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# Fire Debate

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## Purpose:

- In this activity students will read two different articles on wildfires. Using information from these articles, they will answer questions in a debate that determines if fire forests are good or bad for the environment.

## Objectives:

Students will:

- Infer and demonstrate their understanding of fire ecology and management.
- Determine the circumstances under which forest fires are good and when they are bad.
- Identify the climatic and human-made sources of forest fires.
- Define what is meant by “natural”

## Materials:

- The Bulletin: “A Tale of Extremes: Central Oregon’s 2018 Fire Season” Article (in binder, make one copy for each student in half of the class)
- Oregon Wild: “The Truth About Forest Fires” Article (in binder, make one copy for each of the students in half of the class)

**Time Required:** 1 hour

**Grades:** 9<sup>th</sup> – 12<sup>th</sup>

**NGSS and Common Core Standards:**

**HS-LS2-6.** Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.

**HS-ESS3-2.** Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios

**RST.9-10.8** Assess the extent to which the reasoning and evidence in a text support the author’s claim or a recommendation for solving a scientific or technical problem. (HS-LS2-6)(HS-LS2-7), (HS-LS2-8)



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## Activity:

<b>Introduction</b>	Ask students a True or False Question: Forests Fires are bad. Have them respond using a thumbs up to vote “true” or a thumbs down to vote “false”. Introduce the term “framing”. Explain that framing means to present or formulate a point of view based on a claim. For example: forest fires are bad. Explain that they are going to participate in a debate that argues if whether or not forest fires are bad or good.
<b>Body</b>	Divide the class in to two teams. One team will be assigned to read the Bulletin article and the other will be assigned to read the Oregon Wild article. (Note: Each student will have their own copy). Explain to students that they should be paying attention to how forest fires are being framed in their articles. When they are done reading have them brainstorm and group share how forest fires were framed in their articles and identify evidence from their articles to support their claims. <ul style="list-style-type: none"><li>● Examples:<ul style="list-style-type: none"><li>○ Forest fires are destructive and must be stopped. Why?<ul style="list-style-type: none"><li>■ Answer: They spread quickly and easily, destroy human-built and wildlife habitat and contribute to poor air quality.</li></ul></li><li>○ Forest fires are needed to help maintain healthy ecosystems. Why?<ul style="list-style-type: none"><li>■ Answer: They recycle nutrients and enable fire-dependent species to grow and reproduce.</li></ul></li></ul></li></ul> After the groups finalize their interpretations, begin the debate by writing the first question on the board: <b>Question One:</b> A forest fire breaks out and spreads through Siskiyou-Cascade National Monument, burning over 700 acres of vegetation. What would be the result if the fire continued to spread? <ul style="list-style-type: none"><li>● Possible answers:<ul style="list-style-type: none"><li>○ Habitat would be lost, wildlife would be killed, the air would be polluted, residencies and human lives would be in danger.</li><li>○ Habitat would be replenished, resulting in positive ecological feedback loops for wildlife in the long run.</li></ul></li></ul> <p>*NOTE: Have students refer to evidence from their articles to support and challenge each other’s’ claims for each question.</p>



**Question Two:** Suppose there are human-built establishments within a 5-mile radius of the conflagration. Should the fire be suppressed or allowed to continue?

- Possible answers:
  - The fire should be suppressed to save human lives and property.
  - For long-standing ecological reasons, the fire should be allowed to take its course and humans should be immediately evacuated.

**Question Three:** Fire has been used as a tool by the USDA to clear cut forests for timber industries. Should this method of forestry be allowed to continue?

- Possible answers:
  - No, because it could easily spread, taking out more than intended, and work its way into residential communities.
  - Yes, because it is less ecologically harmful for the environment than using bulldozers and chainsaws.

Before the fourth question, ask students to identify how forest fires are started:

- Possible answers:
  - Climate Change
  - Weather conditions
  - Poor use of matches or other flammable items

**Question Four:** Some forest fires are considered man-made and some natural. What does it mean to be natural?

- Possible answers:
  - Natural means it was caused by weather or climate. Humans did not contribute. Humans are not part of the natural environment.
  - Natural means it was caused by nature. However, climate change has been attributed to by human actions. Humans are therefore a part of the natural environment.

**Question Five:** A fire is started in Siskiyou-Cascade National Monument by a bolt of lightning and another is started in Rogue River National Forest by a group of campers who forgot to put out there campfire. Which fire is the most critical and in need of immediate management?

- Possible answers
  - The fire started by lightning should be managed because it is taking place in a National Park where Park staff is responsible for conserving and protecting the flora and fauna therein.
  - The fires started by people because it was not started by non-human sources.



**Closure**

Revisit the True or False Question at the beginning of the lesson: Forests Fires are bad. Have them respond using a thumbs up to vote “true” or a thumbs down to vote “false”.

How many students changed their votes?

As a class, discuss, compare, and contrast the pros and cons of forest fires. What makes them good and what makes them bad?

When should they be suppressed and when should they be allowed to take their courses?

Explain that forest fires are neither one nor the other. They are both good and bad, depending on the situation.



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