



national science week 2021

National Science Week 2021, Gladstone Fish Industry, Years 5-6

Overview Students investigate density of various saltwater solutions

Resources Barry and Jenny resource books; clear plastic cups; filtering materials: stocking, mesh, chux cloth, paper towel; rubber bands; sand; and water

Learning intentions

- "Solids, liquids and gases have different observable properties and behave in different ways." (ACSSU077)
- "Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks." (ACSIS086) & (ACSIS103)
- "Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate." (ACSIS087) & (ACSIS104)

Success criteria

For students to understand that humans can impact the marine environment with litter and that science experiments involve conducting fair tests.

Introduction

Saltwater density experiment: <https://www.sciencekiddo.com/salt-water-experiment-ocean-science/>

The ocean provides food sources such as fish, prawns, lobsters, and oysters. These creatures rely on a healthy habitat to survive. Read Barry and Jenny's expedition and discuss how litter can impact their environment.

<http://ghhp.org.au/assets/documents/education/Interactive%20PowerPoint.pptx>

https://youtu.be/X_rvia4AxJc George the farmer video Deep Blue

The Gladstone Ports Corporation's (GPC) Ports of Gladstone, Rockhampton and Bundaberg are home to many different types of animals, including fish: <https://www.gpcl.com.au/big6-fish>



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Introduction cont..

In Gladstone, a number of organisations joined together to create a Report Card for the health of the harbour. <http://ghhp.org.au/> Many different factors are considered and tested

Habitats:

<https://www.gpcl.com.au/habitats>

Lesson steps

- Dissolve 3 teaspoons of salt in one cup, 3 teaspoons of sugar in another cup, and 3 teaspoons of baking soda in a third cup. Be sure to leave one cup as plain, fresh water. (This is the controlled variable.)
- Place the grapes or similar item into each cup and observe the level the items “float”.

Conclusion

Discuss with the students which cup the grapes floated in.



Explain that a fair test involves changing one thing (type of salt), measuring one thing (height of grape), and keeping everything else the same (controls – same amount of each salt, same size grape).

Discuss the composition of seawater and the impacts of density.

