


NAME:

Pollen Movers

Most of the time pollination benefits both the plant and the pollinator; the pollinator receives food, either nectar or pollen from the flower and the plant receives help reproducing.

Some plants have established a specialized relationship with a certain pollinator. Other plants are generalists, meaning that they attract a wide range of pollinators. Pollinators look for certain characteristics, or floral “advertisements” telling them to visit that plant. The table below gives examples of some of the specific characteristics that several pollinators look for.

POLLINATOR					
	beetle	butterfly	moth	hummingbird	bee
SIGHT	POOR	GOOD (red)	OKAY	GOOD (red)	GOOD (UV, not red)
SMELL	GOOD	OKAY	BETTER	POOR	GOOD
BEHAVIOR	CRAWLS	LANDS	HOVERS	HOVERS	LANDS
REWARD	POLLEN	NECTAR	NECTAR	NECTAR	NECTAR, POLLEN, & SCENT
TIMING	NIGHT	DAY	NIGHT	DAY	DAY

Data Collection

1. Visit a garden or natural area and identify up to five flowers to observe. Write the name of the flowers on your data sheet.
2. Record the characteristics of each flower on the data sheet.
3. Using the information in the chart above, make a hypothesis as to which types of pollinators might visit your five different flowers. Write this on your chart.
4. Quietly, so not to disturb the pollinators, observe your flowers for 15 minutes and write down the types of pollinators that visit your flowers on the data sheet. If you do not have time to observe all the flowers for 15 minutes, work in groups with different students each observing a flower.

DATA SHEETS

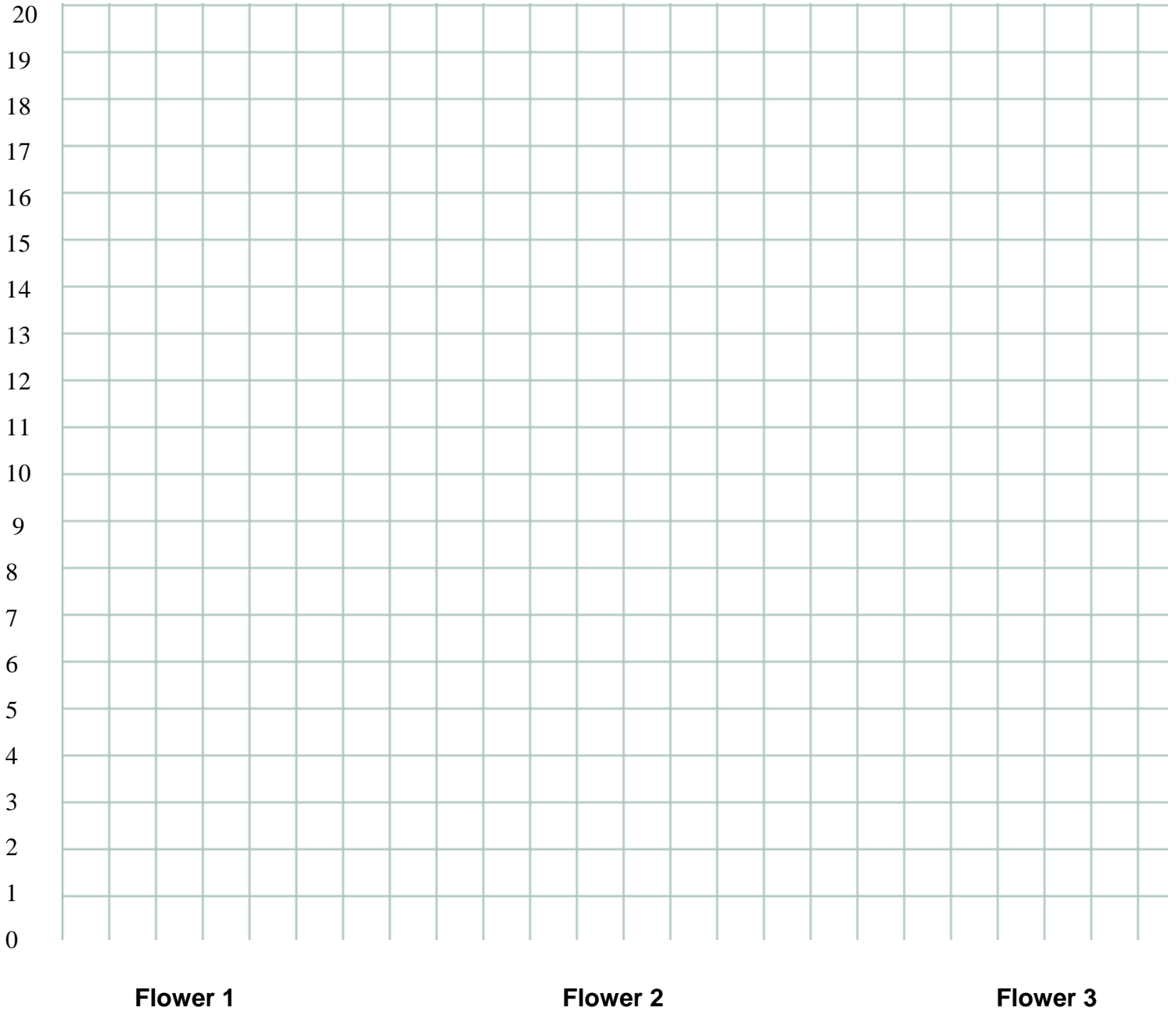
Flower names:

1. _____
2. _____
3. _____
4. _____
5. _____

flower number	flower characteristics			hypothesized visitors	observed visitors (#)
	color	shape	odor (strong, slight, or none)		
1					beetle butterfly moth hummingbird bee
2					beetle butterfly moth hummingbird bee
3					beetle butterfly moth hummingbird bee
4					beetle butterfly moth hummingbird bee
5					beetle butterfly moth hummingbird bee

Graph

Choose three of the flowers you observed and make a bar graph of the number of each types of pollinator that visited each flower. For example, if flower 1 had 2 beetles and 3 bees you would place a red bar reading the value “2” and a blue bar reading the value “3” on the graph above the flower 1 position.



beetle  butterfly  moth  hummingbird  bee 

Questions

1. Which of the pollinators were “generalist” pollinators (meaning that they visited all types or a range of flower types)?
2. Which of the pollinators were more specialized in their flower types (meaning that the pollinator visits only one or two types of flowers)?
3. Do you think that the time of day could have affected your results? Why or why not?

Additional resource: David Attenborough’s *The Private Life of Plants Volume III. The Birds & the Bees*, video, tell the story of several plants and their specialized pollinators.