Fast or Slow

Sort geographic changes by the time they take.

WG.4.b "describing major physical and environmental features and how geography may change over time;"

NAME _____ DATE _____

RAPID CHANGE

Rapid changes alter land in a short time, such as seconds, hours, or days.

A meteorite impact forms a crater in minutes.

GRADUAL CHANGE

Gradual changes alter land little by little over many years or longer.

A glacier widens a valley over thousands of years.

1 SORT

8 items

In Part 1, circle RAPID or GRADUAL for each change, then in Part 2, choose two items and explain what time clue helped you sort each one.

1. An earthquake lifts part of a coastline in seconds. RAPID GRADUAL

2. Tree roots crack a boulder over many years. RAPID GRADUAL

3. Wind wears away sandstone over centuries. RAPID GRADUAL

4. A landslide moves a hillside downhill in minutes. RAPID GRADUAL

5. A tsunami reshapes a shore in hours. RAPID GRADUAL

6. A lava flow covers land in days. RAPID GRADUAL

7. A river deposits sediment to build a delta over centuries. RAPID GRADUAL

8. A hurricane strips sand from a beach in one day. RAPID GRADUAL

2 PROVE IT

Explain your thinking

Pick two items from Part 1. For each one, tell how you knew where it belonged.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Part 3: Write one new example of a RAPID change and one new example of a GRADUAL change.

RAPID _____

GRADUAL _____

CHALLENGE

Write two sentences that explain how one rapid change and one gradual change could shape the same place.

Fast or Slow

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	An earthquake lifts part of a coastline in seconds.	**RAPID**	Earthquakes can move land suddenly in seconds.
2	Tree roots crack a boulder over many years.	**GRADUAL**	Roots slowly grow into small cracks and break rock apart over time.
3	Wind wears away sandstone over centuries.	**GRADUAL**	Wind erosion usually removes rock bit by bit over a long time.
4	A landslide moves a hillside downhill in minutes.	**RAPID**	A landslide quickly moves soil, rock, and debris.
5	A tsunami reshapes a shore in hours.	**RAPID**	Powerful tsunami waves can rapidly move sand and debris along a shore.
6	A lava flow covers land in days.	**RAPID**	An erupting volcano can spread lava across land in a short time.
7	A river deposits sediment to build a delta over centuries.	**GRADUAL**	Sediment builds up slowly as a river deposits material over a long time.
8	A hurricane strips sand from a beach in one day.	**RAPID**	Strong storm waves and winds can quickly erode a beach.

PART 2 · PROVE IT

Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **RAPID**: A mudflow changes a hillside in minutes.
- **GRADUAL**: Groundwater dissolves limestone to form caves over thousands of years.

Challenge: A volcanic eruption can quickly cover part of a landscape with lava. Over many years, rain can weather the cooled lava into soil.

Part 1 answers: 1 RAPID, 2 GRADUAL, 3 GRADUAL, 4 RAPID, 5 RAPID, 6 RAPID, 7 GRADUAL, 8 RAPID. For Part 2, accept explanations that correctly use the stated time scale and identify whether the selected process changes land quickly or little by little.