

# Bromothymol Blue and Dry Ice

By Angela Challis and Paul Nance



Grade 5  
Core Concept/Science/Dance

- Objective:**
- This is a chemical change.
  - Bromothymol Blue is a base.
  - As the dry ice bubbles, carbon dioxide is dissolved into the water. When carbon dioxide dissolves into a liquid it turns into carbonic acid.
  - With the presence of an acid in the Bromothymol Blue, it neutralizes the solution and will turn yellow.

## Grade 5 Core Curriculum Science: Standard 1:

Students will understand that chemical and physical changes occur in matter.

**Objective 2:** Identify the physical properties of matter (e.g., hard, soft, solid, liquid, gas)

## Grade 4 Core Curriculum Dance:

**Standard 2:** The student will identify and demonstrate movement elements in performing dance.

**Objective 1:** Expand dance vocabulary with movement experiences in space.

## Dance Activity:

*Music: Party Rock (edited)*

- This is a chemical change:** Make groups of 2 or 3 and you will end up with a different group.
- Bromothymol Blue is a base:** Make a shape that has 3 parts of you body touching the floor.
- As the dry ice bubbles, carbon dioxide is dissolved into the water.** Jump, keeping your shape of 3 parts of you body touching the floor. Spread out from your group.
- When carbon dioxide dissolves into a liquid it turns into carbonic acid:** Now make a shape that has one part of you body touching the floor.
- With the presence of an acid in the Bromothymol Blue, it neutralizes the solution and will turn yellow:** Find a new group of 2, 3, or 4. New substance, make a connecting shape.

