

Name: \_\_\_\_\_

# CASE

## Activity 7.2.1 An Egg is Not Enough

### Purpose

Previously, you have learned about the importance of plant genetic material. The transfer of pollen from anthers to stigmas, called pollination, initiates the process of fertilization. How do pollen grains actually reach plant ovules?

For some types of inflorescence, pollen may fall from the anther to the stamen of the same flower to self-pollinate. How do dioecious flowers, such as corn, pollinate? How do plants cross-pollinate in nature?

Why is pollination important? What happens if plant egg cells are not pollinated?

### Materials

#### Per pair of students:

- Computer with Internet access
- *Activity 7.2.1 Pollination Scenario Cards*

#### Per student:

- Pencil
- *Agriscience Notebook*

### Procedure

Through this activity, you will research the various ways that plant flowers receive pollen. Then you will read scenarios describing pollination of 10 different plants and try to determine which method of pollination brought about the results described.

#### Part One – Identify the Agents

1. Your teacher will assign you and your partner a type of pollination to research.
2. Using the Internet, research the assigned various type of pollination. Record your findings in Table 1 on the student worksheet.
3. In the third column, mark whether the plant is most likely self-pollinated, cross-pollinated, or both.
4. Your teacher will direct you when to share researched pollination types. Share your information when it is your turn.



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## Activity 7.2.1 Student Worksheet

**Table 1. Agents of Pollination**

Pollination Type	Description	Is the plant self-pollinated, cross-pollinated, or both?
<b>Anemophily</b>	Plants, such as pines produce large quantities of pollen blown by wind is a form of pollination whereby pollen is distributed by wind.	self
<b>Cantharophily</b>	Like when bees and beetles pollinate the plant	Cross
<b>Chiropterophily</b>	Bats drink the nectar, and these plants typically offer nectar for extended periods of time,(Bat pollination)	cross
<b>Hydrophily</b>	form of pollination where pollen is transferred by the flow of waters, particularly in rivers and streams, these species fall into two categories those that distribute their pollen to the surface of water, and those that distribute it beneath the surface.	self
<b>Hymenopterophily</b>	All groups of flying insects partake in this pollination	both
<b>Myrmecophily</b>	refers to associations with ants, though in its more general use the term may also refer to commensal or even parasitic interaction	cross
<b>Myophily</b>	Flies pollinate the plant for it	cross
<b>Ornithophily</b>	bird pollination is the pollination of flowering plants by a bird	both
<b>Phalaenophily</b>	When moths pollinate the plant for it	cross

<b>Psychophily</b>	When butterflies pollinate the plant for it	cross
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**Table 2. *Pollination Scenarios***

<b>Scenario</b>	<b>Clues</b>	<b>Type of Pollination</b>
<b>1</b>		
<b>2</b>		psychophily
<b>3</b>	Bright colors	canthrophily
<b>4</b>	Large Night blooming plant	chiropterphily
<b>5</b>	A tiny trail of bent filaments was left	Myrmecophily
<b>6</b>	Its found upstream	hydrophily
<b>7</b>	Because no sign of animal interference	Anemophily
<b>8</b>	The nector was taken but not the pollen and the landing area on the bloom was disturbed this happened during the day	Ornithophily

<b>9</b>	Large bunch of flowers	Hymenopterophily
<b>10</b>	Easy and access able night	chiropterophily