

The life span of a goldfish in a different water environment



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Our study is about, the different possible places wherein a normal goldfish can live in. Our background of the study is letting a goldfish live in a water environment that has fresh water and having another goldfish live in a saltwater environment. We will check if a normal goldfish is fit to live in a different water environment, instead of just living in a simple goldfish bowl with a water. Will a normal goldfish live in a saltwater environment for at least 2 weeks? That is the question we are trying to answer. But we are trying to know how long a goldfish can live in a different water environment not just in saltwater and freshwater.

The goldfish or *Carassius auratus auratus* is a freshwater fish. It is one of the most commonly kept aquarium fish. A relatively small member of the carp family, the goldfish is domesticated version of a less-colorful carp native to East Asia. It was first originated in China more than a thousand years ago. Goldfish breeds vary greatly in size, body, shape, fin configuration and coloration. During the Tang Dynasty, it was popular to raise carp in ornamental ponds and water gardens.

People began to breed the gold variety instead of silver variety, keeping them in ponds or other bodies of water. On special occasions at which guests were expected they would be moved to a much smaller container for display. During the Ming Dynasty, goldfish also began to be raised indoors. The first occurrence of fancy-tailed goldfish was recorded in the Ming Dynasty. In 1611, goldfish were introduced to Portugal and from there to other parts of Europe. During the 1620s, goldfish were highly regarded in Southern Europe because of their metallic scales, and symbolized good luck and fortune.

Statement of the Problem

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This study would like to know the life span of a goldfish in a different water environment. Specifically it endeavored to answer the ff. questions. 1. How long can a normal goldfish live in a different water environment? 2. What is better for the goldfish to live in, saltwater or freshwater? 3. Will the goldfish in the saltwater live as longer than the one in freshwater?

Hypothesis

The goldfish inside of the bowl with the saltwater will live for not as long as the goldfish inside the freshwater because the freshwater is the goldfish's natural habitat. Even if we give them the same treatment, the same feeding time or same amounts of food. The fish in the freshwater will live longer than the other one.

Significant of the Study

Our study is not much of a big deal. But it helps people with pets or likes taking care of pets like fishes and other things. This will help them a lot on how and where to put their pet fishes specifically goldfish. Most kids like to take care of small animals most commonly goldfish. This will help many people in a small way and I hope it does.

Scope and Delimitation of the Study

This research on experiment will at least be 4 weeks long. We are going to need all the time we can use in that 4 weeks. The first week will just be researching, planning and buying the materials we need. The second week will begin the experiment and the following weeks will just be observation.

Definition of Terms

- Carassius auratus auratus*- has an elongated, stocky body. Also called goldfish.

- Carp-are various species of oily freshwater fish of the family Cyprinidae, a very large group of fish native to Europe and Asia.

The items that are needed are the following. Two medium size common goldfish and eight liters of water, two medium size goldfish bowl or container, saltwater or seawater mixture (The mixture must only be enough for one litter of water) and fish food. The fish food should be enough to feed the two goldfish for at least two weeks.

The two goldfish shall be apart of a test that will how long can a goldfish live in a different water environment. The normal lifespan of a goldfish can reach up to 20 years. This is very important to know, because we will know how long a goldfish can live in a different water environment. The eight litters of water is obviously the place on where the goldfish shall live in. The seawater mixture is needed for the test because it is the one that shall be mixed to the water, to see how long can a goldfish live in a different water environment.

We can't just put salt in it because there is a specific mixture to meet to make an accurate seawater mixture. Seawater mixture consist of chloride (Cl^-), sodium (Na^+), sulfate (SO_4^-), magnesium(Mg^{2+}), calcium (Ca^{2+}), and potassium (K^+). By weight these ions make up about 99 percent of all sea salts. The amount of these salts in a volume of seawater varies because of the addition or removal of (200 of 10, 433 words). The fish food is for feeding the test subjects. The amount of fish food shall be measured every feeding time.

The procedures are the following: Put four liters of water in each bowl that is where they will live for at most two weeks. Next is mix the saltwater mixture with the water. The mixture must only be enough for four liters of water, if it is too much the goldfish might die on the first day. Put the one goldfish in each bowl, one in the seawater and one for the freshwater. The feeding is very important, the feeding shall be measured. One teaspoon for each feeding time, feeding is three times a day just like a normal humans diet, Breakfast, lunch, and dinner. The specific times are 6: 00am, 12: 00pm and 6: 00pm. Feeding is a large part because, each goldfish shall eat the same amount of food as the other one.

The experiment was very successful. The result is as expected a goldfish can't live in a long time inside a different water environment. The goldfish inside the seawater died within 3 days 8 hours 4 minutes and 27 seconds, according to the video recording of the fish.

The fish died because of the high amounts of sodium chloride and the mixture of seawater gives out a different kind of salt that's why we call it sea salt. It has a high concentration of chloride, sodium, magnesium, calcium, and potassium. There are many kind of salt or uses for it but sea salt is different in a small way. The feeding was constant, everyday in the exact time the fishes were fed. There is no feeding time that passed. The main point is that a normal goldfish can live in a different water environment approximately 3 days. And the goldfish that was put inside the freshwater is still alive until current time. A photo of the experiment is not available. For when the experiment was on going there was no cameras nor any device that can take the picture of the subjects.

We have done our experiment during our Christmas break. But we encounter such problems while doing the experiment and before doing the experiment. In our experiment we need patience. We also have a hard time scheduling our time because it's a christmas break. But on behalf, we have good results in our experiment. The experiment is kinda' hard but it is exciting. In finishing our experiment, we came up to a conclusion. Therefore, I conclude that a life span of a goldfish lives long in a freshwater environment than in a saltwater environment. This conclusion proved our hypothesis.