Smokey's Wildfire Prevention Detectives

Activity 1 Reproducible Master

Find the Source

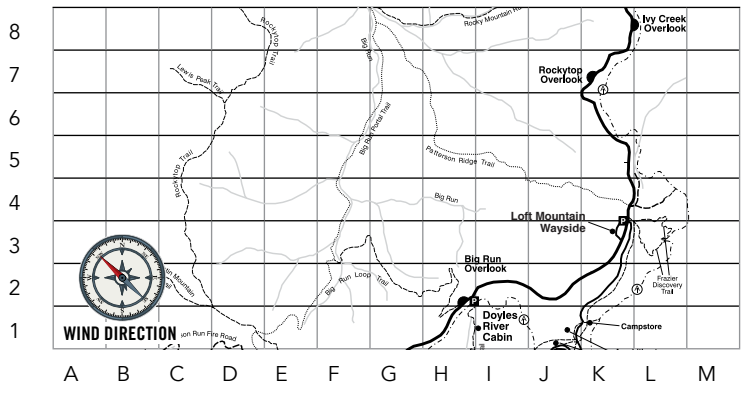
It's not easy to investigate a wildfire. Most investigations start while firefighters are still battling the blaze, so safety is paramount. In addition, firefighting equipment can affect the fire scene, rain can wash away evidence, and there's the risk that trees damaged by the fire could fall onto the investigator.

Wildfire investigators use the scientific method to gather and analyze clues about the cause of a wildfire. The first thing they determine is the point of origin — the spot where a fire started. And that's your first assignment as part of Smokey's Wildfire Prevention Detectives team!

INVESTIGATION #1: Plot the Origin

To identify a wildfire's point of origin, investigators map the area that burned in the fire and look for a V-shaped pattern. The point of origin is usually found at the point of the V. Members of your Wildfire Prevention Detectives team have been reporting map coordinates for areas burned in a wildfire. Shade in the boxes for these coordinates to determine the pattern of this wildfire and its likely point of origin. Remember: The path of a wildfire is influenced by weather (wind), topography (land features), and vegetation (fuels).

Shade These Coordinates															
L4	E6	J2	D7	I2	F3	I1	D5	G3	I4	F4	H3	E5	G5	D6	F6
B7	E7	J3	C7	I3	E4	H2	K3	G4	H4	F5	H5	H6	K4	C6	H7



1. Based on the pattern you have mapped, what are the coordinates of this wildfire's point of origin?_____

2. What is near this location that may provide a clue to what started the wildfire?_____

_____

_____

_____

3. What factor contributed to the spread of this wildfire?_____

_____

_____

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INVESTIGATION #2: Fire's Fingerprints

Wildfire investigators also use burn patterns to help locate a wildfire's point of origin. They know that the burned side of a partially burned object usually points toward the origin of the fire. Your Wildfire Prevention Detectives team located several partially burned objects when they were mapping this wildfire. Three of these objects and their map coordinates are shown below. Using the principle that the burned side of an object points toward the fire's origin, identify which direction the burned side of each object is pointing.

1. Tree charred on one side.

- Found at coordinate B7
- The charred side is pointing:
  - **A.** northwest
  - **B.** southeast
  - **C.** south

2. Rock covered with soot on one end.

- Found at coordinate L4
- The soot-covered side is pointing:
  - **A.** southwest
  - **B.** north
  - **C.** northeast

3. Log charred on one end.

- Found at coordinate H7
- The charred end is pointing:
  - **A.** east
  - **B.** north
  - **C.** south

To learn more about the science behind preventing wildfires, go to **www.SmokeyBear.com/wildfire-science.asp**.