

Guppies

- Kindergarten - Animals 2 by 2
- 4th Grade - Environments



What to do when the fish arrive. Float the unopened bag in aquarium of dechlorinated or spring water for about 15 minutes to equalize the temperature. When temperatures are equal, pour contents of bag into the aquarium. Discard shipping water. **DO NOT USE CHLORINATED TAP WATER!** *You can dechlorinate water by simply leaving tap water out overnight.*

Background. Plants and animals that live in water make up the majority of biomass. They have so much more space in which to live. Life undoubtedly originated in the water, and many life-forms have never left it. Living in a dense fluid like water provides a lot of support for organisms, and the free-swimming forms have three-dimensional mobility. And, of course, they never have to worry about where their next drink is coming from.

Water. Chlorine in regular tap water can be lethal to guppies. There are two ways to dechlorinate water. The first is to age the tap water by letting it sit in an open container for at least 24 hours. Chlorine dissolved in the water escapes into the air. Or add dechlorinating chemicals (included in the kit) to tap water. Set aside a pitcher of water to age, so that you will have it ready to maintain the water level of the aquarium. Keep your aquarium covered to reduce evaporation and to keep dust out and fish in.

The water in an aquarium will be fine for extended periods of time. Aged or treated tap water should be added to maintain the proper level, and about once a week 1/4th of the water should be removed and treated water added in order to reduce the concentration of nitrogen-containing chemicals, the excretory products of the animals. If a fish dies, or if too much food is put into your aquarium, remove the fish or food immediately and change the water. If you don't, bacteria will proliferate, taking advantage of the bounty of food. The result will be a putrid smell and danger for your fish and other aquarium animals. The bacteria will quickly deplete the oxygen supply in the aquarium, and the animals will suffocate. Temperature. It will not be necessary to obtain an aquarium heater. In fact, it is more important to keep your aquarium from getting too warm. Warm water holds less oxygen in solution, so aquatic organisms are more comfortable in cooler water. Keep your aquarium away from direct sun except for specific purposes.

Aquarium care. As long as the fish are not crowded, they will be able to get enough oxygen just from what is dissolved at the surface of the water. We suggest six to eight guppies in a basin aquarium.

Food. Commercial flake food is the best for guppies. This kind of food floats, and the fish will quickly learn to come to the surface to eat. The most important thing about feeding is not to overfeed! Feed your

fish a pinch of food twice a day. A "pinch" is the amount they can eat in 3 minutes. Too much food left in the aquarium will foul the water. Fish-feeding cakes—compressed food that disintegrates slowly—are available at pet and aquarium stores if you need to leave the fish unattended for more than 3 days. Guppies can go without feeding over a two-day weekend if they are fed twice a day during the week. They can also nibble on the elodea or other aquatic plants.

Reproduction. Guppies are small fish that bear live young. The feeder-guppy females are larger and usually a uniform beige or silver gray. Their abdomens become quite large when they are gravid (carrying young). The males are smaller and have longer, flowing tails. Males are the ones with spots of multiple colors. Fancy guppies that have been bred for showy colors can be dazzling. Guppies are quite prolific and will probably give birth during their stay in your classroom. In fact, you may observe the arrival of baby guppies a day or two after the adults are put in their basin aquarium. The stress of transportation may induce a gravid female to release the babies. Adult guppies will eat the young, so you should supply the aquarium with plenty of Elodea in which the babies can hide, or move the adults to a separate tank. Students will enjoy watching the baby guppies grow.

What to do with them when the investigations are completed. Keep and care for the guppies in your class. *You can also return them to the district science coordinator for distribution to other schools.*

Care for the environment. Guppies should never be released into the wild nor disposed in the sewer. These fish can become unwanted pests, damaging the environment, local organisms, and food webs. To humanely dispose of fish, place them in water in a plastic bag and then in the freezer. The frozen fish can be placed in the compost. The plastic bag should be recycled.