

## Fascinating Fruit Flies

**Skill:** Develop a habitat to observe the life cycle of a fruit fly.

**Estimated Lesson Time:** Habitat assembly—30 minutes  
Observation of the life cycle—approximately one month

### Teacher Preparation:

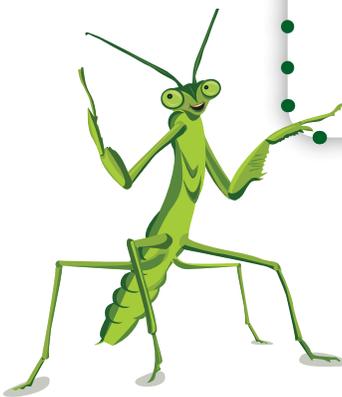
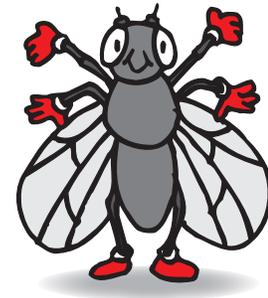
Gather the supplies for the experiment.

#### Materials for the class:

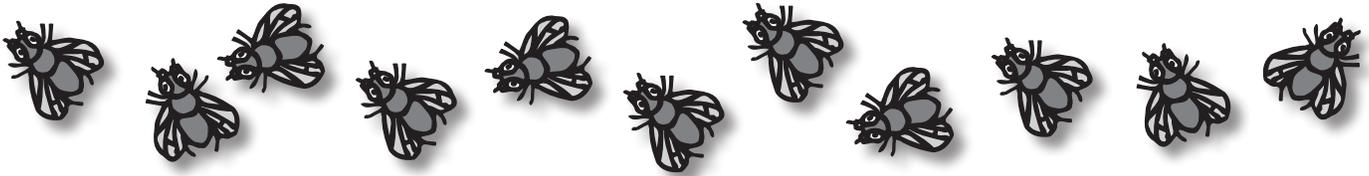
- 2 large plastic jars
- grapes
- very ripe banana
- paper towels
- large pieces of cotton (not cotton balls)
- paper
- tape
- magnifying glasses

#### Materials for each student:

- 1 science notebook

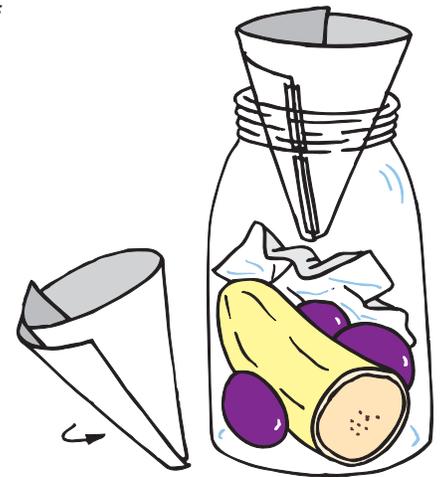


**Note:** Not all ripe bananas will attract fruit flies. To ensure success with this activity, purchase flightless fruit flies at a pet store or online. Flightless fruit flies will not be able to escape from their jars. If you purchase fruit flies, you will only need one jar.



## “Fascinating Fruit Flies” Lesson

1. Explain to the class that over the next several weeks they are going to be able to observe the life cycle of fruit flies. Ask the following questions:
  - What is a life cycle? (*the process of birth, growth, reproduction, and death*)
  - How long is the life cycle of a fruit fly? (*Accept all answers and assure the students that they will learn more about the life cycle of a fruit fly over the next several weeks.*)
2. Place half of the banana (with the peel still on) and some grapes inside a jar. Crumple up one paper towel and place it in the jar too. Stuff cotton into the top of the jar. Be sure that the cotton fits tightly into the top so that the flies cannot escape.\* Ask the class
  - Why do you think we put fruit in the jar? (*Fruit flies like the smell of fruit. They find fruit and lay their eggs on it.*)
3. Curve a piece of paper into a funnel. The small end of the funnel should have a ½-inch opening. Tape the ends of the funnel together so that it can retain its shape. Put the other half of the banana, some grapes, and a crumpled paper towel into the second jar. Place the funnel on top. This funnel will allow the fruit flies into the jar but will make it harder for them to escape.
4. Put both jars in a warm spot in your classroom to observe for a few days. They should be in the light but not directly in the sun. Point out as the eggs become larvae, or maggots. After about a week, the larvae will be gone and the students will observe little capsules. These capsules are maggots in the pupae stage. This stage is a resting phase. Finally, they break out of their cocoons and emerge as adult flies.
5. Once the students see at least five fruit flies in the funnel jar, take the funnel out. Stuff cotton into the top of this jar like you did with the first jar. Continue observing the flies for about a month in order to observe their full life cycle. Ask your students to document their observations in their science notebook.



\* If you opt to purchase flightless fruit flies at a pet store or online, add them to the jar at this point. You will not need to create the second jar.

**Fun Fact:** A female fruit fly is bigger than a male. A male fruit fly has a larger, darker stripe around its body.

