

ROCK CYCLE (6-10 YEAR OLDS)

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IMML

OBJECTIVE: GEO-WORKSHOP STUDENTS WILL BE ABLE TO IDENTIFY THE PROCESSES THE EARTH USES TO RECYCLE OLDER ROCKS INTO NEW ROCKS. THE THREE MAJOR ROCK GROUPS WILL BE EXAMINED TO SEE HOW THEY ARE RELATED TO EACH OTHER THROUGH THE USE OF ACTIVITIES IN THE MUSEUM AND ROCK SAMPLING ON THE HILLSIDE OUTSIDE THE MUSEUM.

I. EROSION

ACTIVITY: DO ROCKS LAST FOREVER?

II SEDIMENTARY ROCKS

ACTIVITY 1: SEDIMENTARY LAYERING

ACTIVITY 2: ROCK COLLECTION OUTSIDE

ACTIVITY 3: MICROSCOPE: GRAIN SIZE + SHAPE

III IGNEOUS ROCKS

ACTIVITY: MICROSCOPE: COMPOSITION + TEXTURE

IV METAMORPHIC ROCKS

ACTIVITY 1: METAMORPHOSE SOFT CANDY

UNDER HEAT + PRESSURE

ACTIVITY 2: MICROSCOPE: FOLIATED VS. NON-FOLIATED

V ROCK CYCLE DIAGRAM

ACTIVITY 1: SCAVANGER HUNT IN MUSEUM FOR ROCKS ON DISPLAY

ACTIVITY 2: ROCK BINGO

ACTIVITY 3: A FEW MILLION YEARS IN THE LIFE OF A ROCK

Do Rocks Last Forever?

Huge boulders and towering cliffs look as though they have been the same forever, but all rocks change because of *erosion*. Erosion is the gradual weathering and breaking up of rock into smaller and smaller pieces. Over millions of years, a granite block you see today will be broken into tiny pieces, or *particles*, by the action of wind, water, and ice.

Here's how rocks change:

- Natural sandblasting occurs as the wind blows rock particles against desert cliffs.

- Temperature changes make rocks expand, contract, and shatter.
- Chemicals, from the weak acid in rainwater to air pollution, dissolve rock.
- Swiftly flowing streams wear down rocks and pebbles as they tumble together.
- Even plant roots can split a rock by growing into cracks in its surface.

See how this boulder is "broken up" as you circle the hidden words. (Some words are on the diagonal.)

EROSION

WIND

WEATHER

WAVES

WATER

GLACIER

ICE

FREEZING

THAWING

CRACK

BROKEN

F	R	A	G	M	E	N	T	H	G	R	A	V	E	L
R	R	S	O	A	V	P	U	C	M	I	N	G	R	O
P	Y	E	P	G	S	A	N	D	E	V	R	L	Q	S
A	V	D	E	S	O	U	I	T	N	E	B	A	U	E
R	A	I	N	Z	B	L	A	L	H	R	O	C	N	S
T	A	M	E	N	I	W	A	T	E	R	G	I	C	E
I	F	E	R	O	S	N	A	O	V	Y	L	E	R	T
C	I	N	S	M	E	E	G	O	P	O	E	R	O	A
L	E	T	H	A	W	I	N	G	R	C	R	A	C	K
E	G	R	A	V	I	H	E	A	X	I	O	M	K	L
S	N	I	D	O	N	U	C	O	Q	U	S	P	O	E
W	A	V	E	S	D	K	U	C	E	Z	I	N	G	N
J	E	E	I	B	R	O	K	E	N	R	O	O	T	S
Y	C	U	E	L	A	Q	U	A	I	E	N	A	R	I
P	O	L	L	U	T	I	O	N	T	R	I	C	K	C

PARTICLES

FRAGMENT

GRAVEL

POLLUTION

SEDIMENT

SAND

OCEAN

RIVER

RAIN

ROOTS

