








At Home Sea Breeze

Students will learn about heat capacity and air flow while mimicking an ocean breeze.

3rd - 5th
Grade

Materials

-  2 Baking dishes
-  Ice
-  4 Cups Water
-  4 Cups Sand
-  Incense Stick
-  Heat Source
-  Matches or lighter

Directions

ADULT HELP REQUIRED

1. Heat up 2 cups of sand on a stovetop or burner. Place remaining 2 cups of sand in the freezer.
2. Place hot sand into baking dish 1. Fill second baking dish with 2 cups of water and plenty of ice to make it very cold.
3. Place baking dishes next to one another, without touching them together.
4. Light incense stick. Once smoke is steadily rising from the stick, place between the sand and water, without touching either baking dish.
5. Observe which way the smoke moves. Then set the incense stick safely aside.
6. Empty both baking dishes.
7. Boil 2 cups of water on stovetop or burner and place into baking dish 1. Fill second baking dish with frozen sand.
8. Hold incense stick over the two dishes and observe which way the smoke moves.

What Happened?

When hot and cold surfaces are next to one another, the air above the hot surface rises and creates a low pressure zone. The air above the cold surface then moves to fill the gap of the low pressure zone. This creates a movement of air, perceived as wind, which causes the smoke to move! The same thing occurs at the beach with the hot sand and the cooler ocean water.

Click the wave below to see a cool video about sea and land breeze!

