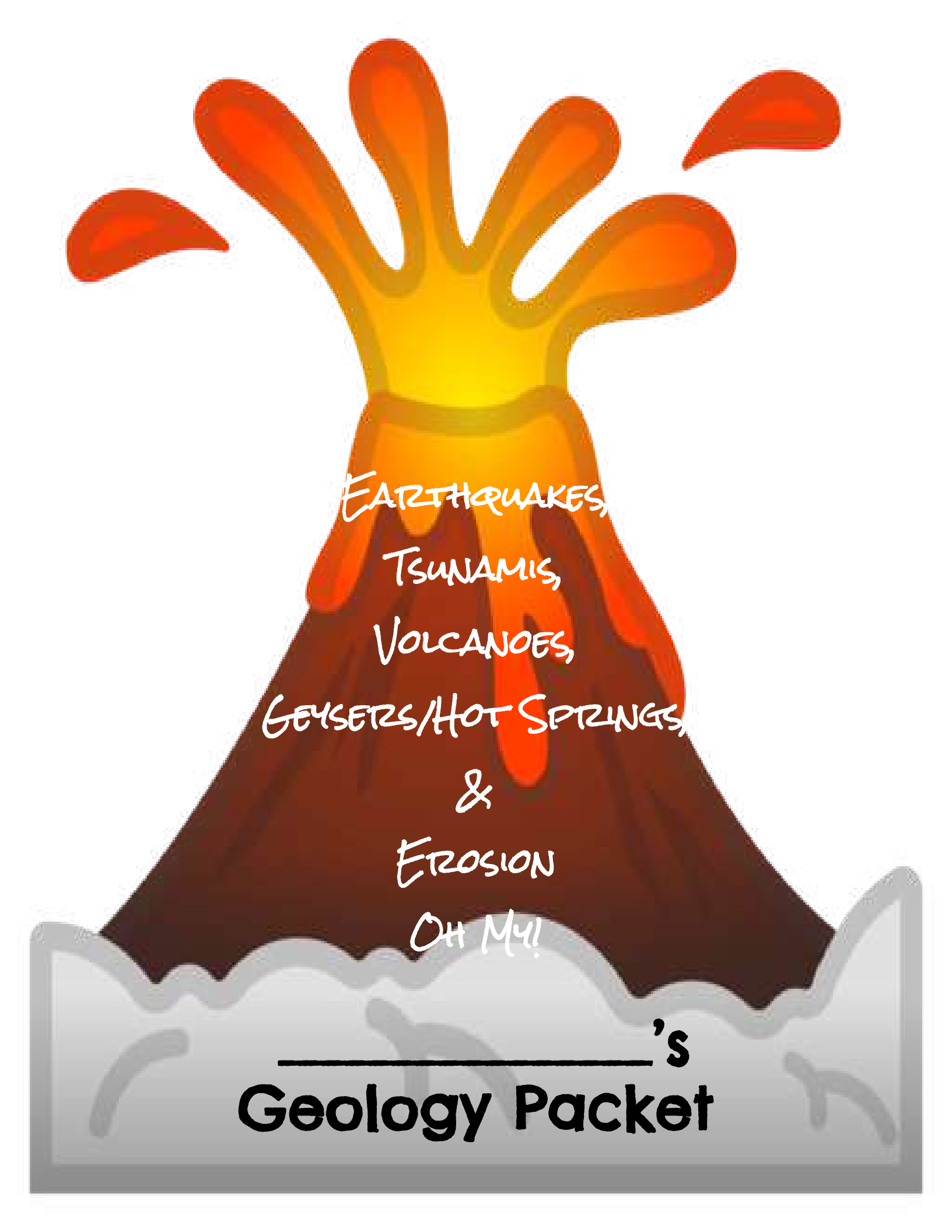

Earthquakes,
Tsunamis,
Volcanoes,
Geysers/Hot Springs,
&
Erosion
Oh My!
_____'s
Geology Packet

Erosion Station

Directions: Using your computer and the ELA Buzz Agenda(Erosion section), watch the episode, **Magic School Bus: Rocks and Rolls,** and answer the following questions while watching.

1. Water fills a crack in a rock, then freezes causing the rock to break.This is an example of _____ .
   a. weathering
   b. erosion
   c. Deposition

2. The river carrying pieces of rock(sediments) downstream is an example of _____.
   a. weathering
   b. erosion
   c. Deposition

3. The building up of rocks in the river is an example of _____.
   a. weathering
   b. erosion
   c. Deposition

4. The build up of these sediments would form what type of rock?
   a. igneous
   b. metamorphic
   c. sedimentary

5. Other than water freezing, what else can cause weathering?

   _____

   _____

   _____

1. Other than moving water, what else can cause erosion?

   _____

   _____

   _____

Geysers/Hot Springs Station

Directions: Using the websites/videos about geysers and hot springs on the ELA Agenda, create a mini poster on the back of this piece of paper. Make sure to include the following information:

Below is a checklist of what you need to include on your mini-poster:

_____ What is a geyser?

_____ How are geysers and hot springs related?

_____ At least 1 popular geyser/hot spring and location

_____ 3 Fun Facts

_____ At least 1 diagram with labels

Be sure to organize your ideas before drawing your final mini-poster! Your paper can go up and down OR side to side. Use crayons, colored pencils, and/or markers. Be creative!

Hint: If you needed to teach another 4th grader about geysers/hot springs using your poster, what would you want it to look like?

Earthquake Station

Directions: Use the “Earthquakes” section on your ELA Agenda to complete the following Webquest and answer the questions.

Click on Link 1

Watch the video: What is the name of where the plates of the Earth’s crust meet?

_____ _____

Read: What causes the tectonic plates to move in different directions?

_____

Watch each of the demonstrations on the 4 ways plates can move.

Read: How do plate tectonics impact our planet?

_____

Play the GAME. Once complete, click the back button to return to original website.

Click on “Read more about the Power of Plate Tectonics.

Read through this page: Draw a diagram of the layers of the Earth and add labels.

Scroll back to the top, and click on Earthquakes.

Read: What was the magnitude of the largest earthquake on record? _____

Go back to ELA Buzz Agenda and click on Video 1.

What coast of the United States has the most earthquakes?

_____

The mantle is believed to be how many miles thick?

_____

Go back to ELA Buzz Agenda and click on Link 2. Explore the website by clicking on the different tiles. Write 3 new fun facts that you learned through your exploration:

Fun Fact 1	Fun Fact 2	Fun Fact 3

Volcano Station

Directions: Let's build a volcano!

Once done, you'll have completed the following diagram. Realistically, color your diagram while waiting to move to the next station.

(Insert blank diagram of volcano here)

Tsunami Station

Step ONE: Build Your Beachfront

1. Using the index cards, tape, and toothpicks,

   build 2 or 3 small houses.

1. Using the sand/corn flour mixture, pile it on one end of

   the foil tin in the form of a sandy beach

   and place the houses at the top of your hill.

1. Using the measuring cup, carefully and

   slowly pour 2-3 cups of water into the other

   end of the foil tin until it is about halfway up the beach.. This will simulate the ocean.

Step TWO: Make the Ground Shake

Now you will make a series of earthquakes that simulate the Richter Scale. You have learned that when an earthquake happens on the ocean floor, it can create tsunamis. Please follow the steps in the next table to simulate a tsunami. Along the way, please fill in your observations and thoughts.

Step THREE: Cue the Questions

Once you have filled in the chart, please respond to the question below the table.

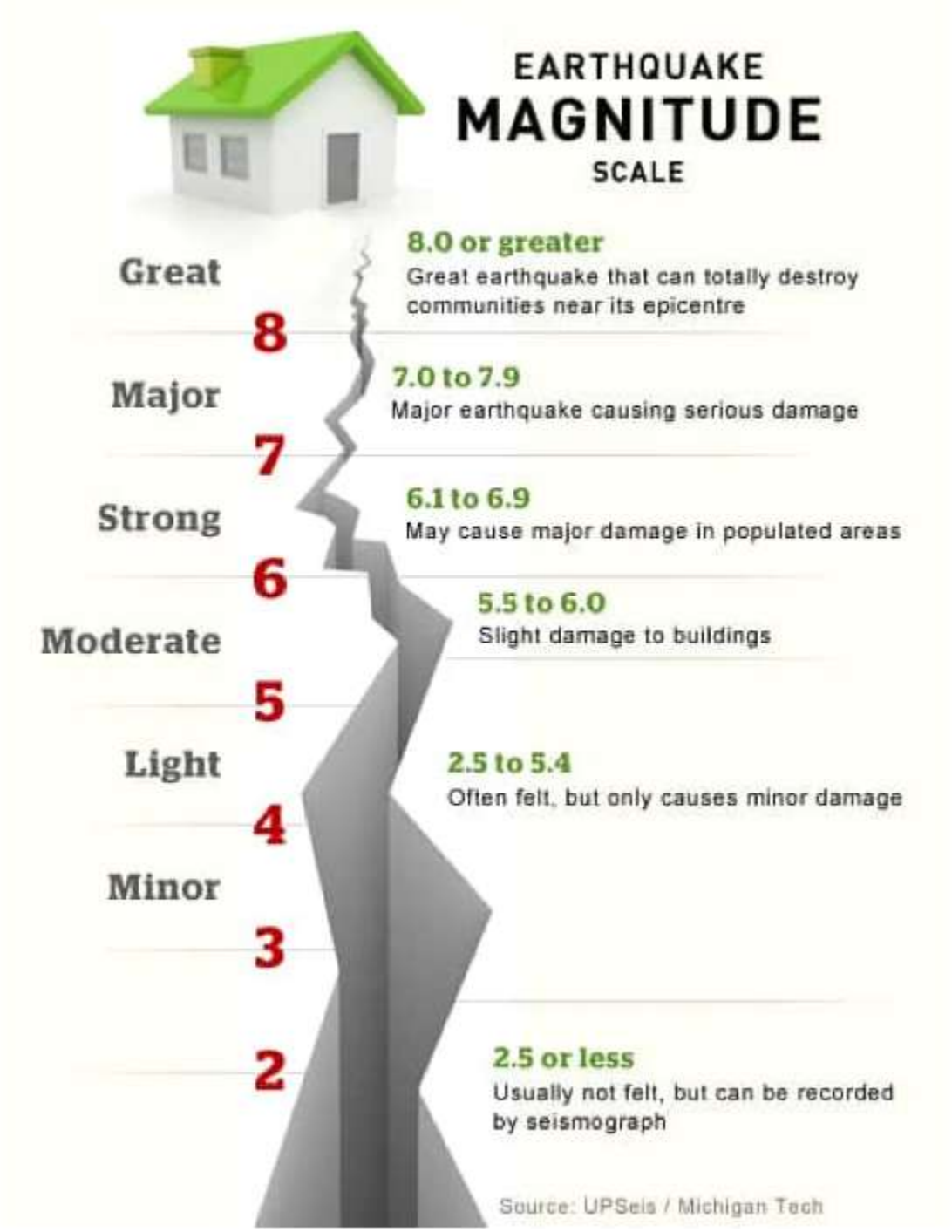
Tsunami Station cont.

On the next page is an example of a Richter Scale. Simulate each earthquake in the order of the table from top to bottom. Then, guess what you think the measurement would be on the Richter scale. Write down your observations of the water, sand, and houses once you simulate the earthquake.

Earthquake Simulation Level	Richter Scale Guess (1-10)	Observations
Lightly bump the table		Water: Sand: Houses:
Shake the table with one hand		Water: Sand: Houses:
Shake the table with 4 hands		Water: Sand: Houses:

How are the "earthquake" and the amount of destruction related?

Tsunami Station Cont.
Richter Scale Explanations



Extra Station

Which is the worst, and why?

Paragraph Prompt: Using your new knowledge about earthquakes, volcanoes, and tsunamis write a paragraph(5-7 sentences) with a strong topic sentence, details to support your opinion, and evidence from your CKLA Reader to strengthen your argument about this topic: Which would be the worst natural disaster to experience: an earthquake, a volcano, or a tsunami? Why is that your choice?

"Which is the worst, and why?" cont...