

LESSON PLAN Step 1

How Does Pollination Work?

Objectives

- Identify the plant parts involved in reproduction.
- Identify the animal (bee) structures involved in pollination.
- Demonstrate how pollen moves from the male stamen to the female stigma.

Materials

- Copies of Activity Pages 1A and B.
- A small dish or container filled with talcum powder. You can also use corn starch, flour, or different colors of chalk dust.
- Cotton swabs

Subjects

- Science, language arts

Procedure

1. Give each student a photocopy of Activity Page 1A. Have them study the line drawing of the flower. Ask them to identify and write down each plant part described below.

- Female and sticky or feathery to trap pollen (the stigma)
- Female and holds up the stigma (the style)
- Female and contains the egg-producing ovary (the pistil)
- Male and produces pollen grains (the anther)

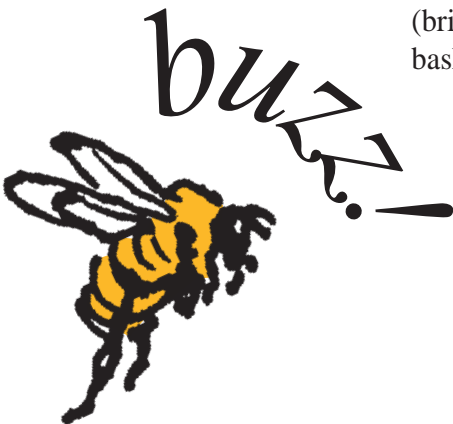
2. Give each student a photocopy of Activity Page 1B. Have them study the line drawing of the bee. Ask them to identify and write down the bee structure or structures that do the following:

- collect nectar (proboscis)
- may carry pollen (bristles, legs and baskets, head)

3. Divide the students into two groups: the pollinators (bees) and the plants. Give each member of the plant group a cotton swab and a small amount of “pollen” (talcum or other type of powder) in a container or dish. Instruct each member of the pollinator group to visit a member of the plant group and dip a finger into the pollen. At this point, ask the class to name the part of the plant that the pollinators touched (the stamen, which consists of the anther and the filament) to get the pollen on their fingers. Have them determine whether it is a male or female part. Ask the students what parts of the pollinators’ “bodies” (represented by their finger) touched the stamen that could carry the pollen to the next plant. Ask what they were looking for when they got to the plant (nectar) and what appendage they used to get it (proboscis bristles).

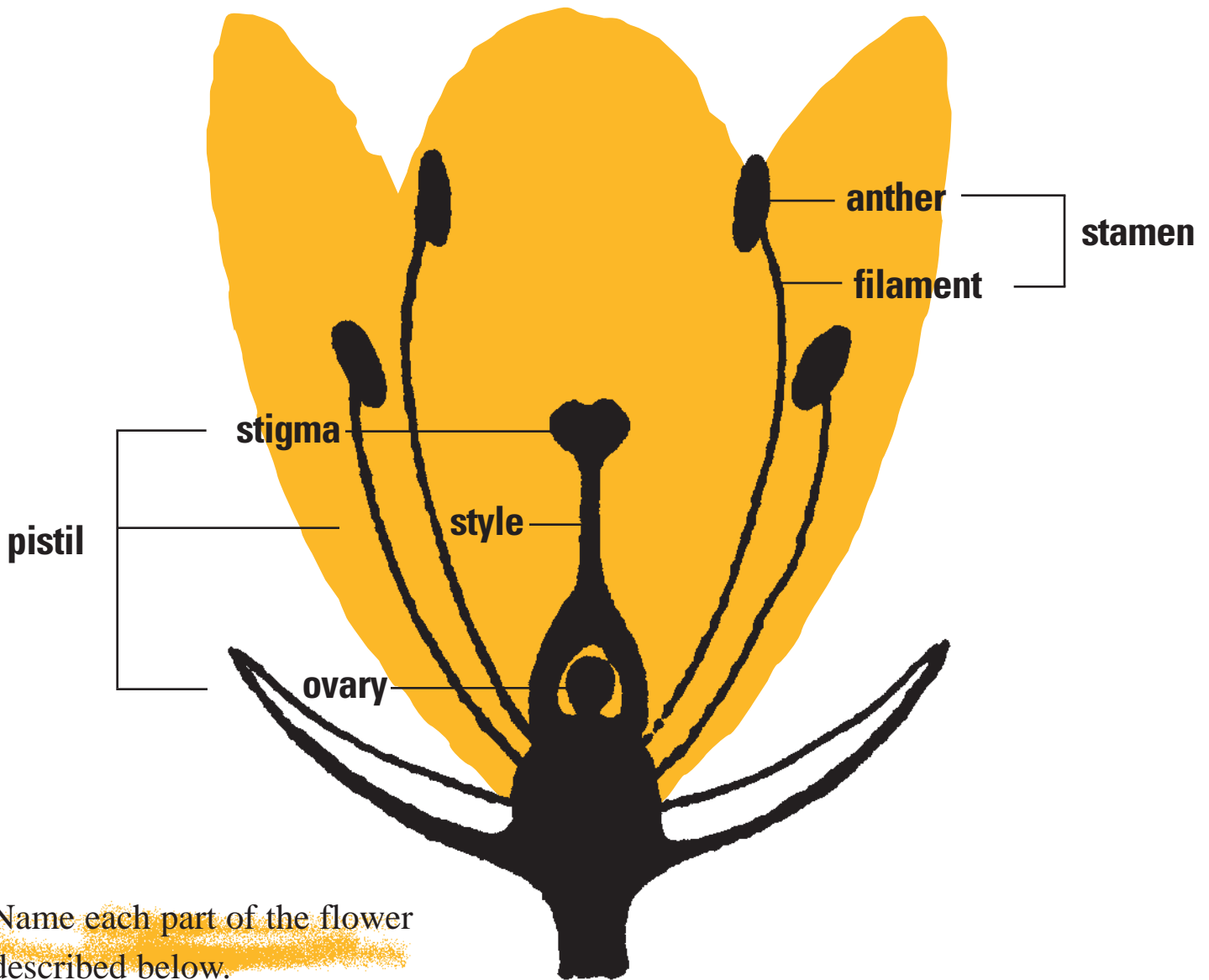
4. Have each member of the plant group hold aloft a cotton swab. Explain that the pollinators have just visited one plant and will now move on to another plant of the same species. Instruct the pollinators to visit a different member of the plant group and rub some of the pollen they are carrying onto that plant’s swab. Ask the students what part of the flower the swab represents (stigma) and whether it is a male or female part (female).

5. Have each group meet separately to discuss its specific role as a pollination partner and how it benefitted from the pollination process. Have each group select a spokesperson who will take notes and report the findings to the class.



ACTIVITY PAGE 1A

Flower Anatomy



Name each part of the flower described below.

1. Female and sticky or feathery to trap pollen:

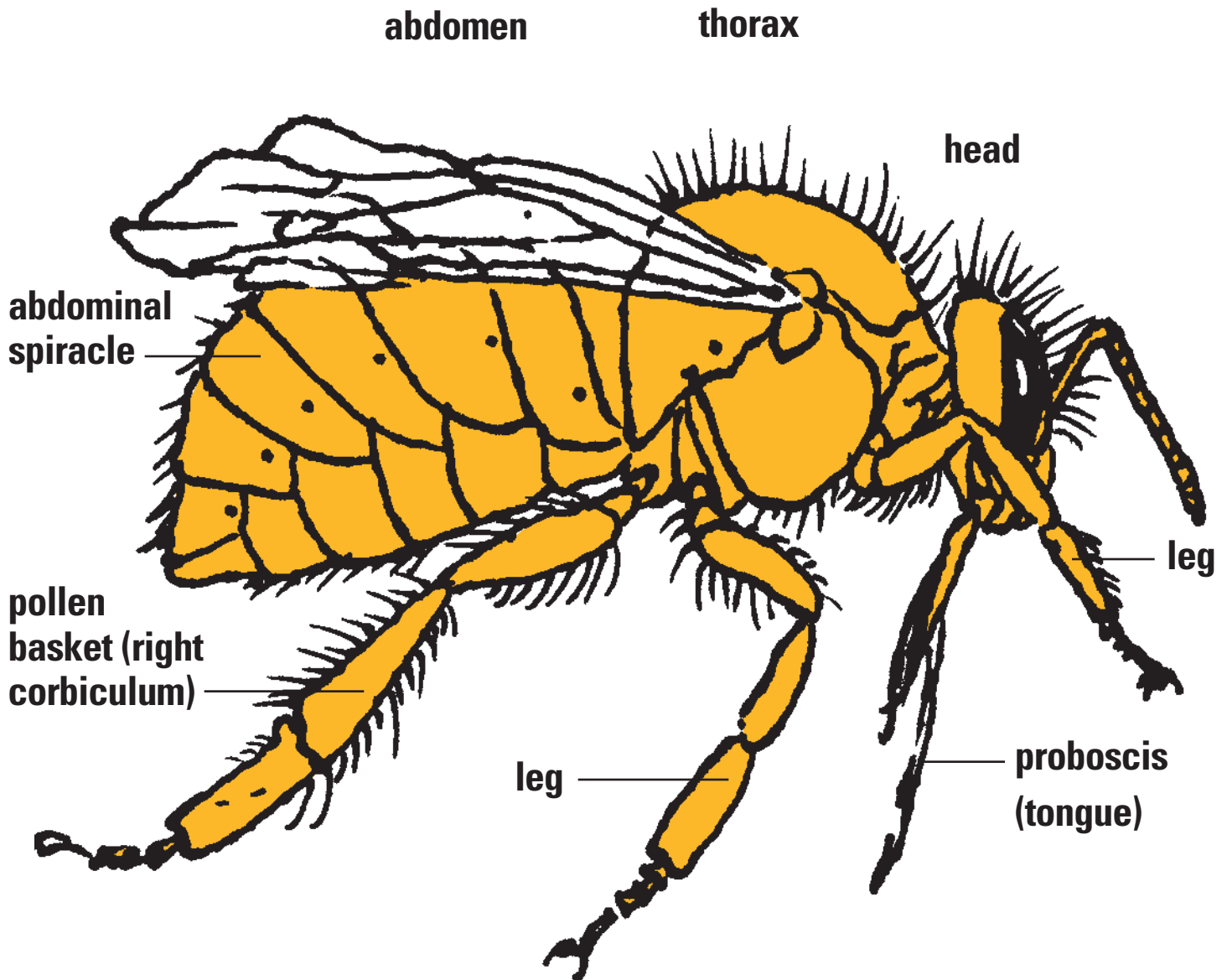
2. Female and holds up the stigma:

3. Female and contains the egg-producing ovary:

4. Male and produces pollen:

ACTIVITY PAGE 1B

Bee Anatomy



Name the part or parts of the bee that do the following:

1. Collect nectar:

2. Carry pollen:
