What Makes an Eruption Explosive?
Volcanoes

What are they?
Would you want to live near one?
The truth is...

Many types of eruptions are not the “explosive type” we imagine...
Effusive eruption ➔

 Explosive eruption
But when they are explosive...

- **Plinian eruption**: The largest and most violent of all types of volcanic eruptions
- Gas and ash can rise up to 50 km and can spread for hundreds of miles from the volcano
- **Mount St. Helens** (1980)
  - 57 people killed
What contributes to violent eruptions?
• Extreme temperatures and pressures
• Volcanic ash, gas, rock fragment expulsion
But also these:
Time to Explore Two Main Concepts:

• **Viscosity:** A fluid’s resistance to flow or movement. Describes internal friction of a fluid. *A bubble encounters more resistance as it rises through honey than through water.*

• **Degassing:** The process of freeing gas from a solution. In this case, freeing gas from magma.