative and made "Sea-d" Turtles!

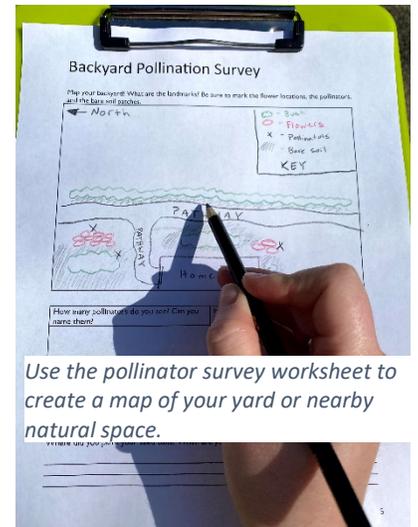
Some particularly **vulnerable** community members in our backyard ecosystems are **pollinators!** Critters in this group include bees, butterflies, moths, and even flies! They **pollinate** our flowers which in turn produce delicious fruit, vegetables, and seeds to eat. This is the way a lot of plants reproduce. Pollinators need food, just like any living thing and we can help by planting flowers. It is up to us, their human neighbors, to make sure they have food sources, stay healthy, and stay in our ecosystems.



Some pollinators to look out for: flies, butterflies, moths, and bees.

Activity Part I - Backyard Pollinator Survey (20 min):

Today, you are going to walk around your yard or neighborhood and record the number of pollinators, the number of flowers, and the amount of bare ground that you see. You can even draw a map and point out specifically where you see them! It is important to know how many pollinators and flowers are around your yard now so you can check in later to see if there are more. Take note of any bare soil patches, which identify locations to return to and plant more flowers (or food sources) for the pollinators.



Use the pollinator survey worksheet to create a map of your yard or nearby natural space.

Fill out Pollinator Survey Worksheet (if needed, have an adult helper join you and assist). If you are new to mapping, be sure to check out Oxbow's [Backyard Nature Survey](#) activity! It has helpful information on how to focus and collect detailed facts about an area.

Tip: Your pollinator survey should include a note about the time of day and the weather. Some pollinators might prefer warm, sunny weather to cloudy and rainy weather!



For younger students, make observations together and demonstrate focused observations.

Activity Part II - Pollinator Seed Ball Bonanza (30 min):



When completely dried, seed balls can last up to 6 months in a sealed container!

Now that you have a better idea of how many pollinators are in your yard or neighborhood, do you think you could attract more? What is a good way to do that? Plant flowers they love, such as native plants and wildflowers! A really fun way to plant seeds is by making **seed balls**. Seed balls are balls of clay, soil, and water with seeds mixed in. About the size of a golf ball (~1.5” in diameter), they are a fun way to sow seeds on bare soil. The **compost** or potting soil will give the seeds a

boost of healthy **nutrients** and the clay will protect the seeds from birds or other seed-eating creatures until a strong rain washes the clay out and gently distributes the seeds into the yard soil.

Directions:

1. Combine the compost or potting soil and the dry clay.
You can find compost at most home goods stores, or you can use compost made from [an at-home worm bin](#). Add water slowly, until the mixture is just moist. Make sure to not add too much water! It should have the consistency of cookie dough.
2. Fold the seeds into the mixture. Mix with your hands to make sure the seeds are distributed throughout.
3. Shape the mixture into a ball, about 1.5” in diameter, and put on cookie sheet to dry.
4. Let seed balls dry for 24-48 hours in a dry, open space.
5. Using information from your completed survey, place or toss balls in bare soil spaces you noticed earlier while doing your Backyard Pollinator Survey! If you’re eager to get your seeds growing, water the ball until the soil mixture starts to run off. Or, if you are patient and want a surprise, wait until rain washes the seed ball away.
6. On your Backyard Pollinator Survey worksheet, label where you planted your seed balls and record your planting date. Be sure to check your seed balls every once in a while! Fingers crossed, you should see some plants growing soon!

About dry clay: While it is not necessary to have dry clay for this activity, the clay helps hold the ball shape and protects the seeds until the next rain. If you’re unable to get any powdered clay, just use soil from your yard or an outdoor area and mix with potting soil or compost! Just be sure to adjust the amounts so the consistency remains the same. Soils that hold together on their own are often already rich in clay and might not need much additional clay.

Inquiry Questions:

- Where are the pollinators in your yard? Where are the flowers?
- What other ecosystem community members do you see in your yard?
- Which ones do you wish you would see in your yard? What would you need to do to attract them?
- Challenge: How do you think creatures in your background ecosystem are connected? Try and draw a visual of their relationships to each other (food, shelter, etc.).
- Challenge: Look at your neighborhood. Who and what are that ecosystem's community members? How can you support them?

Conclusion (5 min):

After surveying and placing your seed balls, tell your parent or a close friend about what you did! Use your map's pollinator and flower count as evidence on why you planted more food sources for pollinators. Lead them to the seed ball locations so they can also keep an eye on how the flowers are growing, and enlist them to help spot more pollinator community members.

Enrichment/Expansion:

Did you love learning about your local ecosystems and pollinators? Want to have some more pollinator-themed activities? Check out the [Bee Pollen Buzz](#), a resource from the USDA about pollinators with coloring, puzzles, and fun facts!

Backyard Pollinator Survey

Map your backyard! What are the landmarks? Be sure to mark the flower locations, the pollinators, and the bare soil patches.

How many pollinators do you see? Can you name them?	How many flowers do you see? Describe them.

Where did you plant your seed balls? When are you going to check on them next? _____

