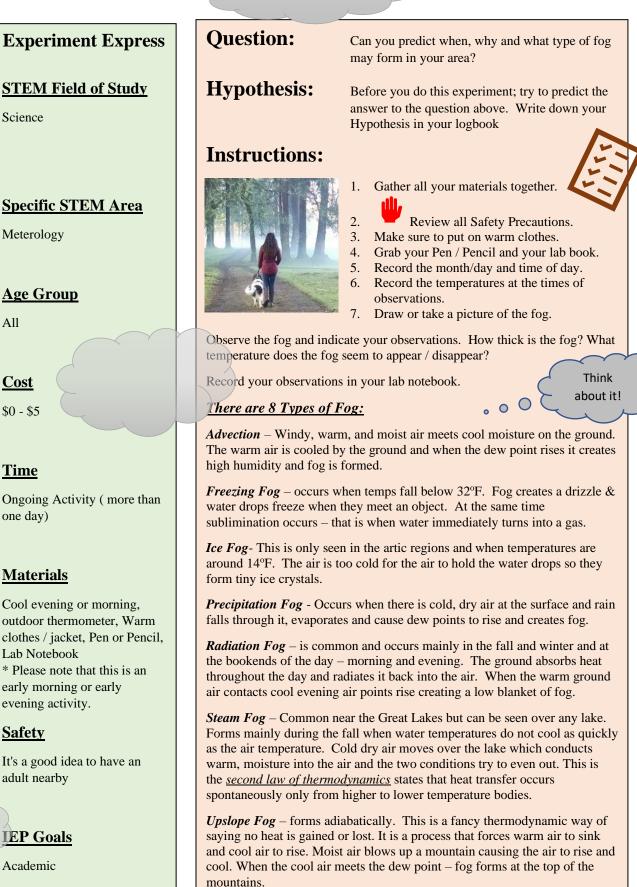
Fogged In



Valley Fog – forms in a valley when the ground is wet from a rainfall, as skies begin to clear and solar energy leaves the earth, the temperatures cool near a dew point. This forms a very thick / dense fog called tule fog.

















Specific STEM Area

Meterology

Science

Age Group

All

Cost

\$0 - \$5

Time

Ongoing Activity (more than one day)

Materials

Cool evening or morning, outdoor thermometer, Warm clothes / jacket, Pen or Pencil, Lab Notebook * Please note that this is an early morning or early evening activity.

Safety

It's a good idea to have an adult nearby

IEP Goals

Academic **Behavioral** Motor





Post Experiment Questions for Adults to ask:

- 1. What type of fog is most common in your area? Why?
- 2. Did you notice any common elements that contributed to the formation of fog?
- 3. What led to the dissipation of fog?
- 4. Where can fog form?
- 5. Was your hypothesis correct?

Discussion of Results / Post Experiment Answers:

- 1. Answers will vary, however, when the student answers why their response should match the description of the variety of fog and the conditions that contribute to the existence of fog in their area.
- 2. The answer to this question is location dependent; however, the student should be capable of articulating the observations they made that seemed to contribute to the existence of fog in their area.
- Radiation fog usually dissipates from daytime heating and surface air warming through conduction. Conduction is the transfer of heat through a substance – and in this case, the ground. Conduction is the same reason why the handle on a pot of boiling water becomes hot.
- 4. Fog can occur anywhere however, it occurs most often over creeks, waterways, and river valleys.
- 5. If your hypothesis was correct, congratulations! If not, do not worry and keep trying!



Draw your own conclusion:

Lighthouses have been around since 247 BC! In fact, the oldest lighthouse, The Pharos of Alexandria, is still standing today in Egypt. These towers stand to serve two purposes: 1. Serve as a navigational aid and 2. To denote and warn boats of dangerous areas. The lighthouse typically has a very bright and rotating light at the top. Our question to you is: why would the lighthouse also require a Foghorn? What purpose do you feel it serves?

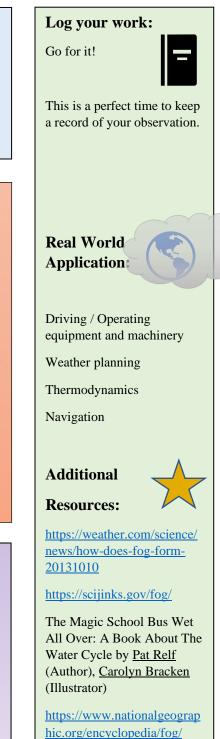
Fog can be an extremely dangerous condition to drive in. One driving skill that is taught to new drivers is to NOT turn on your bright driving lights in fog. Our question to you is: Why?

Let us know your answers to these questions at: www.stemwithsaints.org



Expansion Experiments:

Can you recreate fog? Is it possible for you to recreate the conditions that allow fog to form? Try it and let us know the experiment that you created to form this Meteorological event. You never know – we may use your experiment on our website to help teach others about fog! Send your experiment to <u>www.stemwithsaints.org</u>



Cloud or Fog? (This or That? Weather by <u>Kelly Doudna</u> (Author)



Let's talk!