

VOLCANOES



BRAINTEASER

Today is the 7th annual Swahili Science Fair. Two people signed up to put their "skillz" to the test; a 9 year old girl named Sally, and a 32 year old named Fred. Both participants received the exact same materials: vinegar, baking soda, and, of course, a pre-made clay volcano.

The competition is to see whose volcano can produce the most "lava" (in this case, the lava is the baking soda/vinegar reaction). Each contestant was given 5 minutes to plan how they will use the materials.

When it was time to do the experiment, both contestants started pouring the ingredients into their volcanoes. Within seconds, Sally's volcano began emitting tons of lava, spewing it everywhere. On the other hand, Fred's did very little.

Considering both used the exact same amounts of identical materials, and both poured in the ingredients at the same speed, why was Fred's volcano so lame?

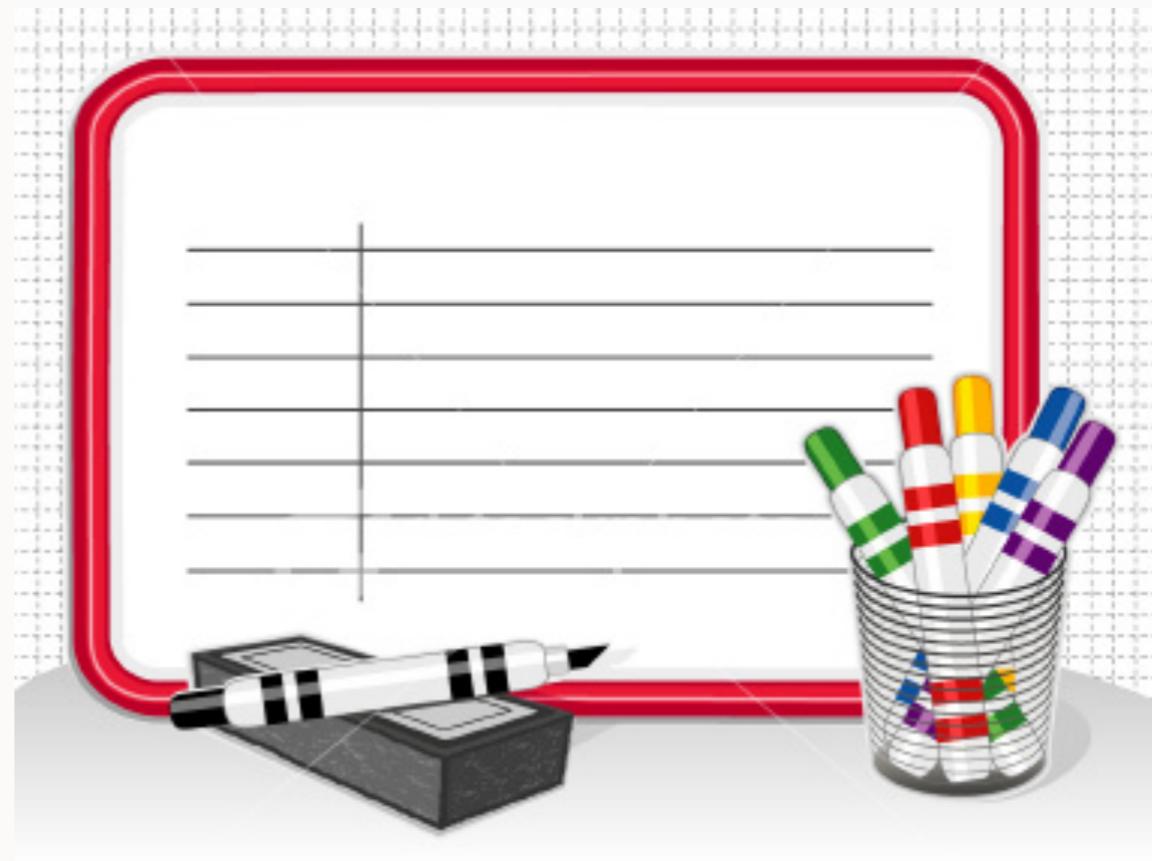
WHAT IS A VOLCANO?

Whiteboard Activity:

- As a group, write or draw your answer



5 min



WHAT IS A VOLCANO?

an opening in Earth's crust that releases lava, smoke, and ash when it erupts.



but why does this happen??

WHAT IS A VOLCANO?

- When a volcano is active, it **erupts**.
- When a volcano is not active, it is **dormant**.



Mount Stromboli, Italy
Continuous eruption for over 2000 years



Mount Edziza, British Columbia
Highest Volcano in Canada

AMAZING VOLCANOES



20 AMAZING VOLCANOES

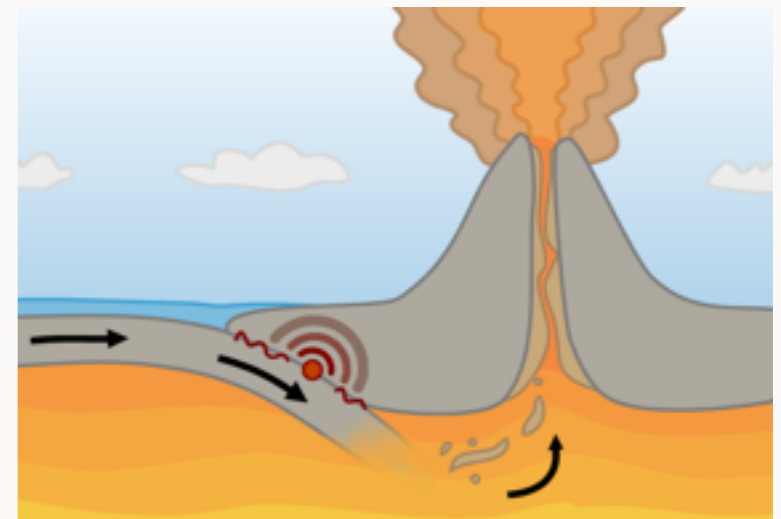
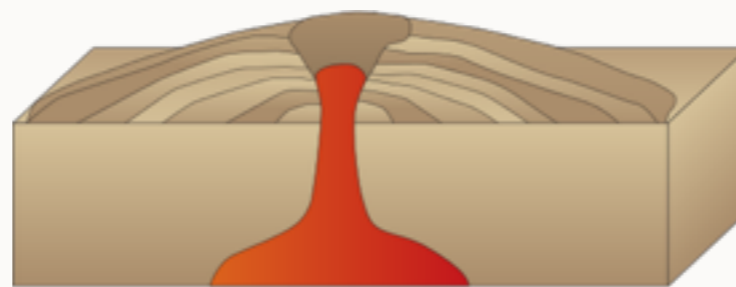
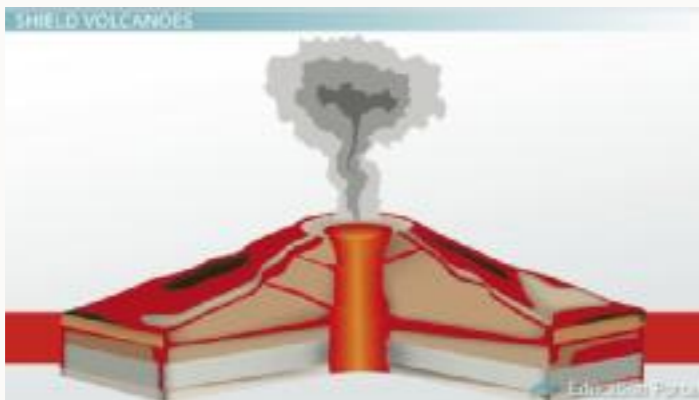
TYPES OF VOLCANOES

Partner Activity

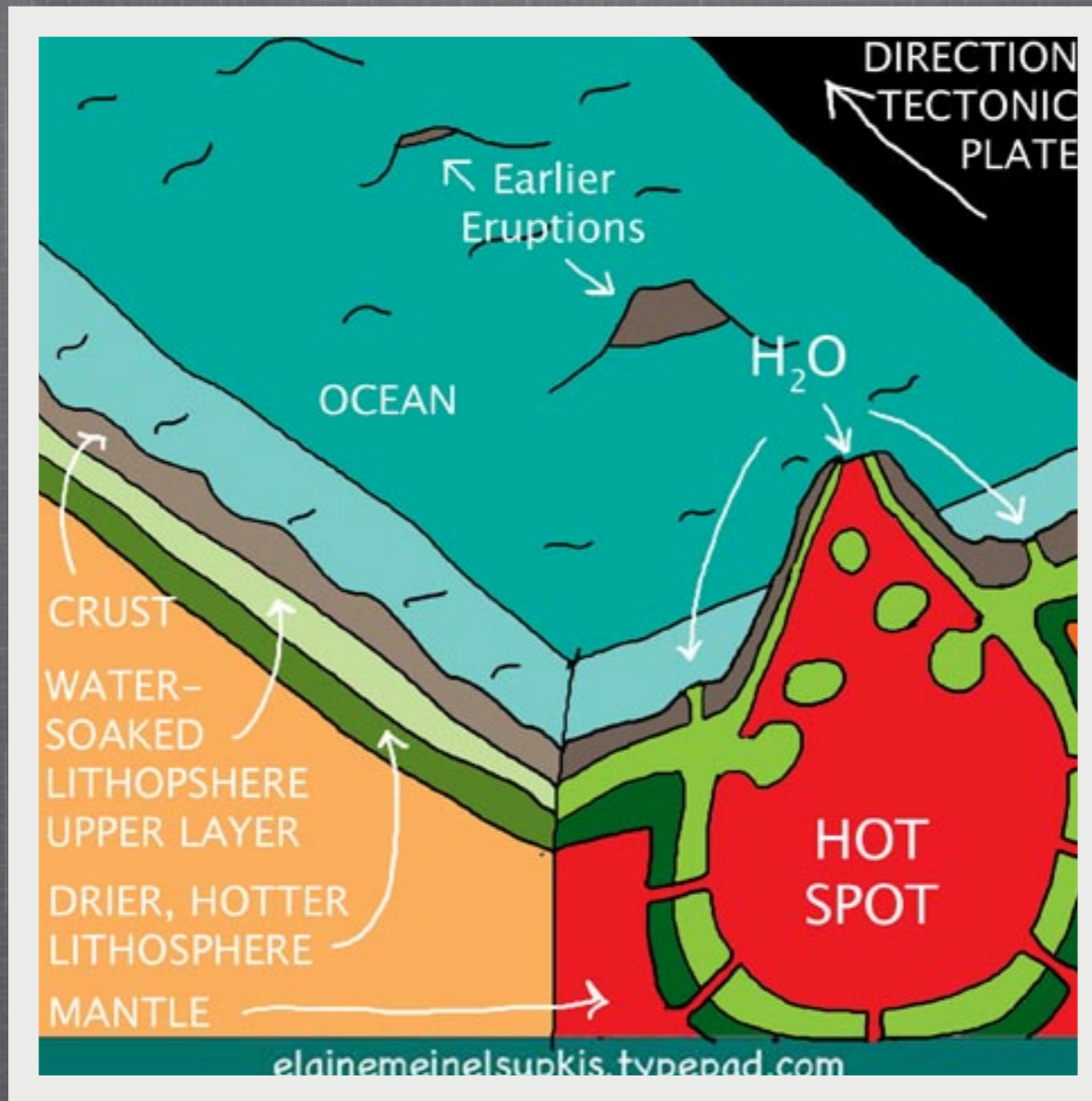
- Complete your Frayer's Model as you rotate through the four stations.
- Each student must complete an individual Model.
- Include a definition (in your own words!), a drawing, and one fact for each of the three types of volcanoes.

TYPES OF VOLCANOES

1. Ash-and-Cinder Cone Volcano
2. Shield Volcano
3. Composite Volcano (Stratovolcano)



HOT SPOTS



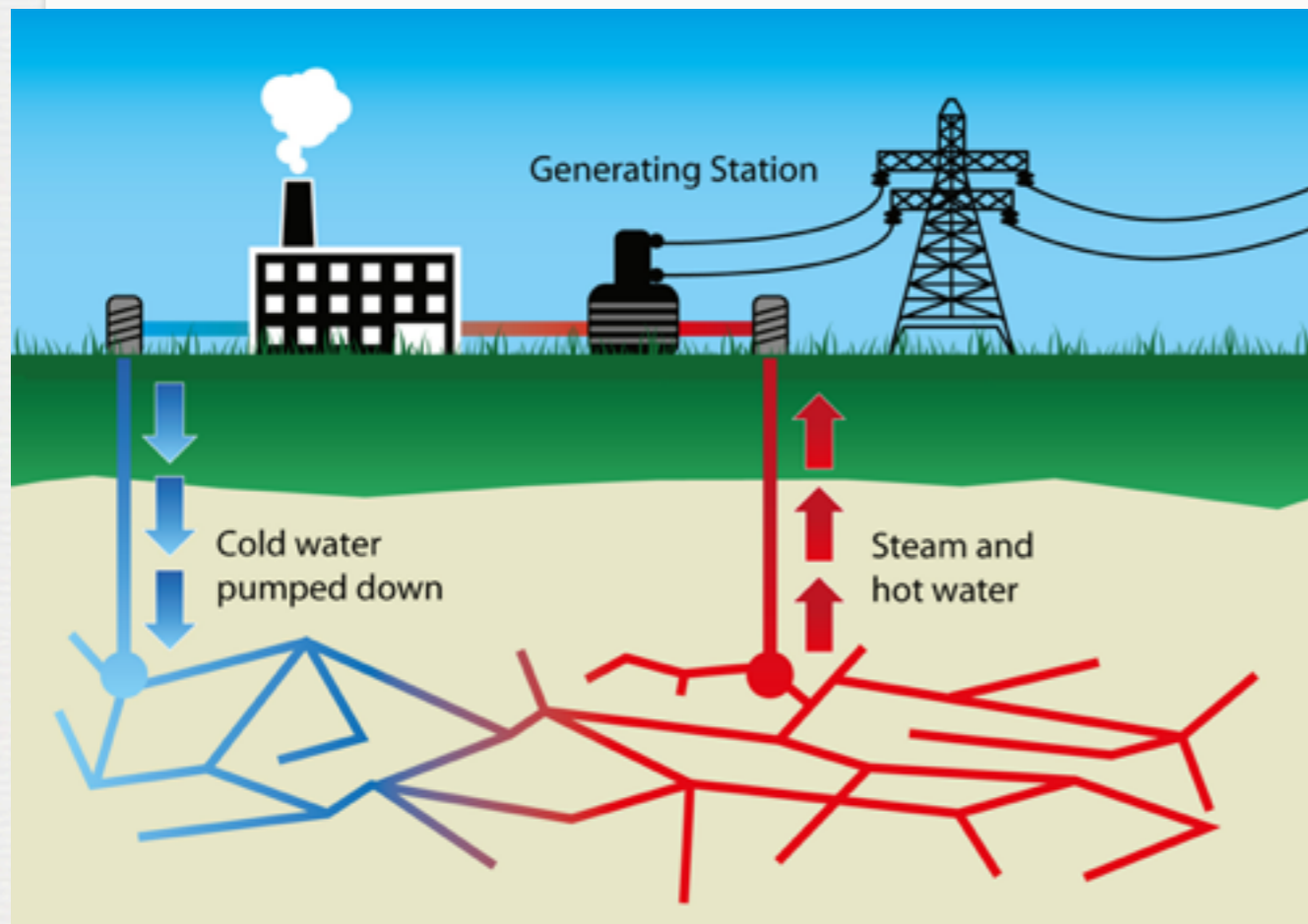
Scientists have begun to look at **hot spots** where boiling water and steam occurs naturally.

HOT SPOTS

They have taken the energy from this and used it to run power plants. We are now able to turn Earth's energy into electrical energy, referred to as **geothermal energy**.

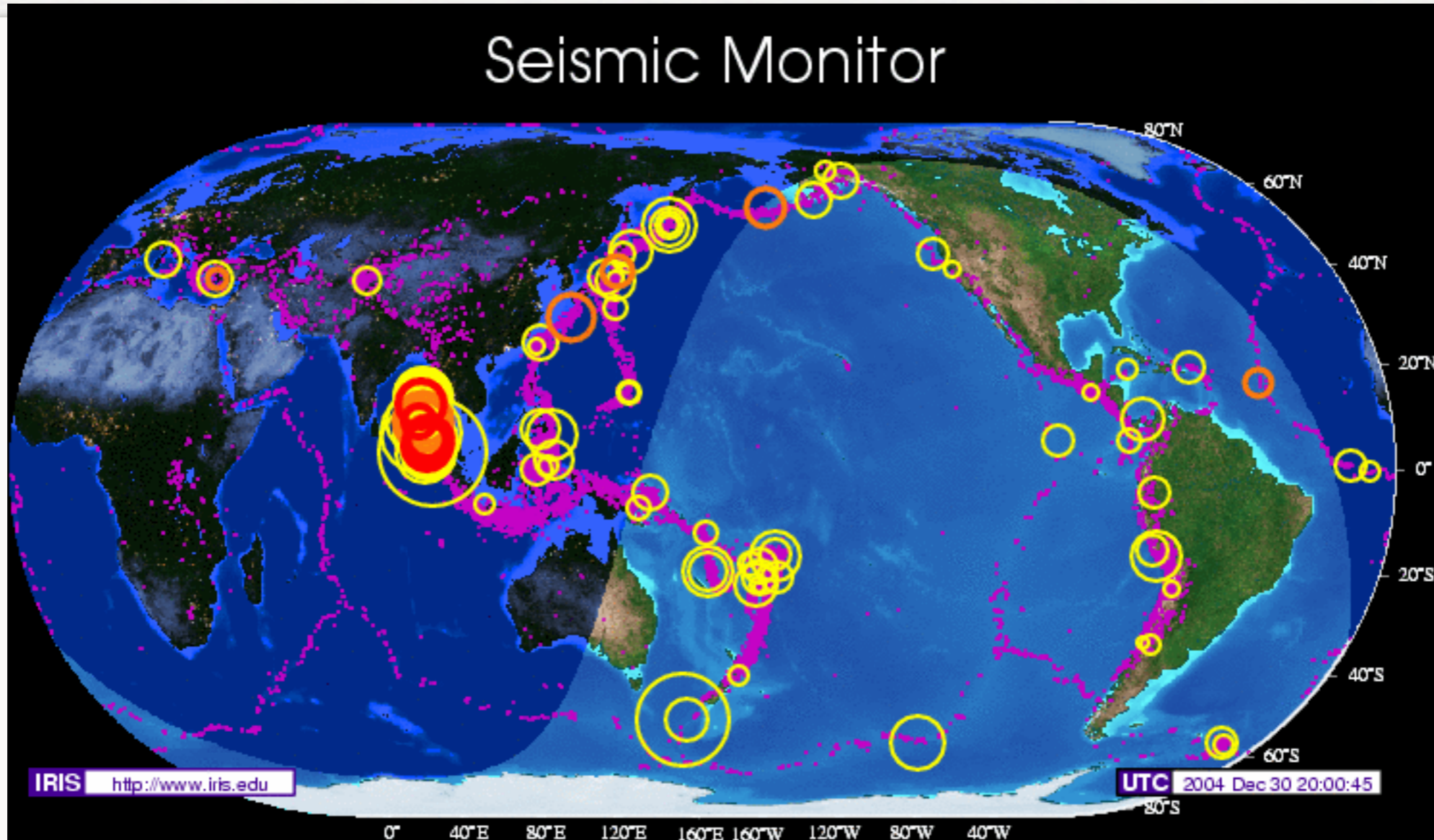
Geothermal energy is clean and reliable. This type of energy could help reduce the number of oil spills and waste from mining fossil fuels.

HOT SPOTS



In places where the magma is too far beneath the surface, scientists have tried pumping water into cracks in rocks where it turns into steam that can be used as energy. This is an expensive alternative to fossil fuel.

RING OF FIRE



What is the Ring of Fire and how did it get its name?

REVIEW

