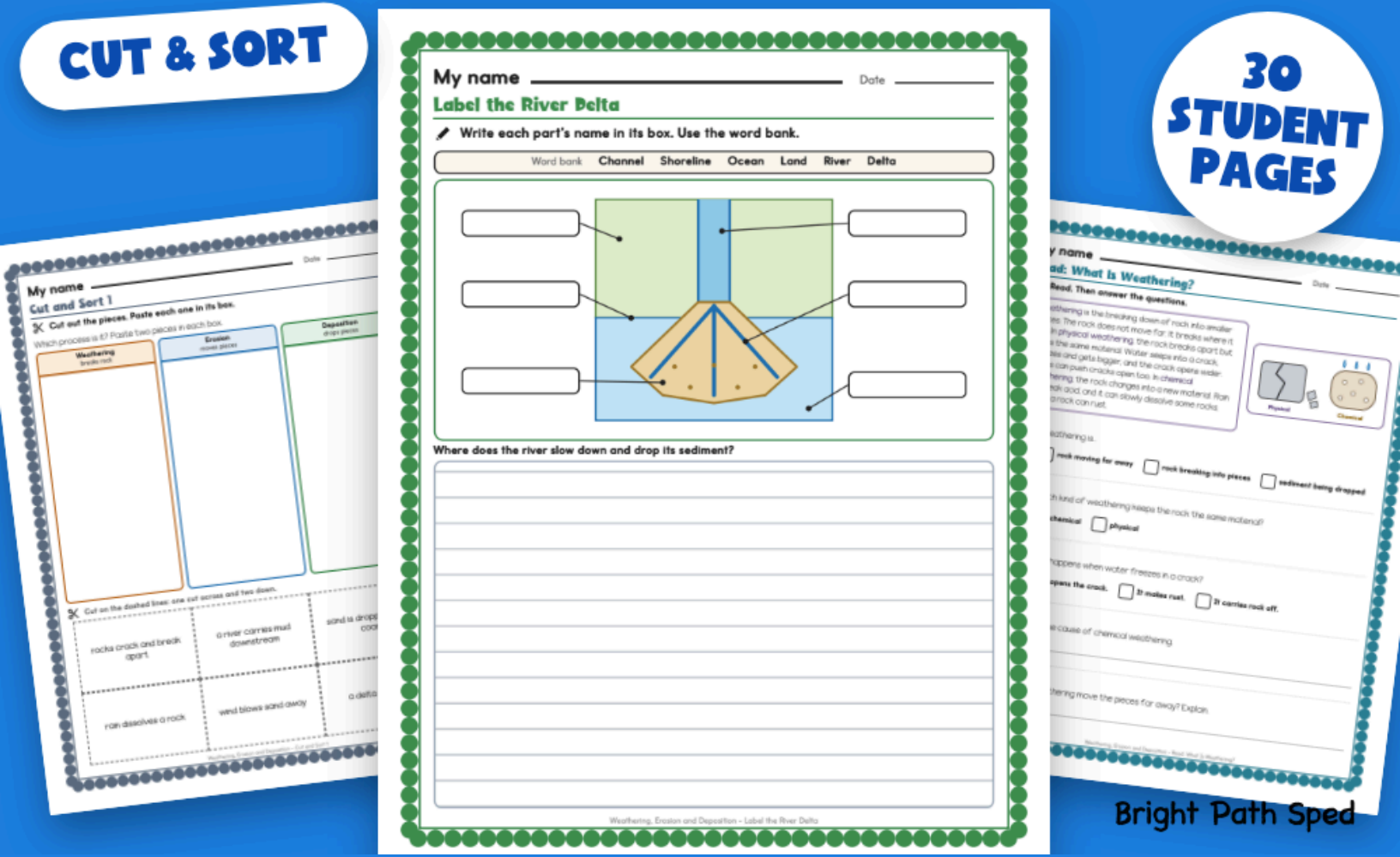
WEATHERING EROSION AND DEPOSITION

SORT, READING, DIAGRAM - GRADES 5-7

CUT & SORT

30 STUDENT PAGES



Bright Path Sped

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This is a fillable PDF

- Open it in a PDF reader (Adobe Acrobat Reader, Preview, or your browser), click into a line or a box, type, and Save As.
- Every name line, answer box, check box and ruled box on the student pages is a type-in field, and so are the tracker and the other record pages. You can also print any page and write by hand. Print the rate page to plot the points in pencil.
- It works offline, with no account needed.

Print at 100 percent

Turn off fit to page and shrink to fit so the ruled lines stay 0.34 inch apart. Weathering is orange, erosion is blue and deposition is green, and every box also carries the words, so a black and white copy reads too.

Student work

A filled-in tracker, class grid or team note carries a real student's name. Keep it in the data folder.

Need help?

If a field will not behave or a page will not print the way you expect, use Ask a Question on the product page before leaving a review. A fix to the file ships as a free update from My Purchases.

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PREVIEW

Teacher Notes

The parts of a student page, the page types in order, and a few teaching notes.

The parts of a page

- **The color code.** Weathering is orange, erosion is blue and deposition is green on the reference pages, the sort mats and the keys.
- **The answer box.** A bordered box. Click it to type, or print and write in it. On a label page each box joins its part with a line.
- **The check box.** Weathering, erosion or deposition; true or false; yes or no; and the quiz choices.
- **The ruled work box.** Lines 0.34 inch apart, one idea to a line.
- **The cut lines.** Mats 1 and 3: 6 pieces in 3 across by 2 down, each 2.4 by 1.46 inches. Mat 2: 10 pieces, 5 across by 2 down, each 1.46 by 1.15 inches. Edge to edge.

Page type	What it looks like	What the student does
The Three Processes; Causes and Landforms; Earth Words	3 pages, 6 items	A process strip, a canyon and a delta, tables, a glacier valley, then six words to match.
Read: five short readings	5 pages, 25 items	Weathering, erosion by water, erosion by wind, ice and gravity, deposition.
Worked Example	1 page, 3 items	Four steps on a delta, then a Your Turn.
Which Process? 1 and 2	2 pages, 16 items	Everyday examples, then short clues.
Label four landforms; Name the Landform	5 pages, 29 items	Type each part's name in a box joined to the part; then match five clues to five landforms.
Cause and Effect 1 and 2; Compare	3 pages, 14 items	Cause to effect and back, then physical and chemical weathering side by side.
Rate table; Read the Graph	2 pages, 11 items	Invented measurements of a stream bank, a graph grid and a finished graph.
Fix It; Claim, Evidence, Reasoning 1 and 2	3 pages, 18 items	True or false with a rewrite; four short scenarios with invented numbers.
Quiz; Short Answer; Exit Tickets	3 pages, 19 items	Ten choices, five written answers and four one-question tickets.

Two steps, marked by a shape

- **Circle.** Which Process? 1 (page 14): everyday examples in a sentence.
- **Triangle.** Which Process? 2 (page 15): short clues, no story to lean on.

Teaching notes

- Say it every day: **weathering breaks it, erosion moves it, deposition drops it.** Then ask what the pieces are doing.
- Students often use erosion for everything. The Which Process pages and the cause-and-effect organizers ask what the rock is doing first.
- The diagrams are simplified on purpose, and real landforms have more parts. Use your own words for the details your class needs.
- All numbers are invented and rounded for practice. No lab procedure is included.

PREVIEW

Preview - Bright Path Sped

My name _____ Date _____

The Three Processes

Read about the three processes. Keep this page next to you.

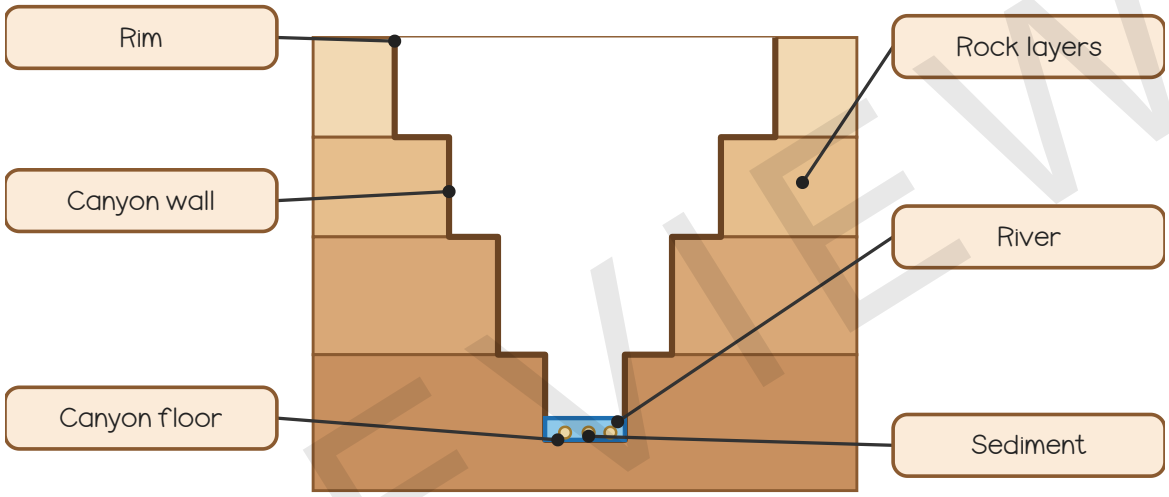
Rock changes in three steps. They happen one after another.

Weathering
Rock breaks into smaller pieces. The pieces stay where they are.

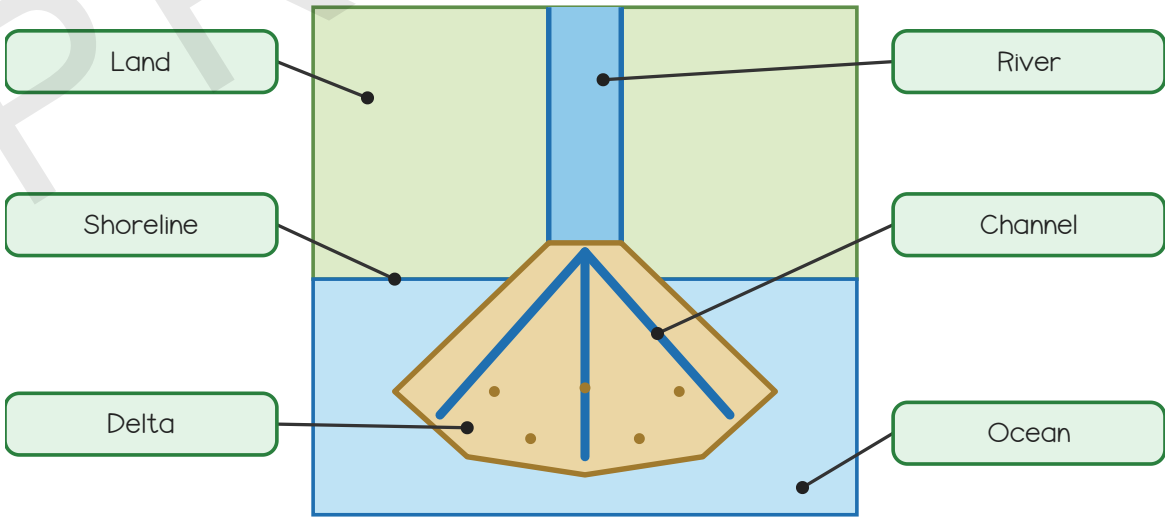
Erosion
Water, wind, ice or gravity moves the pieces to a new place.

Deposition
The moving water, wind or ice slows down and drops the pieces.

Erosion: a river cut this canyon



Deposition: a river built this delta



PREVIEW

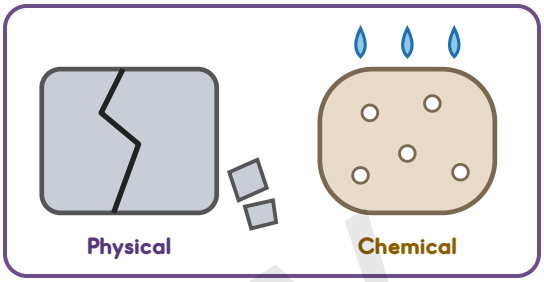
Preview - Bright Path Sped

My name _____ Date _____

Read: What Is Weathering?

Read. Then answer the questions.

Weathering is the breaking down of rock into smaller pieces. The rock does not move far. It breaks where it sits. In physical weathering, the rock breaks apart but stays the same material. Water seeps into a crack, freezes and gets bigger, and the crack opens wider. Roots can push cracks open too. In chemical weathering, the rock changes into a new material. Rain is a weak acid, and it can slowly dissolve some rocks. Iron in a rock can rust.



1. Weathering is...

☐ **rock moving far away** ☐ **rock breaking into pieces** ☐ **sediment being dropped**

2. Which kind of weathering keeps the rock the same material?

☐ **chemical** ☐ **physical**

3. What happens when water freezes in a crack?

☐ **It opens the crack.** ☐ **It makes rust.** ☐ **It carries rock off.**

4. Name one cause of chemical weathering.

_____

5. Does weathering move the pieces far away? Explain.

_____

PREVIEW

Preview - Bright Path Shed

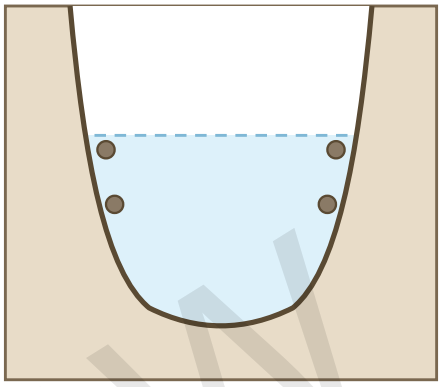
My name _____ Date _____

Read: Ice and Gravity

Read. Then answer the questions.

A glacier is a huge mass of ice that moves very slowly downhill. As it moves, it drags rocks along and scrapes the ground under it. A glacier can turn a narrow, V-shaped river valley into a wide, U-shaped valley. Gravity also causes erosion. It pulls rock and soil downhill, from a slow slide of soil to a fast rockfall. Rocks pulled down by gravity often land in a river or on a glacier and get carried farther.

A glacier valley



1 A glacier is...

☐ **a pile of sand** ☐ **a mass of moving ice** ☐ **a kind of rock**

2 What shape does a glacier carve a valley into?

☐ **a V** ☐ **a U**

3 Gravity pulls rock and soil...

☐ **uphill** ☐ **sideways** ☐ **downhill**

4 How does a glacier change the ground?

_____

5 Name two causes of erosion that you read about.

_____

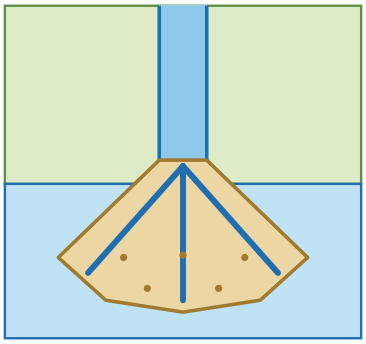
PREVIEW

Preview - Bright Path Sped

My name _____ Date _____

Worked Example

Read how it is done. Then try one.



What we see
- Moving water slowed down.
- The sand and mud stopped.
- They settled in a fan shape.

Step 1 Ask: is the rock breaking? No. The pieces are not breaking. Weathering is out.

Step 2 Ask: are the pieces moving? No. The water slowed down, so the pieces stopped moving. Erosion is out.

Step 3 Ask: are the pieces being dropped? Yes. The sand and mud settled in a new place.

Step 4 Decide. Dropped sediment is **deposition**.

Your turn. Strong wind lifts dry sand off a field and carries it away.

Is the rock breaking? ☐ **yes** ☐ **no**

What are the pieces doing? ☐ **moving** ☐ **stopping**

Which process? ☐ **weathering** ☐ **erosion** ☐ **deposition**

I know because...

PREVIEW

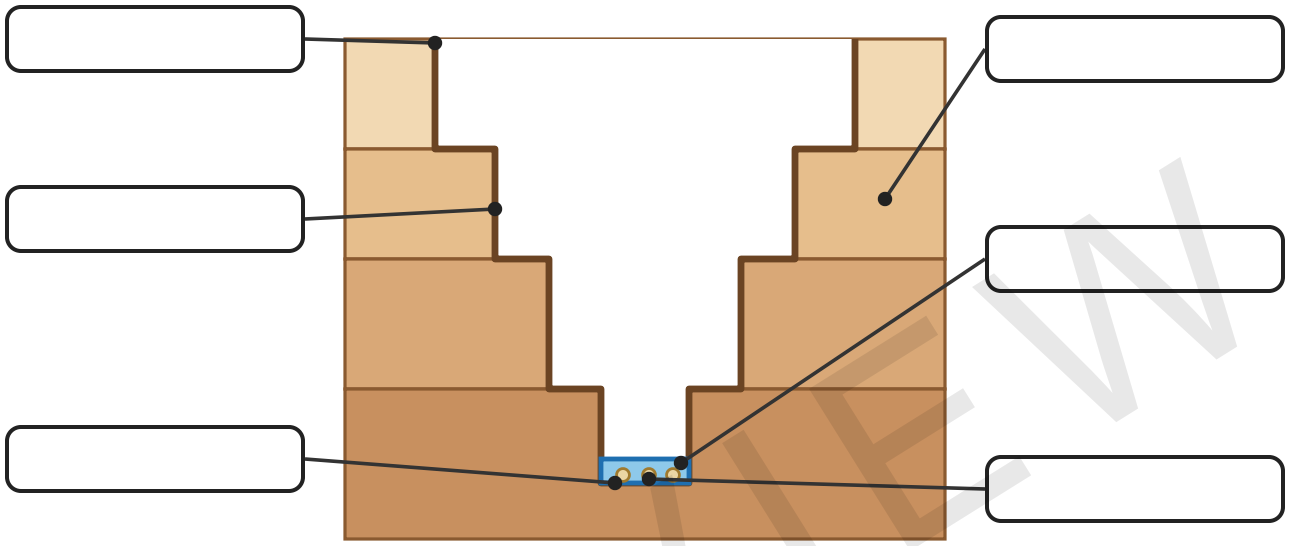
Preview - Bright Path Sped

My name _____ Date _____

Label the Canyon

Write each part's name in its box. Use the word bank.

Word bank **Rock layers** **Rim** **Sediment** **Canyon floor** **River** **Canyon wall**



Where is the river? What did it do to the rock?

PREVIEW

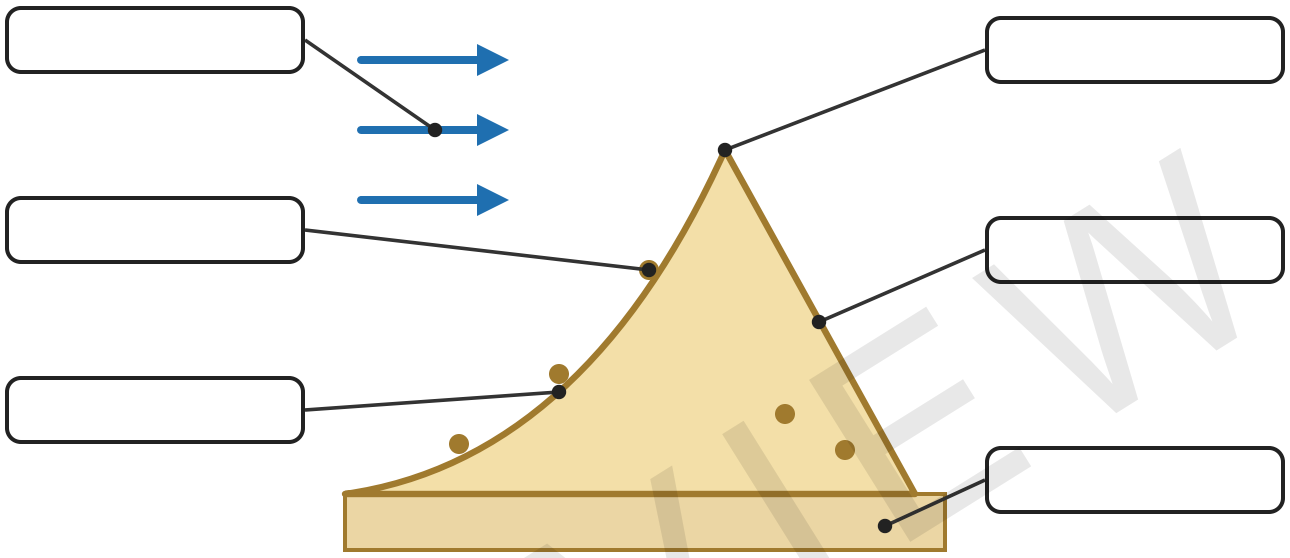
Preview - Bright Path Sped

My name _____ Date _____

Label the Dune

Write each part's name in its box. Use the word bank.

Word bank **Windward slope** **Ground** **Wind** **Slip face** **Sand grains** **Crest**



Which side of the dune is steeper? Which way is the wind blowing?

PREVIEW

My name _____ Date _____

Cause and Effect 1

Read the clue. Write the other part. Check the process.

A cause makes an effect happen. Read the clue, fill in the other half, and check the process.

Cause (given)	Effect (you write)	Process
1 Water freezes inside a crack in a rock.		☐ weathering ☐ erosion ☐ deposition
2 A fast river flows down a steep slope.		☐ weathering ☐ erosion ☐ deposition
3 A river slows down where it enters a lake.		☐ weathering ☐ erosion ☐ deposition
4 Wind blows across loose, dry sand.		☐ weathering ☐ erosion ☐ deposition
5 Acid in rain touches limestone.		☐ weathering ☐ erosion ☐ deposition

PREVIEW

Preview - Bright Path Sped

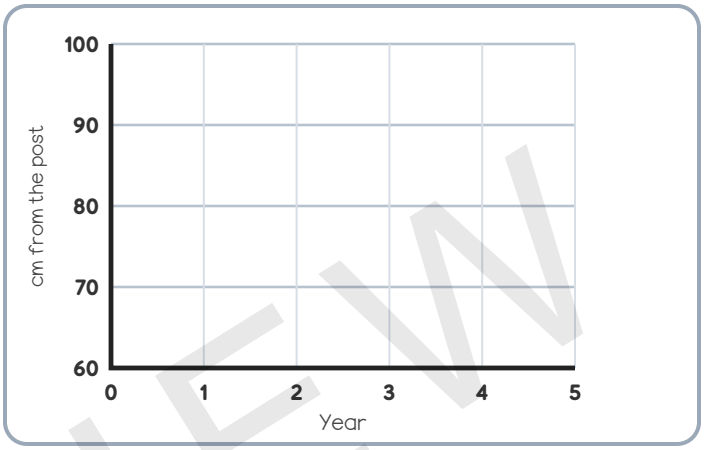
My name _____ Date _____

How Fast? A Rate Table

Read the table. Fill in the boxes.

A fence post stands in a field. The table shows how far the post is from the edge of a stream bank, in cm. The numbers are invented for practice. As the stream erodes the bank, the edge comes closer to the post. Plot the points on the graph if you like.

Year	Site 1 (cm)	Site 2 (cm)
0	100	100
1	97	94
2	94	88
3	91	82
4	88	76
5	85	70



Site 1 lost how many cm in 5 years? ☐

Site 2 lost how many cm in 5 years? ☐

How many cm does Site 1 lose each year? ☐

How many cm does Site 2 lose each year? ☐

Site 2 wears away how many times as fast as Site 1? ☐

If Site 2 keeps going, how far is the bank from the post in Year 6? ☐

Which site has the faster erosion? How do you know?

PREVIEW

Preview - Bright Path Sped

My name _____ Date _____

Claim, Evidence, Reasoning 1

Read the facts. Write your claim, evidence and reasoning.

Two stream banks (invented)

Site 1 lost 15 cm of bank in 5 years. Site 2 lost 30 cm of bank in 5 years. Which site has the faster erosion?

Claim

Evidence: use the facts and numbers

Reasoning: why does the evidence fit the claim?

A pile at the bottom of a slope (invented)

At the bottom of a steep slope, a pile of rock pieces grows. It is 20 cm tall after 1 year and 60 cm tall after 3 years. About how fast does the pile grow?

Claim

Evidence: use the facts and numbers

Reasoning: why does the evidence fit the claim?

PREVIEW

Preview - Bright Ezee Shop

My name _____ Date _____

Quiz

Check the best answer for each one.

1. Rock breaking into smaller pieces where it sits is...

   ☐ **weathering** ☐ **erosion** ☐ **deposition**

2. Moving rock pieces and soil to a new place is...

   ☐ **weathering** ☐ **erosion** ☐ **deposition**

3. Dropping sediment in a new place is...

   ☐ **weathering** ☐ **erosion** ☐ **deposition**

4. Water that freezes in a crack causes...

   ☐ **physical weathering** ☐ **chemical weathering** ☐ **deposition**

5. Rain that slowly dissolves a rock causes...

   ☐ **physical weathering** ☐ **chemical weathering** ☐ **a dune**

6. A fan-shaped landform where a river meets still water is a...

   ☐ **dune** ☐ **canyon** ☐ **delta**

7. Wind-blown sand that piles up makes a...

   ☐ **dune** ☐ **delta** ☐ **canyon**

8. A huge mass of slow-moving ice is a...

   ☐ **delta** ☐ **dune** ☐ **glacier**

9. Which of these can carry sediment away?

   ☐ **moving water** ☐ **a still rock** ☐ **a crack**

10. A river cuts a canyon mostly by...

    ☐ **deposition** ☐ **erosion** ☐ **a delta**

PREVIEW

Preview - Bright Path Shed

My name _____ Date _____

Cut and Sort 1

Cut out the pieces. Paste each one in its box.

Which process is it? Paste two pieces in each box.

Weathering breaks rock	**Erosion** moves pieces	**Deposition** drops pieces

PREVIEW

Cut on the dashed lines: one cut across and two down.

rocks crack and break apart	a river carries mud downstream	sand is dropped at the coast
rain dissolves a rock	wind blows sand away	a delta builds up

Answer Key: Which Process and Sorts 1 and 3

Breaking is weathering, moving is erosion, dropping is deposition. In the sort keys, r1 c1 is the top left piece. Sort 2 is on page 37.

Which Process? 1 page 14

#	Item	Process	A good clue
1	Ice in a crack freezes, and the crack gets bigger.	Weathering	rock breaks where it sits
2	A river carries sand and mud down to the sea.	Erosion	sediment is moving
3	A river slows down and drops sand at its mouth.	Deposition	sediment is dropped
4	Rain slowly dissolves the surface of a limestone rock.	Weathering	the rock is changing and breaking down
5	Wind lifts dry sand and blows it across a field.	Erosion	sediment is moving
6	The wind slows down, and the sand piles up into a dune.	Deposition	sand is dropped
7	Roots grow into a crack and split a rock.	Weathering	rock breaks where it sits
8	A glacier drags rocks across the land.	Erosion	ice moves the pieces

Cut and Sort 1 page 32

Piece	Piece shows	Box
r1 c1	rocks crack and break apart	Weathering
r1 c2	a river carries mud downstream	Erosion
r1 c3	sand is dropped at the coast	Deposition
r2 c1	rain dissolves a rock	Weathering
r2 c2	wind blows sand away	Erosion
r2 c3	a delta builds up	Deposition

Which Process? 2 page 15

#	Item	Process	A good clue
1	Rock breaks into smaller pieces.	Weathering	the rock breaks down
2	Water carries pieces of rock away.	Erosion	pieces are moved
3	Sediment is dropped in a new place.	Deposition	pieces stop
4	A delta forms.	Deposition	a delta is built from dropped sediment
5	The river cuts its canyon floor deeper.	Erosion	the river wears rock away
6	Cracks open in a boulder.	Weathering	the rock breaks where it sits
7	Wind moves sand along the ground.	Erosion	pieces are moved
8	A sand bar builds up in a river.	Deposition	slow water drops sand

Cut and Sort 3 page 34

Piece	Piece shows	Box
r1 c1	a river cuts a canyon	Moving water
r1 c2	a dune moves along	Wind
r1 c3	a glacier scrapes a valley	Ice
r2 c1	waves move sand along a beach	Moving water
r2 c2	blowing sand crosses a desert	Wind
r2 c3	a sheet of ice drags rocks	Ice

PREVIEW

Answer Key: Worked, Compare, Rate, Graph, Sort 2

Every value was computed from the numbers on the student page. Bold words in the first table are what the student types.

Worked example and Your Turn

- Worked example: the pieces are not breaking and not moving, they are dropped, so it is **deposition**.
- Your Turn: no, the rock is not breaking; the pieces are moving; **erosion**.

Compare: Two Kinds of Weathering page 23

Compare	Physical	Chemical
What happens to the rock	breaks into smaller pieces	changes into new material
Is new material made?	no	yes
A cause	water freezing in a crack	acid in rain
An example	roots split a rock	iron in a rock rusts

How Fast? A Rate Table page 24

Question	Answer
Site 1 lost how many cm in 5 years?	15
Site 2 lost how many cm in 5 years?	30
How many cm does Site 1 lose each year?	3
How many cm does Site 2 lose each year?	6
Site 2 wears away how many times as fast as Site 1?	2
If Site 2 keeps going, how far is the bank from the post in Year 6?	64

Read the Graph page 25

Question	Answer
At Year 2, how far is Site 1 from the post (cm)?	94
At Year 4, how far is Site 2 from the post (cm)?	76
In Year 3, how many cm apart are the two sites?	9
Which line goes down faster?	Site 2
How far was each site from the post in Year 0 (cm)?	100

Cut and Sort 2 page 33

Piece	Piece shows	Box
r1 c1	ice splits a rock	Physical weathering
r1 c2	rain dissolves limestone	Chemical weathering
r1 c3	roots crack a rock	Physical weathering
r1 c4	iron in a rock rusts	Chemical weathering
r1 c5	sand scrapes a rock	Physical weathering
r2 c1	acid in rain eats a rock	Chemical weathering
r2 c2	heat and cold crack a rock	Physical weathering
r2 c3	air and water change a mineral	Chemical weathering
r2 c4	rocks bump and break	Physical weathering
r2 c5	moss acid eats a rock	Chemical weathering

PREVIEW

Answer Key: Label the Landforms

Boxes are numbered from the top, left side first, then the right side. The diagrams are simplified on purpose. Accept spelling that is close.

Label the Canyon page 16

Box	Part	Side
1	Rim	left
2	Canyon wall	left
3	Canyon floor	left
4	Rock layers	right
5	River	right
6	Sediment	right

Label the River Delta page 17

Box	Part	Side
1	Land	left
2	Shoreline	left
3	Delta	left
4	River	right
5	Channel	right
6	Ocean	right

Label the Dune page 18

Box	Part	Side
1	Wind	left
2	Sand grains	left
3	Windward slope	left
4	Crest	right
5	Slip face	right
6	Ground	right

Label the Glacier Valley page 19

Box	Part	Side
1	Mountain	left
2	Valley wall	left
3	Bedrock	left
4	Debris	right
5	Glacier	right
6	Valley floor	right

Sample answers to the question on each label page

- **Label the Canyon:** The river is at the bottom of the canyon. It wore away the rock (erosion) and carried the pieces off.
- **Label the River Delta:** At the shoreline, where the river meets the ocean. The dropped sediment builds the delta (deposition).
- **Label the Dune:** The slip face is steeper. The wind blows from left to right, from the gentle slope toward the slip face.
- **Label the Glacier Valley:** It scraped the valley into a wide U shape and left debris along the sides.

PREVIEW

Earth Science Tracker

One student, every scored page. Filled example: page 46.

Student _____ Teacher _____ Month _____

Page	Page type and set	Items	Right	Date	Notes
7	Earth Words	6			
8	Read: What Is Weathering?	5			
9	Read: Erosion by Water	5			
10	Read: Erosion by Wind	5			
11	Read: Ice and Gravity	5			
12	Read: What Is Deposition?	5			
13	Worked Example	3			
14	Which Process? 1	8			
15	Which Process? 2	8			
16	Label the Canyon	6			
17	Label the River Delta	6			
18	Label the Dune	6			
19	Label the Glacier Valley	6			
20	Name the Landform	5			
21	Cause and Effect 1	5			
22	Cause and Effect 2	5			
23	Compare: Two Kinds of Weathering	4			
24	How Fast? A Rate Table	6			
25	Read the Graph	5			
26	Fix It	6			
27	Claim, Evidence, Reasoning 1	6			
28	Claim, Evidence, Reasoning 2	6			
29	Quiz	10			
30	Short Answer	5			
31	Exit Tickets	4			
32	Cut and Sort 1	6			
33	Cut and Sort 2	10			
34	Cut and Sort 3	6			

How to fill this in

Write how many items the student got right with no prompt, and the date. A blank means not tried yet, never wrong. There are 163 items on the 28 scored pages. Answer keys: pages 35 to 41. Filled example: page 46.

This month we are working on (your own standard or wording)

PREVIEW

Earth Science at Home

Dear family, this week we are learning how rock is broken down, moved and dropped. These questions are for talking, not for a grade. Short answers are fine.

Student _____ Week of _____

Three things to talk about

- Ask your student to name the three processes. A hint: one breaks rock, one moves the pieces and one drops them.
- Ask: "What happens when a river slows down?" It drops the sand and mud it was carrying. Over time that can build a delta.
- Ask what carries sediment: moving water, wind, ice and gravity.

My words from home

A landform I can name _____

How erosion and deposition differ _____

A question I still have _____

Words that may come up

Weathering: rock breaking into pieces where it sits. **Erosion:** moving the pieces. **Deposition:** dropping the pieces in a new place. **Sediment:** small pieces of rock, sand and mud. **Delta:** land built where a river drops sediment. **Glacier:** a huge, slow mass of ice.

Note from the teacher

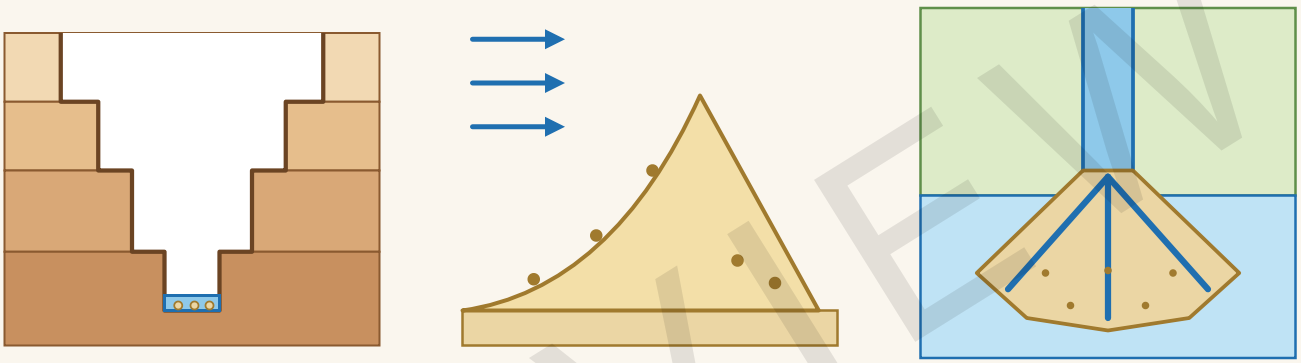
Note from home

PREVIEW

Binder Cover

Slide this into the front of a binder. The divider tabs and a spine label to cut out are on the next page (page 49).

Science - Earth Science



WEATHERING, EROSION AND DEPOSITION

Sort, Read, Diagram

Learn | **Practice** | **Check**

Teacher _____ Class or student _____

PREVIEW