


Meteorologist: Air Masses and Weather

NGSS Standard: MS-ESS2-5



Adventure Description:

In this adventure, you will think like a meteorologist and serve as an expert witness during a trial.

Activity

Step 1: Background Information on Forensic Meteorology and Air Masses (5+minutes)

- Show Video: [Air Masses and Weather](#).
- Explain to students that some meteorologists specialize in forensic meteorology. Ask students what they think a forensic meteorologist might do, based on the name.
- Explain that forensic meteorologists study weather events from a specific time in history. They are kind of like detectives who look at past weather to determine if a crime could have happened. For example, someone might say that they are innocent of a crime because he or she was on a long bike ride during the time when the crime happened. A forensic meteorologist might look back at weather data and realize that there were severe storms when the suspect claimed to be on a bike ride; therefore, he or she is probably lying.
- Next, discuss how forensic meteorologists need to know what air masses are and how they form so they can figure out what the weather could have been on any day in the past. If students need to review what air masses are and how they cause changes in weather, show [Handout: Learning about Air Masses](#).

Step 2: Activity Set Up (5 minutes)

- Explain to students that they will be asked appear in court as an expert witness to provide a testimony related to a specific case.
- Provide students with [Handout: Steps to Become an Expert Witness](#). As a class, read through the steps.
- Divide students into pairs or small groups.

Please contact Allison Bischoff, Director of Customer Service, at allison@rozzylearningcompany.com or 314-272-2560 with questions.



Step 3: Preparing to Be an Expert Witness (25+ minutes)

- Explain to students that they will now prepare to be an expert witness in a trial. Have pairs follow the steps listed on the handout. Students should use [Handout: Learning About Air Masses](#) to help create their testimony.
- As students are working, ask the following questions:
 - Looking at the data from the time of your incident, what type of weather would you expect to have seen?
 - How can you use the weather information as evidence about whether or not a crime was committed?
 - What technical vocabulary will you need to explain to people who aren't experts?

Step 4: Testifying During a Trial (10+ minutes)

- Explain to students that one pair will now volunteer to present their testimony.
- After one pair presents, allow other students to give feedback on their testimony. Did it meet all of the requirements?
- Teacher note: answers about what weather events students should conclude occurred based on the data can be found on [Handout: Teacher Key](#).

Materials List

Provided online:

- Video: Air Masses and Weather
- Handout: Learning about Air Masses
- Handout: Steps to Become an Expert Witness
- Handout: Teacher Key

Not Provided online (each student or group needs):

- No extra needed materials

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