



LESSON PLAN

Season 2/Episode 18

Chemical Reaction Bag Explosion (Investigating 'Explosions')

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:

Fifth/Sixth Class

Strand:

Materials

Strand Unit:

Materials and Change

Content Objective:

- Investigate how a wide range of materials may be changed by mixing

Assessment Method(s):

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

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PLAYER

Lesson: Chemical Reaction Bag Explosion

Lesson Introduction

- The teacher will begin the lesson using WALT and WILF.
- Question the children on their prior knowledge of explosions.
- Click [HERE](https://www.youtube.com/watch?v=X8XMVkaWaul&list=PLe4jkNChuybHYhU-YSs5LW-TuLKz_SQk&index=18) for a whole class demonstration on the experiment.
(https://www.youtube.com/watch?v=X8XMVkaWaul&list=PLe4jkNChuybHYhU-YSs5LW-TuLKz_SQk&index=18)

Lesson Development

- Put 3 heaped tablespoons of bread soda into the resealable bag.
- Measure out 350ml (1.5 cups) of vinegar.
- Add a few drops of food colouring to the vinegar and mix.
- Bring the bag (with the bread soda in it) outside and lay flat on the ground.
- Place the cup containing the vinegar into the bag and seal the bag (as per video).
- When ready, tip the cup containing the vinegar over, inside the bag and shake the bag.
- Leave the bag on the ground and run away as fast as you can! What happens?

Lesson Conclusion

- Talk and Discussion
- Discuss children's observations

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Lesson: Chemical Reaction Bag Explosion

Resources	Methodologies	Linkage/Integration
A 3 litre resealable bag Some clear malt vinegar Food colouring Bread soda (also called baking soda or bicarbonate of soda but NOT baking powder) A small plastic container (a clean, dry plastic cup or pot or similar) A tablespoon measure A measuring jug or cup measure	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:

Product:

Activities:

Environment:

Resources:

Teaching Strategies:

Scientific Explanation:

This mini-coloured explosion was created by a chemical reaction between the vinegar (called an acid) and the bread soda (called an alkali or base). When they mix together inside the bag, they create a gas called carbon dioxide which builds up until the bag cannot expand anymore and it explodes.

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