IV. Application

A. Explain Lightning Fatalities

1. Hypothesize why most lightning fatalities occur at the beginning or end of a thunderstorm, rather than during the part of the storm with the heaviest rain.

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B. Math Applications

1. If a lightning flash is seen 12 seconds before the thunder is heard, about how far away did the lightning strike?

_____ miles

2. There are 5280 feet per mile. Use the "flash to bang" rule to figure out the speed of sound in feet per second.
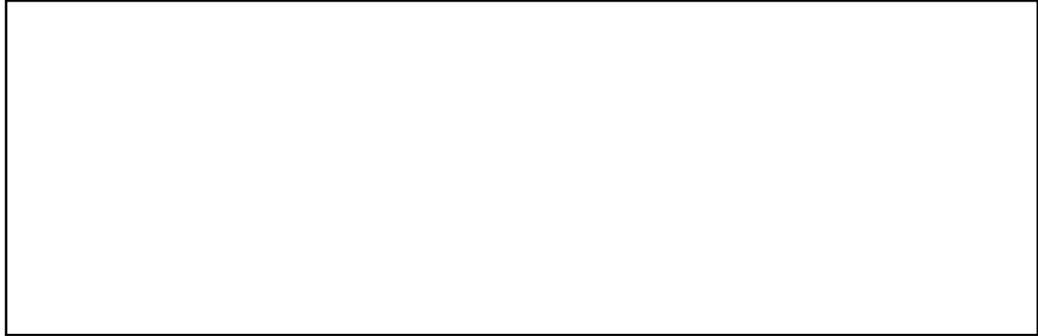
3. There are 2.54 centimeters per inch, 12 inches per foot, and 100 centimeters per meter. Convert your answer in number two to meters per second.

V. Enrichment Activities

A. Research

1. Research Saint Elmo's Fire. What kind of lightning is St. Elmo's Fire? Where does it occur? What problems does it cause?

2. Research "Faraday Cage".

3. Research Zeus' thunderbolts made by Vulcan.

4. Research Nicola Tesla.

5. Find out how buildings can be protected from lightning strikes.

B. Interviews

1. Interview a meteorologist about lightning. Find out what equipment and technology is used to predict and track lightning.

2. Interview an electrician. Find out what "grounded" outlets are and how they work.

3. Interview a firefighter about what lightning can do to a forest and how they put out the fires.

4. Interview a forester about controlled burning. What is it and how is it used?

C. Related Web Sites

1. Lightning Safety
   http://www.lightningsafety.com

2. Kid's Lightning Information and Safety Page
   http://www.kidslightning.info/

3. The Lightning Dictionary
   http:// library.thinkquest.org/20698/data/light4.htm

4. National Weather Service - Lightning Safety
   http://weather.gov/om/wcm/lightning/index.htm

5. Lightning Kills, Play It Safe
   http://www.lightningsafety.noaa.gov/

6. Thunderstorms and Lightning
   http://www.crh.noaa.gov/mkx/slide-show/tstm/index.html

7. A Severe Weather Primer: Lightning
   http://www.nssl.noaa.gov/primer/lightning/ltg_basics.html

8. Lightning Safety: What you need to know NOW
   http://www.nssl.noaa.gov/edu/safety/lightning.html