Bellringer: D6

- Which is your favorite Utah rock? Explain:

Utah Studies

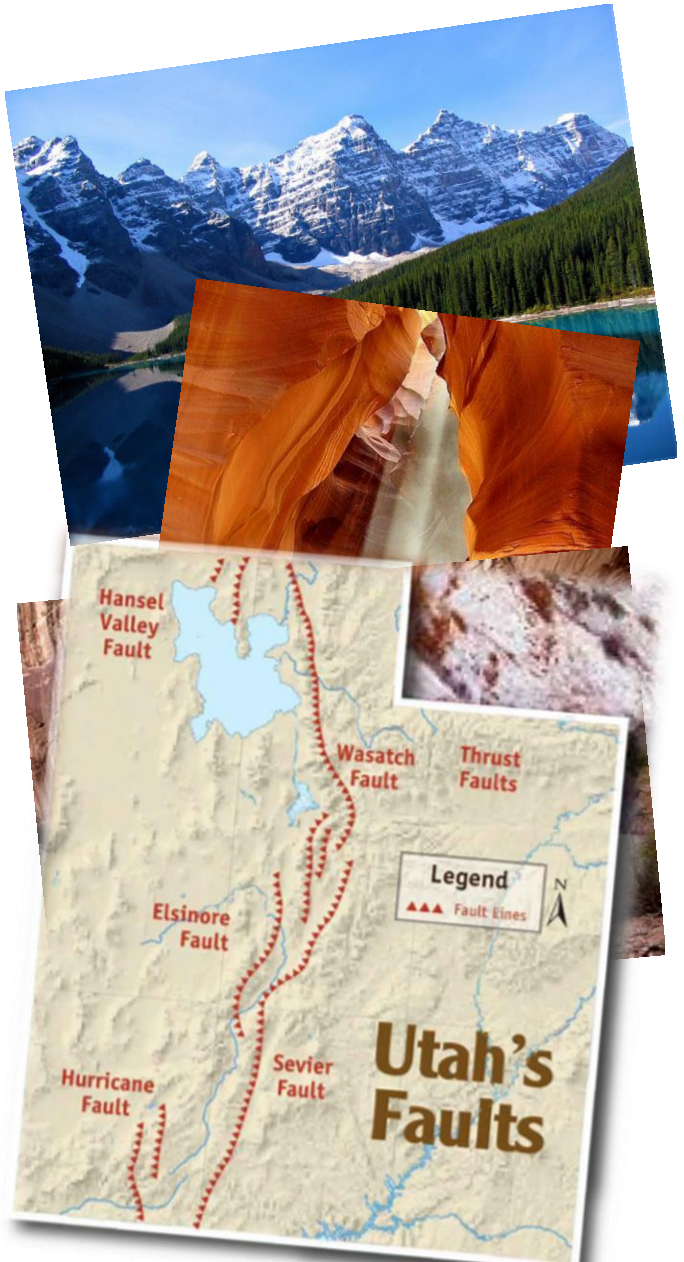
T1D6: Utah's Geology, Part II

Main Ideas:

- Erosion
- Faults
- Igneous
- Coal
- Topaz
- Copper, etc.
- Ice Age
  - Glacial lakes, Ice sheets
- Lake Bonneville
  - Remnants: Utah Lake, Salt Lake, Sevier Lake
- Ice Age Animals
  - Mammoths, Giant Sloths, Ancient Bison, Musk Ox, Saber-toothed cats, giant camels, etc.
- Natural Forces Today
  - Earthquakes, erosion, etc.

Forces Shaping Utah's Mountains and Plateaus

- The Rocky Mountains, where Utah sits, were created as giant pieces of crust got pushed together, and the land was uplifted here.
- Our plateaus were also created this way. As time has passed, **erosion** has acted on these landforms, cutting canyons, valleys, etc. out of the landscape.
- A huge part of that activity are **faults**, which are cracks in the earth's crust that are subject to movement when pressure builds.
- **By which faults do most Utahns live?** Did you know it has a major earthquake every ~300 years? And it has been about 400 years since the last big one?



Volcanic Activity in Utah

State Rock: Coal

State Gem: Topaz

State Mineral: Copper

- Many parts of Utah have been affected by **volcanic activity** (related to molten lava below or above the surface). For instance, the La Sal, Abajo, and Henry Mountains were created in this way.
- **Igneous** rocks are created from cooling molten rock. Utah has had many volcanoes in its long geologic history, but today they are all inactive, or dead. However, you can still see their former activity now.
- Because of this volcanic activity, many minerals were pushed up out of the inner earth near the surface, where we can now mine it, like copper, gold, silver, etc. 7 Min VID

Utah's Rocks & Minerals

- Utah is a very great place for a lot of reasons. One of them is the fact that we have so many different fossil fuels and minerals buried here.
- For example, Utah has enough **salt** to satisfy the world's needs for over a thousand years. We use it for all sorts of things.
- One of the more popular uses is the Salt Flats west of the Great Salt Lake, where people like to **race**. However, we still need to be careful of how we take care of that resource, which can eventually run out: VID
- **What environmental issues are associated with using / mining our minerals here in Utah?**

A **Thought Provoking** Question

HW: Extra Credit!

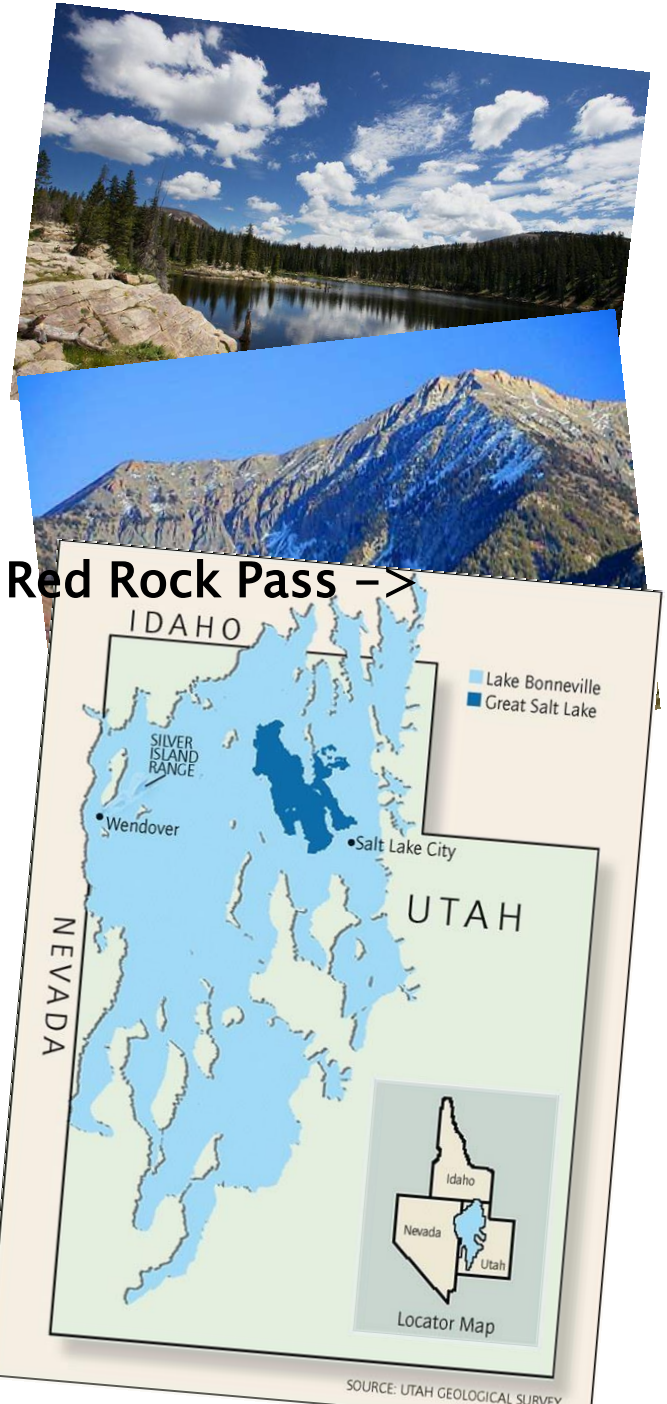
- Don't forget to check out either:
- Option A: an Earthcache (**due** next **Tuesday**)! Use the printed worksheet.
  - Some earthcaches are more intense than others (just like geocaches). Find one that works for you!
- Option B: Utah Minerals Activity:
  - Do some research, find one that interests you!
  - Then, complete one of the activities on the worksheet. Be sure to consider the rubric as well!
  - This one is **due next Thursday!**

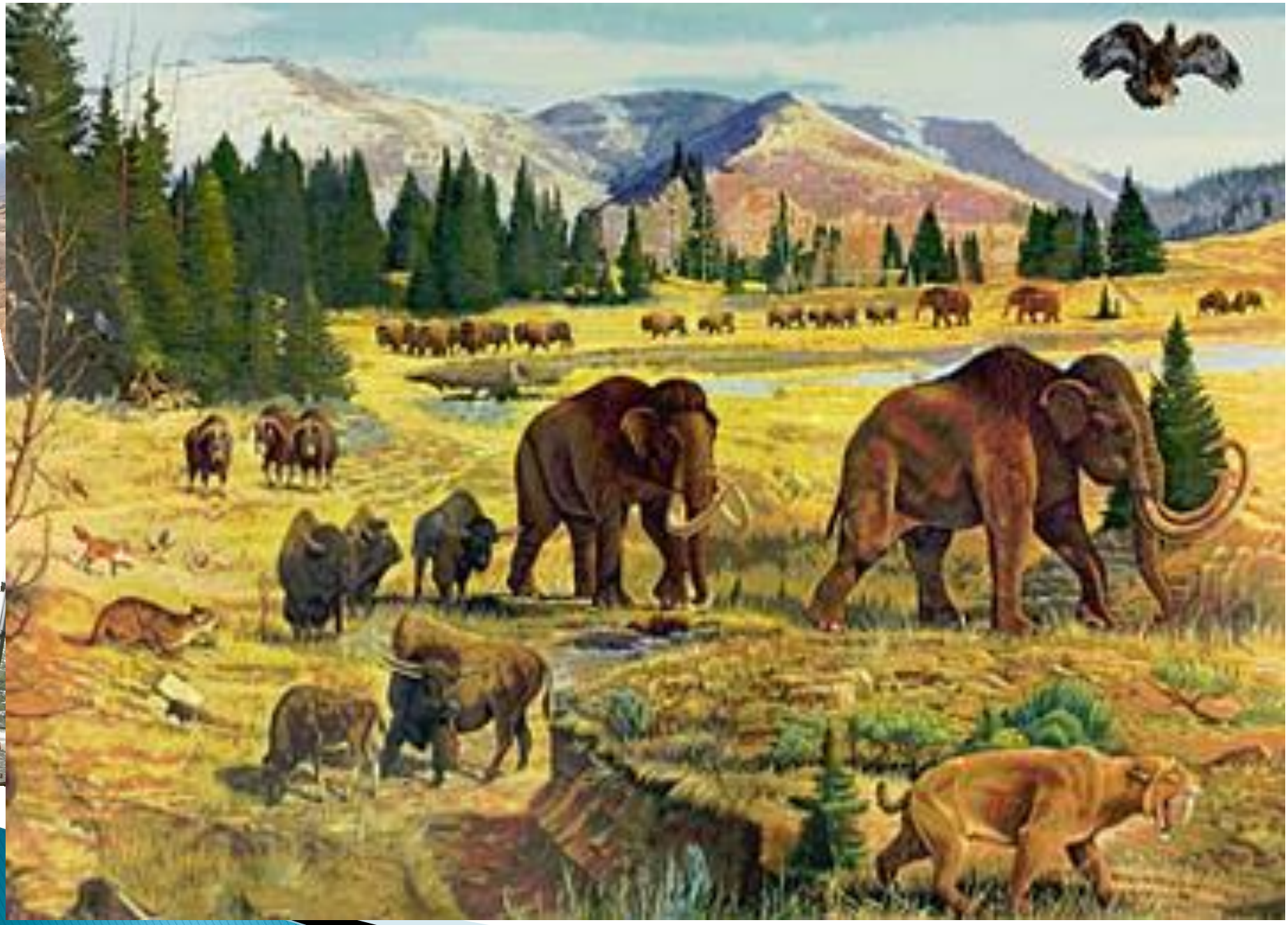
Bellringer: D7

- Which is your favorite character from Ice Age? What other animals lived during the last Ice Age?

The Ice Age in Utah

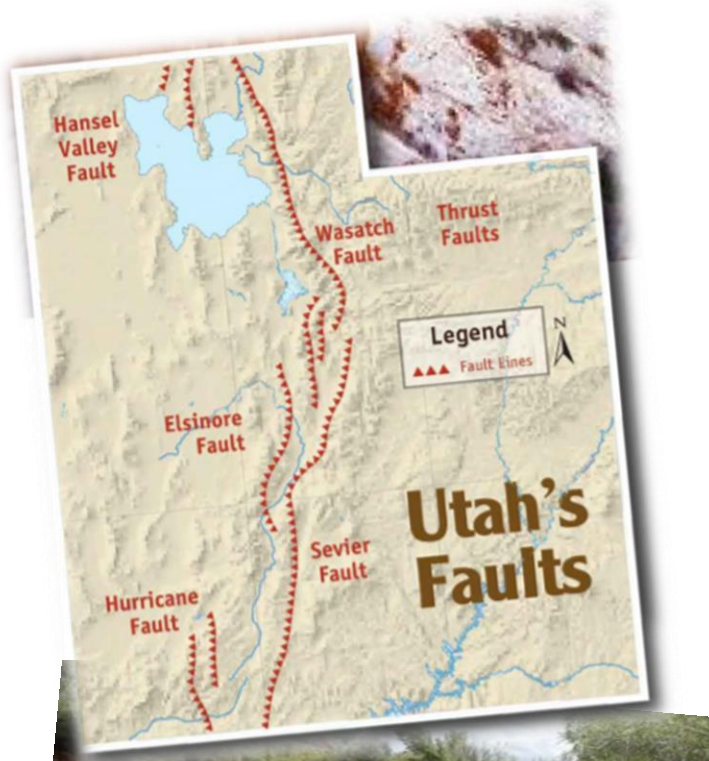
- The last Ice Age to affect Utah happened about 10-20,000 years ago. A giant sheet of ice covered much of North America, but it didn't cover Utah.
- In Utah, **glaciers** formed in the **Wasatch** and **Uinta** mountains, and as they melted they left behind many small **glacial lakes.**
- The biggest lake formed by this warming was **Lake Bonneville,** which covered **nearly half** of Utah and we can see its remnants in the **Great Salt Lake** and **Utah Lake** today. Vid





Natural Forces & Utah Today

- As mentioned before, Utah is far from being a stable place even today. **Fault lines** mean that earthquakes are a very real and current danger even today. VID
- Floods, rock slides, and other natural disasters still can and do happen as well. In fact, Utah has over 700 small earthquakes every year, but they are usually pretty minor. Some though, not so much: Vid



Homework:

- Finish up working on your **WPA Utah Posters!**
- Also, if you want for EC, the **Earthcache assignment** / Minerals Activity. Use the printed worksheet.
  - Some earthcaches are more intense than others (just like geocaches). Find one that works for you!
- Utah Minerals Activity (**Due Thursday**):
  - Do some research, find one that interests you!
  - Then, complete one of the activities on the worksheet. Be sure to consider the rubric as well!
  - **Due: T3D9**
- **Test Next Time!**
  - **Don't forget to review the Ch. 2. Review!**
  - [redacted] LINK