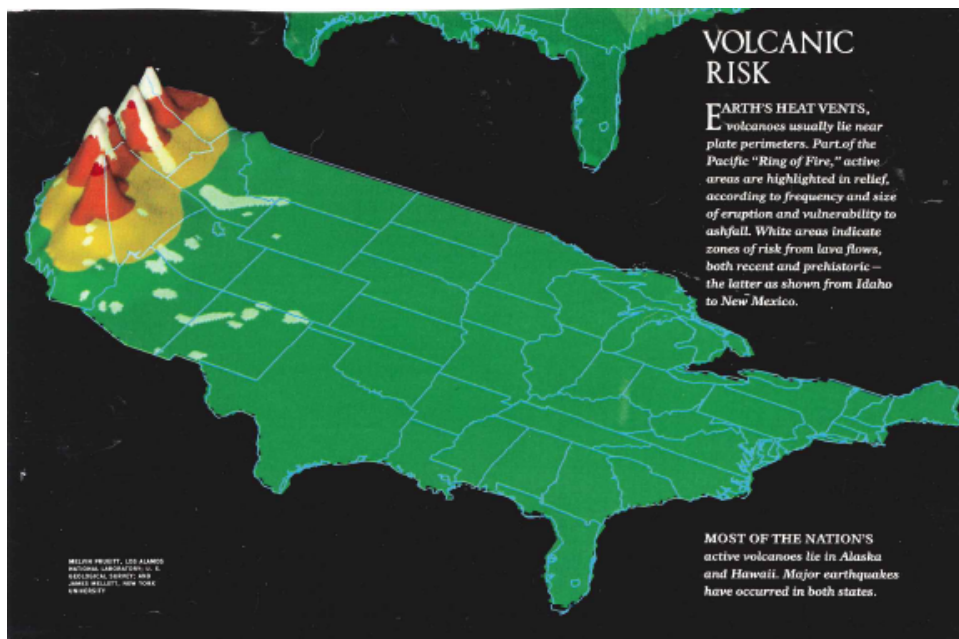


## Volcanoes and Lava



Along the northern section of Western North America we are at high risk for volcanic activity.

**Background:**

1. For most of us the mention of volcanic activity suggests danger and destruction! However, there are benefits to volcanic eruptions. What are some benefits of volcanoes?

Volcanoes provide us with new land, islands for example, and the ash from volcanic eruptions makes land more fertile for agriculture.



2. What is the difference between magma and lava?

Magma is melted rock below Earth's surface while lava is the melted rock when it is on Earth's surface.

3. What is the scientific definition for melting?

Melting is when a solid becomes a liquid. This requires heat.

4. How does magma form in the asthenosphere?

The mantle is solid rock which is under great pressure. Just below the lithosphere the rock is still very hot but the pressure is less so the hot rock can turn to a liquid. This is the same principal as we saw for the liquid outer core and the solid inner core.

5. Why does magma rise from within the asthenosphere and move into the lithospheric plates?

The magma is a liquid and is less dense than the surrounding rock. The liquid can move more easily in the cracks in the lithosphere.



6. What is the scientific definition for freezing?

Freezing is when a liquid turns to a rock. This requires cooling or removing the heat from the liquid.



7. What is the difference between something freezing and drying out?

Drying out is when water leaves a substance, usually as water vapor. Freezing doesn't have any water leave.