

What size of food does a
starfish (*Asterias rubens*)
prefer?

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(The tunas!)

Observation

- We observed that starfish generally eat food that are the same size as themselves.



Explanation

- Although it is physically possible, in logical terms, the starfish would not choose to eat the amount of food that is larger than it's stomach.
- The smaller food would not suffice for the starfishes hunger.



Hypothesis

- If we place a starfish in front of three different sizes of food, it will choose the size most similar to itself.



Null Hypothesis

- If we place a starfish in front of three different sizes of food, it will choose nothing to eat, the smaller size or the largest size.



Materials

- 3 Plastic containers of each of the three different sizes (small, medium, and large)
- 9 servings of 8g of mussels
- 9 servings of 4g of mussels
- 9 servings of 1g of mussels

Set Up

Water

- 10 cm water in the three large containers
- 5.5cm of water in the three medium containers
- 5cm of water in the three small containers

Mussels

- Place specific amount of mussels in a Petri dish, using the scale for accuracy

Procedure

- We placed the correct amount of food into the plastic container with the appropriate sized starfish
- We recorded the results



Results

	Large starfish	Medium starfish	Small starfish
1	Large food	N/A	Small&Med food
2	Large food	N/A	Small&Large food
3	N/A	Large food	Small food



Conclusion

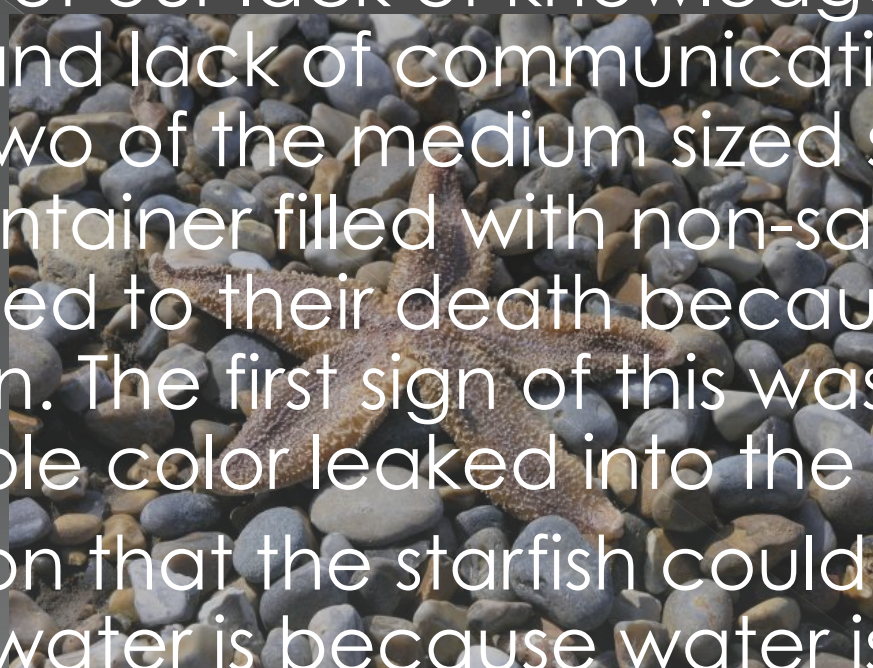
- The results showed that, overall, the small starfish chose the small amount of food and the large starfish chose the large amount of food, supporting our hypothesis and rejecting our null hypothesis. This is most likely because it is more effective.
- Although sea stars have the possibility to consume things that are much larger than their stomach, when given the choice, they are most likely to choose the food that is the appropriate size for themselves

Evaluation

- Distance between starfishes and food was not the same as the other containers – the way we can improve this situation is to measure the distance accurately using a ruler
- Set up was not similar to nature i.e. not running water – to improve this we could put sand, seaweed, or running water to imitate the sea
- Different amounts of hunger- if given more time, we could have isolated the starfishes for one or two days to assure that they are hungry

Evaluation (cont.)

- Because of our lack of knowledge of this starfish, and lack of communication, we placed two of the medium sized starfish into a container filled with non-salt water. This resulted to their death because of lack of oxygen. The first sign of this was that their purple color leaked into the water
- The reason that the starfish could not live in the freshwater is because water is not dense enough for their tissues, resulting with flooding throughout the starfish



Thank you for watching!

