

# Patch Program

## Pollinators

This patch is designed to help you learn about the importance of pollinators. You will learn what a pollinator is, why they are important and how you can help them. You will discover where pollen is made and the importance of pollen to our food supply. You will get to give back to pollinators by taking action in your community.

### Grade level requirements:

- **Daisies (grades K-1).** Choose one activity from each category.
- **Brownies (grades 2-3).** Choose one activity from each category.
- **Juniors (grades 4-5).** Choose two activities from each category.
- **Cadettes (grades 6-8).** Choose two activities from each category.
- **Seniors (grades 9-10).** Choose two activities from each category.
- **Ambassadors (grades 11-12).** Choose two activities from each category.

## Discover

Discover the many kinds of pollinators and why they are important. Identify pollinators and realize that you have the power to impact pollinators and their food sources.

- What is a pollinator? Identify three different pollinators. Draw a picture of each one. Try to find them in nature. Count how many you can find. Find out about the habitat and life cycle of each pollinator. Create a model of each pollinator. Try to find them in nature. Count how many you can find.
- What is pollen? Why is it important? Find out what makes pollen and what it does. Identify three different sources of pollen. Draw a picture of each one. Use pompoms or rolled paper to make pollen on your pictures.

- Where do pollinators live? Find homes of three different pollinators. Find a pollinator's home near you. Draw a detailed diagram of a flower, labeling all the parts of the flower. For extra help, cut a large flower in half and dissect the flower
- How do pollinators help other animals? Make a list of the animals that are helped by pollinators. Learn about food webs. See how plants, animals and humans are connected by an energy cycle. Discover how much energy is transferred between cycles.
- Where do pollinators live? Find homes of three different pollinators. Find a pollinator's home near you. Discover why pollinators live in the homes they do. Look up predators or threats to the pollinators' survival.
- Why are bees important? Are there different kinds of bees? Where do bees live? Identify three different bee homes. Identify three different predators of bees. Honeybees are amazing – how do engineers learn from bees? Where else do you see hive structure and why? Why do bees build in a hexagon pattern?
- What colors are different pollinators attracted to and why? Are there certain plants that many pollinators are attracted to? How is this advantageous to the plant and the pollinator?
- Discover where seeds come from and the need for pollinators in the life cycle of the seed. Create several detailed diagrams of the life cycle of a plant, from seed to flower, and how pollinators are needed.

## Connect

Understanding the natural world around you and where foods come from help you to be more aware of things bigger than yourself. Find ways below to connect to the importance of pollinators

- What special tools or body parts do pollinators have to help them eat? Compare what you use to help you eat. Try using a straw to eat everything for a meal or snack. How did it work for you?
- Pollen is needed for one-third of our fruits and vegetables to grow. How is pollen moved from flower to flower? Play the Pollen Game with your troop or family to see how pollen moves from flower to flower.

**Pollinator Game:** Make a list of all the foods that you enjoy that would be gone if pollinators did not exist. How would not having pollinators effect the

earth? How would it effect other animals? How would it effect businesses? Make a chart of plants that need pollinators and plants that do not.

- Did you know that different pollinators have favorite flowers? Find out what flowers the pollinators in your area are attracted to and why. Make a flower out of paper that would attract a pollinator.
- How does a beehive work? Learn how the bees communicate. Research the social structure of bees and the different responsibilities of bees in the hive. Visit a beehive or create a model of one. Look for examples of beehive structure in buildings and technology.
- Food webs show the connection of plants and animals to each other. Learn how pollinators are part of a food web. Create a food web of plants, pollinators, and animals in your area. Use pictures/names and string to show the connection.
- Not all pollinators are insects. Bats are great pollinators. Discover two species of bats that are pollinators. Research how these bats are adapted to their food source. Explore where these bats live, what their favorite foods are, and how they are adapted to their habitat.
- Look around your house or local store and find some cleaners or herbicides. Look up the ingredients listed on the bottles. Are these ingredients environmentally friendly? Look up environmentally friendly alternatives.

## Take Action

Now that you have discovered different types of pollinators and connected to their importance it is time to take action. Try out some ways below to show others what you know about pollinators!

- Find native flower seeds that are good for pollinators and make flower bombs. Then hand them out to family, friends, and people at school with directions on how to plant native flowers for pollinators.
- Make a poster or flyer about what you have learned about pollinators and display it in your school or share with another troop.
- Build a bee bath or butterfly feeder for your own yard.
- Build a solitary bee house. Research the kind of wood and fastener you should use to protect the bee and attract them to your house. Be sure to look at what size holes would be best for bees in your area. Hang the house in your yard or find a nature sanctuary.

- Build a bat house. Research the dimensions and materials that are safest for the bats and that they would be attracted to. Hang your bat house in a pollinating bat habitat.
- Create a presentation of what you have learned about pollinators and present it to other troops, your service unit, or another group. See if you can have your presentation on display at a local library or other public space.