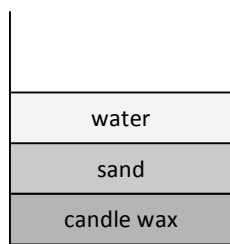


# ACTIVITY 9 - Fiery Moon

When we look at the Moon, we can see vast dark patches across the surface. Early astronomers thought that these dark patches may be ancient seas. The Latin for sea is mare, and these areas still bear that name today. We now know that these dark areas are huge plains of basalt, created from ancient lava flows. From about 3.5 to 3 billion years ago, the Moon was not cold and still, as it is today, but was subject to intense volcanic activity.

This experiment models volcanic activity and asks you to think about the processes involved.



## Materials:

- Eye protection
- 250 cm<sup>3</sup> beaker containing red candle wax
- Sand
- Water
- Bunsen burner
- Tripod
- Gauze
- Heat proof mat

**Safety:** Wear eye protection when using a Bunsen burner and when looking in to the hot beaker

## Procedure:

- Cover the set candle wax with about 15 cm<sup>3</sup> of sand and then add 25cm<sup>3</sup> of water
- Warm the beaker gently over the Bunsen burner
- Watch the side of the beaker carefully.
- When the wax starts to pool on top of the water, turn off the Bunsen and continue to watch the beaker

The sand and the water in this experiment can be thought of as layers of solid crust on the Moon. The candle wax is like the magma.

Think about what you observed and answer these questions:

1. Why does the candle wax rise to the surface?
2. What does this tell you about the volcanic activity on the Moon?
3. Do your observations show how you could find cooled regions of magma beneath the crust?

## Extension:

Use a map of the Moon to compare the maria (seas) to other areas on the Moon. What do you notice about the number of craters over the same area in each part of the Moon?

How can you explain the difference in appearance between the surfaces?