

## 79. Dry Ice Cream

**Classroom Activity:** Make ice cream using dry ice.

**Grade:** 5

**Strand(s):** Understanding Matter and Energy

This task addresses the following overall expectations:

- conduct investigations that explore the properties of matter and changes in matter;
- demonstrate an understanding of the properties of matter, changes of state, and physical and chemical change.

and the following specific expectations:

- use scientific inquiry/experimentation skills to investigate changes of state and changes in matter;
- use scientific inquiry/experimentation skills to determine how the physical properties of Materials make them useful for particular tasks;
- identify properties of solids, liquids, and gases and state examples of each;
- explain changes of state in matter;
- describe physical changes in matter as changes that are reversible;
- describe chemical changes in matter as changes that are irreversible;
- distinguish between a physical change and a chemical change.

### Assessment Categories

- Knowledge and Understanding
- Application

### Type of Activity

- Classroom/Science lab
- Extra-Curricular activity

### Preparation

- 1 hour of **Preparation** prior to holding activity in class. Items such as safety goggles and gloves should be used as dry ice is very cold (-78 C). Please keep in mind that dry ice should not be placed in an air-tight container as the build up



of  
CO<sub>2</sub>

could lead to explosive pressures.

### Materials

- Five kg (minimum order) of dry ice pellets - purchase at Praxair for \$11
- Two cups half-and-half cream
- Two cups heavy cream
- Two eggs
- 3/4 quarters of a cup of sugar
- Two teaspoons of vanilla
- Dash of salt
- Gloves
- Safety Goggles
- Cooler

### Resources:

<http://www.popsci.com/popsci/how20/289ac50bc45cc010vgnvcm1000004eecbccdrerd.html>