



Group 1

How do wildfires start?

Science and Engineering Practices: Obtaining, evaluating, and communicating information, analyzing and interpreting data

What causes wildfires to ignite? Learn about the wildfire ignition triangle, and analyze data from the Rocky Mountain region from the last 20 years to determine whether humans or lightning cause more fires each year.

Create 2-3 slides to present to your classmates that include:

- An explanation of the fire ignition triangle
- A chart showing the number of fires, the acreage burned, and ignition source of wildfires in the Rocky Mountain Region

Resources:

- [Idaho Firewise Fire Ecology & Management Fire Ignition, Behavior & Effects](#)
- [Wildfire 101: The Fire Triangle and the Fire Tetrahedron](#)
- The [Rocky Mountain Wildfires 2001-2019 Data Set](#) provides statistics on the number and size of wildfires in the last 20 years, and the ignition source. Note that the Google sheet is view only, make a copy of the sheet to edit the document and make a chart.





Group 2

Based on past fires, how could wildfires impact our community in the future?

Science and Engineering Practice: Obtaining, evaluating, and communicating information

Research a historic wildfire in your area, and identify wildfire impacts that happened in the past that may happen again. Include any additional impacts that may occur if development has increased in the wildland urban interface in your county.

Create 2-3 slides to present to your classmates that include:

- The location and size (acres burned) of the wildfire
- The cause of the wildfire
- The time of year the flood occurred
- Impacts from the wildfire, including loss of life (human and/or livestock), buildings or infrastructure damaged, crop damage
- Economic impact of the fire (if available)
- Modern infrastructure in the area that could be damaged if the area were to burn again
- A picture of the historic wildfire

Resources:

- [Colorado Regional and Local Hazard Mitigation Plans](#)
 - Instructions: Click on your county in the list of counties. This will take you to a list of mitigation plans in your region. Click on the plan that is for your community (city or county). Using the Table of Contents, look for the “Risk Assessment” section, and within that, find the Wildfire “Past Events” section
- Local newspaper articles





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Group 3

What time of year do wildfires generally occur in our state?

Science and Engineering Practice: Analyzing and interpreting data

Following the data analysis instructions, analyze data from the NOAA Storm Events database to assess which times of year wildfires most often begin. Confirm your findings using maps from Western Water Assessment.

Create 2-3 slides to present to your classmates that include:

- The graph you produced from your analysis of wildfire ignition dates
- A screenshot of the map of the month that your county experiences the most wildfires from Western Water Assessment

Resources:

- [NOAA Storm Events Database Data Analysis Instructions](#)
- [NOAA Storm Events Database](#)
- [Western Water Assessment Wildfire Maps](#)





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Student Handout
High School
Hazard Lesson: Wildfire

Group 4

What methods exist to minimize the impacts of wildfires?

Science and Engineering Practice: Constructing explanations and designing solutions

Communities across the west are employing wildfire mitigation strategies and creating “FireWise” communities. Explore these strategies and identify three strategies that could be used in your community.

Create 2-3 slides to present to your classmates that include:

- A description and picture of three wildfire mitigation strategies

Resources:

- [Does Wildfire Mitigation Work? 16 Examples and Counting!](#)
- [Colorado State Forest Service - Protect Your Home, Property & Forest from Wildfire](#)
- [National Fire Protection Association - Preparing homes for wildfire](#)



These materials were developed by CIRES Education & Outreach at CU Boulder.
<https://cires.colorado.edu/outreach/projects/HEARTForce>





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Group 5

How do scientists expect the size and frequency of Colorado's wildfires to change in the future?

Science and Engineering Practice: Analyzing and interpreting data

Watch a news story and explore the National Climate Assessment, written by over 300 experts and guided by a 60-member federal advisory committee, to learn what scientists predict for future climate.

Create 2-3 slides to present to your classmates that include:

- The causes and mechanisms for how wildfire frequency is expected to change in the future
- Include screenshots of figures/maps when possible

Resources:

- [Video: Firefighters Battle the Infernos of Climate Change](#)
- [National Climate Assessment: Ecological Disturbances and Forest Health](#)
 - Read the selection (Rapid Forest Change - Wildfire, in Key Message 1)
- [US Climate Resilience Toolkit Fire Regimes](#)

