

# Possible Topics (or come up with your own)

## Astronomy/Space Science Topics

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Was there water on Mars?	Apollo Missions
Why isn't Pluto a Planet?	Elliptical Orbits
Halley's comet	What are comets?
What are potentially hazardous asteroids?	The Contributions of Galileo (or other scientists)
What killed the dinosaurs?	What causes seasons?
What causes the auroras?	What is a meteor shower?
The International Space Station	The Tunguska Event
How did we get to the Moon?	Geostationary Satellites
Why are there Moon Phases?	Scale Model of the Solar System
The moons of Jupiter	The shapes of orbits (planets, comets, etc.)
Probes that have explored Mars	Solar Cycle (Sunspot Cycle)
Space Shuttle Program	Why do eclipses happen?
Mercury, Gemini, or Apollo Program	

## Geology Topics

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The Cascadia Earthquake of 1700	The ancient Elkhorn Volcano
Leonard the Mummified Dinosaur	Formation of the Little Rockies
What happened at Lake Nyos?	What goes on at Ash Grove?
Mass Wasting in the Gates of the Mountains	Montana during the Cretaceous Period
Formation of the Madison Limestone	How did the Helena Valley form?
Helena area faults and earthquakes	East Helena Lead Smelter
East Helena Superfund Site	The Boulder Batholith
Egg Mountain Fossil Site	Mammoth Fossil Site in SD
Ashfall Fossil Site in NE	Labrea Tar Pits
Belt Meteor Crater and other sinkholes	How do varves form?
Glacial Lakes of Montana	Floods of Glacial Lake Missoula
Why does Montana have so much coal?	Where does electricity come from?
What's so unusual about Chief Mountain form?	Lewis and Clark Caverns
Mt. Mazama's Ash in Montana	The K-T Boundary
Tsunamis	Volcanoes of the WA/OR
Past Eruptions of Yellowstone	The Bodies of Pompei
Frost Wedging	Chemical Weathering

The Alaskan Pipeline

Types of Fossils

Madison Canyon Landslide

Helena Quakes of 1935

### **Meteorology Topics**

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Why are Chinook winds warm?

What are microbursts?

Super-Cooled Water/Latent Heat

What's a dew point?

What causes wind? (convection)

Montana during the last Ice Age

The Contributions of Fujita (or other scientists)

Why is Livingston so dang windy?

Tree-Ring Analysis

Japanese Balloon Bombs of WWII

How does RADAR work?

What is a storm surge?

### **Hydrology Topics**

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Montana Drainage Basins

The Helena Valley Aquifer

How do septic systems work?

Giant Springs: An Artesian Situation

What is a watershed?

Removal of the Milltown Dam

How do dams generate electricity?

Where does your water come from?

What is hard water?

### **Oceanography Topics**

What is El Nino?

Why is the Oceanic Conveyor Belt important?

Western Interior Seaway

What if the conveyor belt stops?

Tsunami Debris Headed Toward USA

Pipelines in Montana

What is limestone used for?

Refraction of Seismic Waves

Helena Area Liquefaction Concerns

How do clouds form?

Tornadoes in Montana

Why does it get colder as you go up?

How does a psychrometer work?

What is a temperature inversion?

Cold Fronts and Warm Fronts

How do wind generators work?

Lake sediment cores

What do ice cores tell us?

Weather Balloons and the Jet Streams

Weather Satellites

The Helena Valley Watershed

Floods of 2011

Montana's Deadly Flood of 1964

The Mississippi Delta

Oil Spill on the Yellowstone River

The Berkeley Pit

Montana's Snotel System

Sewage Treatment in the Helena Area

What is La Nina?

Density Currents

Tsunami Warning System

The Coriolis Effect

**IMPORTANT:** You can choose a topic from the list, or you can come up with your own.