

## Thermal Energy Experiments

### Experiment 1: Water and Density

#### Materials:

- Clear large container
- Ice cubes (dyed blue)
- Food colouring (a different colour than blue)
- Hot water
- Little container
- Room temperature water

#### Instructions:

1. Make blue ice cubes
2. Fill the large container with room temperature water
3. Fill the small container with food colouring and hot water
4. Gently lay a few ice cubes to one side of the container
5. Gently pour the hot water to the other side of the container
6. Give it a few moments and observe what happens

### Experiment 2: Water Tower

#### Materials:

- Two of the same glass jars
- Plastic sheet
- Tray
- Stir sticks
- Two colours of food colouring

#### Instructions:

1. Fill one jar with cold water and one jar with hot water to the brim
2. Put different colours of food dye in each jar and mix carefully
3. Place the jars in the tray
4. Place the plastic sheet on top of the cold jar of water so it forms a vacuum
5. Flip the cold jar on top of the hot jar and line up the edges
6. Carefully remove the plastic sheet and observe
7. Repeat, but place the hot jar on top of the cold jar

