



LESSON PLAN

Season 2/Episode 19

Make a String of Ice Beads (Investigating 'Ice')

Let's Find Out features Captain Zoom and her crew of scientists with exciting experiments, curious kids and a trip to a faraway place. Produced with support from Science Foundation Ireland.

Class Level: First/Second Class
Strand: Materials
Strand Unit: Materials and Change
Content Objective:

- Explore the effects of heating and cooling on a range of liquids and solids

Class Level: Third/Fourth Class
Strand: Materials
Strand Unit: Materials and Change
Content Objective:

- Explore the effects of heating and cooling on a range of liquids, solids and gasses

Assessment Method(s):

- Teacher observation
- Teacher designed tasks and tests
- Work samples
- Self-assessment
- Conferencing
- Portfolio assessment
- Concept mapping
- Questioning

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Lesson: Make a String of Ice Beads

Lesson Introduction

- The teacher will begin the lesson using WALT and WILF.
- Question the children on their prior knowledge of ice.
- Click [HERE](https://www.youtube.com/watch?v=kN3RgWg7s7U&list=PLe4jkNChuybHYhU-YSs5LW-TuLKz_SQk&index=20) for a whole class demonstration on the experiment.
(https://www.youtube.com/watch?v=kN3RgWg7s7U&list=PLe4jkNChuybHYhU-YSs5LW-TuLKz_SQk&index=20)

Lesson Development

- Fill the ice tray with water and place it in the freezer overnight, to freeze into ice cubes.
- Remove three ice cubes and place them on the table in a row.
- Dip the string into the glass of water and then lay it across the top of the ice cubes.
- Sprinkle a small amount of salt onto the top of the ice cube and string.
- Leave for two minutes then carefully lift the string from one end and see what happens to the ice cubes as you lift.

Lesson Conclusion

- Talk and Discussion
- Discuss children's observations

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Lesson: Make a String of Ice Beads

Resources	Methodologies	Linkage/Integration
An ice tray Some water String Salt A freezer A glass of water	Talk and Discussion Active Learning Skills through Content Use of the Local Environment Problem Solving	Add in at teacher's discretion

Inclusion and Diversity/Differentiation (Differentiate at teacher's discretion)

Content:

Activities:

Resources:

Product:

Environment:

Teaching Strategies:

Scientific Explanation:

Did your ice cubes lift when you lifted the string? That is because the string was frozen to the top of the ice cubes. How did that happen? When we add salt to water or ice, we lower its freezing temperature. So, when you sprinkled a little salt onto each ice cube that made a small amount of ice melt. The string was sitting across the ice cube and was touching off the melted ice. The surrounding ice made the small amount of melted ice refreeze quickly, capturing the string within it. When you lifted the string, it was now frozen to the ice cubes and lifted them too.

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