

# Amphibians

Investigation Data Sheet



## Tadpole Growth

The number of amphibians living in any particular habitat is dependent on several factors, including climate, space, food availability and the presence of predators. Oftentimes, they must compete with other amphibians for this food and space. As a result, amphibians must adjust to these and other environmental changes in order to survive.

### Objective

Observe how tadpole growth is affected by the introduction of larger tadpoles into their environment.

### Materials

- \_\_ 2 large tadpoles
- \_\_ 4 aquarium tanks
- \_\_ aquarium gravel
- \_\_ water conditioner (if you use tap water)
- \_\_ 12 small tadpoles
- \_\_ tadpole growth food
- \_\_ water

**Safety Notice:** All applicable laboratory safety rules must be followed. Students should not perform any experimental activity without the teacher's supervision and express permission. Students must follow safety guidelines and wear appropriate protective gear.

### Procedure

1. Cover the bottom of each of the four tanks with gravel. Fill up each tank with water so that it is about  $\frac{1}{4}$  full. (Add water conditioner if using tap water.) Label each tank 1-4.

2. The tadpoles should be separated into four groups of three so that each group has its own tank. If your tadpoles came in plastic bags, let them sit in their bags at the surface of the water for ten minutes so that they can adjust to the water temperature of the new tank before being introduced to their new environment.
3. Separate the two large tadpoles and place them in tanks 1 and 2. (Be sure to let their bags float for ten minutes in their respective tanks, just as you did with the smaller tadpoles.) This will allow you to observe what happens when a large tadpole is introduced into an environment containing smaller tadpoles. Over the next seven days, observe and record the growth of the smaller tadpoles in each of the four tanks. Do you see any difference in how the small tadpoles are developing? Be sure to pay equal attention to all four tanks. Record your observations in the table below. Don't forget to feed them daily.
4. Spend another week comparing the tadpole growth in each aquarium. Do you notice any difference between tanks 1 & 2 and tanks 3 & 4? Why or why not?

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### Conclusions

- What role does competition play in the outcome of this investigation?

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- Use the data you collected to estimate about how long it would take for a tadpole living in a pond ecosystem to go through the process of metamorphosis. What factors would influence this estimate?

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	Tank 1 Small tadpoles & 1 large tadpole	Tank 2 Small tadpoles & 1 large tadpole	Tank 3 Small tadpoles	Tank 4 Small tadpoles
Day 1				
Day 2				
Day 3				
Day 4				
Day 5				
Day 6				
Day 7				
Day 8				
Day 9				
Day 10				
Day 11				
Day 12				
Day 13				
Day 14				