



Teacher's Notes: Pollinators

Science Standard:

Learning Objectives:

The students will be able to match picture to picture.

The students will be able to complete a graphic organizer.

The students will use a graphic organizer to write sentences.

The students will be able to identify animals that are pollinators.

The students will be able to explain what pollination is.

Activities

1. Students do image searches. Have the students save pictures of their favorite ones. Those are then inserted onto a Word document or a PowerPoint. Students write a sentence about each bird characteristic. **See Technology printable in the materials.**
2. Get a collection of magazines. Have students look for pictures of plants/flowers and animals that are pollinators. Depending on group you could use the pictures for different things:
 - Divide a large poster board in half. Everyone glues pictures of plants/flowers on one side and animals that are pollinators on the other side.
 - Students make their own collage
 - Students write sentences about the pictures.

General Tips: The goal is to build background knowledge while leading an engaging discussion on any and all information that can be talked about on a given page. The items that you choose to bring up or focus on can be modified for the students you are working with. For example, if you have a student who can point to something in the picture, answer yes/no questions be sure to incorporate a lot more of that as you go through the book. On the same token, be sure to ask a lot of comprehension questions and critical thinking questions at the level appropriate for students. There is something for everyone.

Page 1: There are parts of a flower. Flowers have pollen. Pollen looks like tiny dust. Flowers have a pistil. The pistil is in the center of the flower. Flowers get pollinated when pollen gets in the pistil. There are animals that go on flowers. Those animals move around on the flowers. They help to get pollen in the pistil. The pistil is that big part in the middle. Have students view the following video about pollen and the parts of the flower that helps pollinate flowers.

<https://www.youtube.com/watch?v=9AuVm1jpKEA> Have students view the following video of a bee pollinating flowers. <https://www.youtube.com/watch?v=Qwlla3sDdFs>

Point: flower, yellow pollen, pistil, bee

WH Questions: What moves pollen? Where is the pollen? Where is the pistil? What is in the flower?

Yes/No: Do pollinators move pollen in flowers to pollinate them? Do flowers have pollen in them?

Opinions/Experiences: What do you know about bees? Have you ever seen a bee on a flower? Should you touch a bee when it is on a flower? No! The bee will get scared and sting you. A bee sting hurts!

Peer to Peer Interaction: After you read Page 1, ask students, “What are animals called that move pollen onto the pistil of a flower?” The answer is the main idea card “pollinators.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask the questions above.

Page 2 One thing that moves pollen in a flower to the pistil is the wind. That means wind is a pollinator too. When it is windy the flowers blow all around. The pollen is dust in the flowers. It blows around too.

Point: flower, leaves, stem, wind

WH Questions: What does the wind do to the pollen? Where is the pistil?

Yes/No: Does snow pollinate flowers? Rain? Wind?

Opinion/Experiences: What are some things that wind can blow?

Peer to Peer Interaction: After you read Page 2, ask students, “What does wind do to a flower?” The answer is the main idea card “wind.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

Page 3: The reason pollinators like insects and hummingbirds go to flowers is because they love nectar. Nectar is in the flower. They like to drink it. It tastes good. They drink the nectar from flowers. When they are in the flower drinking nectar they bump the stamen where the pollen is. That can make the pollen move onto the pistil. Then the flower is pollinated. The nectar and the pollen are in flowers.

Hummingbird pollinating video: <https://www.youtube.com/watch?v=6PZfg1EppU8>

Point: hummingbird, pink flowers, stamen, pistil

WH Questions: What is nectar? Where is nectar? Why do hummingbirds go to flowers?

Yes/No: Is nectar something to drink? Do hummingbirds like nectar? Do the hummingbirds move pollen while they are trying to drink the nectar?

Opinion/Experiences: Have you ever seen a hummingbird near a flower? What other birds have you seen? What else animals drink?

Peer to Peer Interaction: After you read Page 3, ask students, “What do pollinators like to drink in a flower?” The answer is the main idea card “nectar.” Students will find the main idea card and read it to their partner. Teacher will prompt them to talk to talk about nectar.

Page 4: Most pollinators are insects. Insects are bugs. There are so many types of insects. Insects like nectar. Just like hummingbirds, that is why they go to the flower. They want to drink nectar. When they are drinking nectar, they move around in the flower and the pollen sometimes gets on the pistil of the flower. That is how the flower is pollinated.

Point: daisy, beetle, stem

Questions: what is that insect doing? Why do insects like to land on flowers? What do they like to drink?

Yes/No: is an insect a bug? Is a beetle a bug? Do insects like nectar?

Sharing Opinion/Experiences: Where do you see a lot of insects?

Peer to Peer Interaction: After you read Page 4, ask students, “What is another name for bugs?” The answer is the main idea card “insects.” Students will find the main idea card and read it to their partner. Teacher will prompt them to talk to each other about insects.

Page 5: Bees do a lot of pollinating. They use the nectar to make honey. Honey is good to eat on toast. Today there are not enough bees. Bees pollinate a lot of flowers. If flowers do not get pollinated, we won't have enough new plants.

WH Questions: What animal is a pollinator? What is honey?

Yes/No: Is a fish a pollinator? Do bees pollinate a lot of flowers? Do bees like flower nectar?

Sharing Opinion/Experiences: What would happen if there were no more insects? What do insects do to help plants?

Peer to Peer Interaction: After you read Page 5, ask students, "What insect is a pollinator?" The answer is the main idea card "bees." Students will find the main idea card and read it to their partner. Teacher will prompt them to talk to each other about bees.

Page 6: Ants are pollinators. They crawl up to the middle of the flower and drink the nectar. The pollen in the flower sticks to them. When they visit another flower, the pollen on the ant gets into the new flower. Then the flower is pollinated. Then seeds grow. Look at the ant in the picture. It is drinking nectar from the flower. The nectar and the pollen are in the middle of flowers. Have the students view the following video of ants pollinating an avocado flower.

<https://www.youtube.com/watch?v=xurZHwk3Buc>

Point: red flower, middle of red flower, ant

Questions: What insect is a pollinator on this page? What do ants like to drink from the flower?

Yes/No: Is a cat a pollinator? Is an ant a pollinator? Is a beetle a pollinator? Do ants move pollen from flower to flower?

Sharing Opinion/Experiences: Where have you seen ants before? What do you know about ants?

Peer to Peer Interaction: After you read Page 6, ask students, "What insect is a pollinator?" The answer is the main idea card "ants." Students will find the main idea card and read it to their partner. Teacher will prompt them to talk to each other about ants.

Page 7: Butterflies and hummingbirds are pollinators. They drink the nectar from flowers. The pollen in the flower sticks to them. When they visit another flower, the pollen on them gets into the new flower. Then the flower is pollinated. It will grow seeds! Have students view the following video of butterflies pollinating flowers. https://www.youtube.com/watch?v=KLfdAsHQw_M

Point: butterfly, wings, flower, hummingbird, flowers, leaves, stems

WH Questions: What insects are pollinators? What type of bird is a pollinator? What do hummingbirds and butterflies like to drink in flowers?

Yes/No: Do butterflies like flower nectar? Do hummingbirds like nectar?

Opinion/Experiences: When have you seen a butterfly? What do you like about hummingbirds and butterflies?

Peer to Peer Interaction: After you read Page 7, ask students, "What animals are pollinators?" The answer is the main idea card "butterflies and hummingbirds." Students will find the main idea card and read it to their partner. Teacher will prompt them to talk to each other about butterflies and hummingbirds.

Page 8: Moths are pollinators. They drink the nectar from flowers at night. The pollen in the flower sticks to them. When they visit another flower, the pollen on them can get on the pistil of another flower. Then the flower is pollinated. Look at the bees in the picture. They are drinking nectar from the flower. The nectar and the pollen are in the middle of flowers. Have students view the following video of a moth pollinating flowers. <https://www.youtube.com/watch?v=OK954K2OClc> Some bats are

pollinators. They drink the nectar from flowers at night. The pollen in the flower sticks to them. When they visit another flower, the pollen on them gets into the new flower. Then the flower is pollinated. It will grow seeds! Look at the bat in the picture. It is drinking nectar from the flower. The nectar and the pollen are in the middle of flowers. Have the students view the following video showing bats pollinating flowers. <https://www.youtube.com/watch?v=MQlpHnoZFms>

Point: leaves, yellow flower, bat, wings, brown moth, black moth, white flower

WH Questions: What animal is a pollinator? What do bats move from flower to flower? When do bats move pollen? What do moths move from flower to flower? When do moths move pollen?

Yes/No: Are bats pollinators? Do bats move pollen from flower to flower? Do bats move pollen during the day? Do bats move pollen at night? Is a moth a pollinator? Does it drink nectar at night?

Opinion/Experiences: Have you ever seen a bat? Do you like bats? Have you ever seen a moth? What other animal do moths look like?

Peer to Peer Interaction: After you read Page 8, ask students, “What pollinators drink nectar at night?” The answer is the main idea card “moths and bats.” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.

Page 9: Have students view the following video showing the beauty of pollination.

<https://www.youtube.com/watch?v=MQiszdkOwuU>

Point: new plants growing, seeds, dirt. Smallest plant, biggest

WH Questions: What do pollinators help grow?

Yes/No: Are pollinators important? Do pollinators kill plants? Do pollinators help new plants grow? Does a pollinated flower grow into an animal? Does a pollinated flower grow seeds? Do seeds grow into a basketball? Do seeds grow into a plant?

Opinion/Experiences: Which pollinator is your favorite?

Peer to Peer Interaction: After you read Page 9, ask students, “What do pollinators do?” The answer is the main idea card “pollinate” Students will find the main idea card and read it to their partner. Teacher will prompt them to ask their partner some of the questions talked about above.