

Rock Cycle Routes

Track how Earth materials change and move.

MS-ESS2-1 "Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process. Clarification Statement: Emphasis is on the processes of melting, crystallization, weathering, deformation, and sedimentation..."

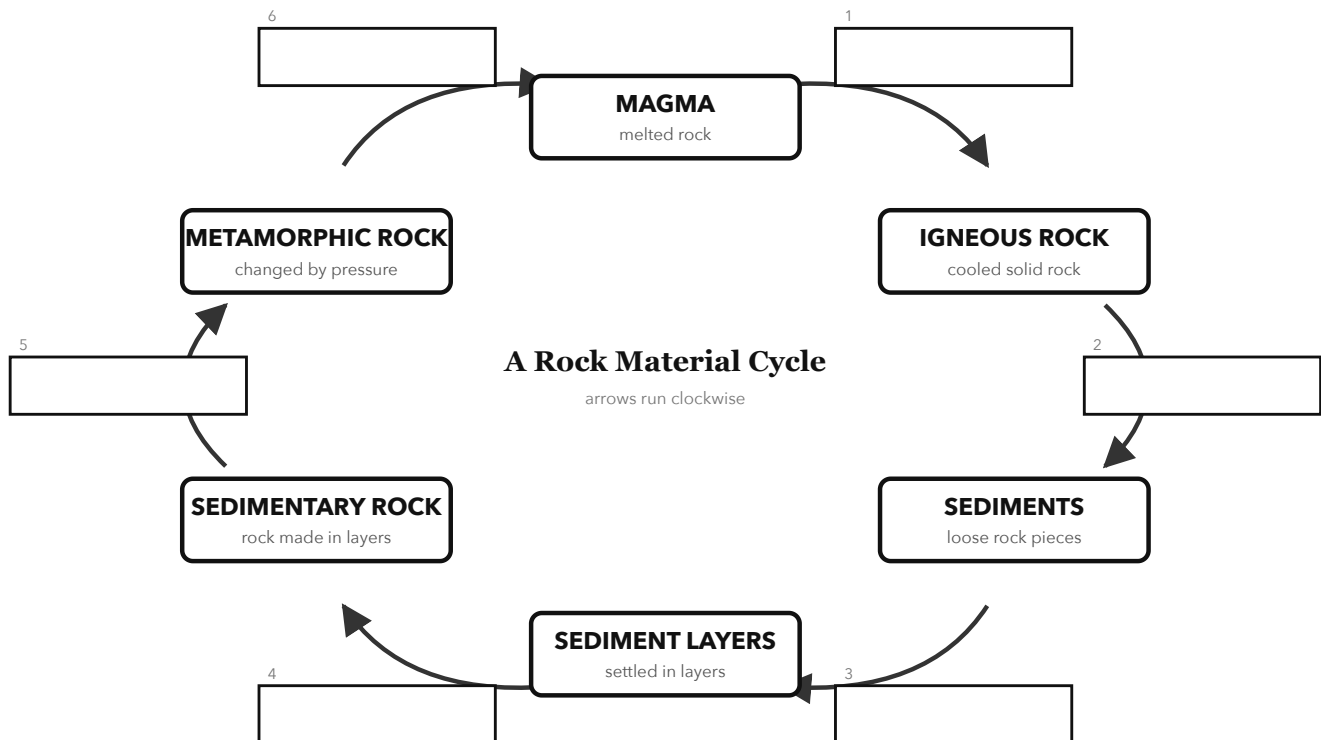
NAME _____

DATE _____

1 LABEL THE MODEL _____ Word bank below

Use each word-bank process once. Write one process in each numbered box to show how materials move or change.

WORD BANK		
Compaction and cementation	Crystallization	Heat, pressure, deformation
Melting	Sedimentation	Weathering



2 RUN THE MODEL Use your finished diagram

1 Which process changes MAGMA into IGNEOUS ROCK?

2 What stage comes immediately after SEDIMENT LAYERS?

3 Starting at SEDIMENTARY ROCK, which two processes take the material to MAGMA?

3 CHECK IT Before you turn it in

☐ I used each process once.

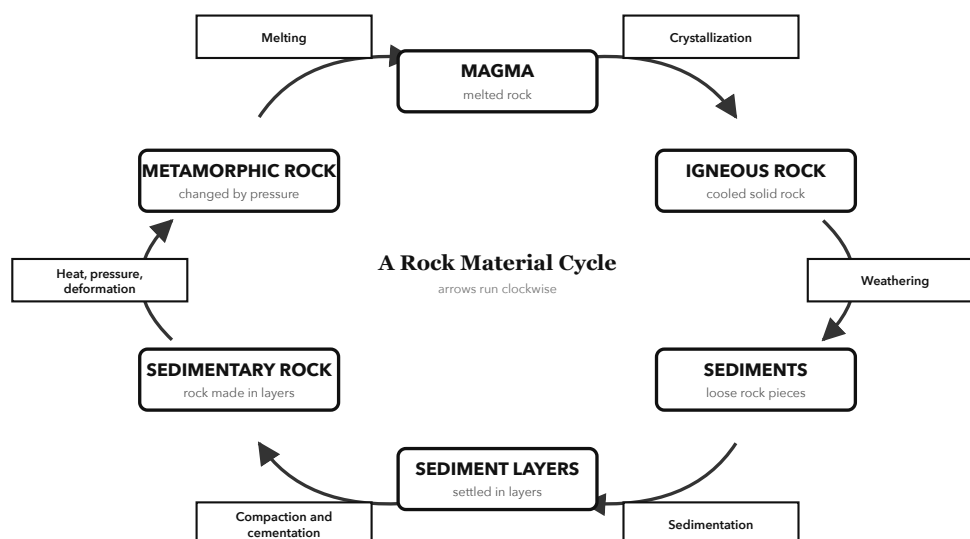
☐ I followed every arrow.

☐ I can trace the full cycle.

TEST THE MODEL

What is one way this model leaves out part of the real rock cycle?

PART 1 • COMPLETED MODEL



PART 2 • RUN THE MODEL

1. **Crystallization.** (Which process changes MAGMA into IGNEOUS ROCK?)
2. **SEDIMENTARY ROCK.** (What stage comes immediately after SEDIMENT LAYERS?)
3. **Heat, pressure, deformation, then melting.** (Starting at SEDIMENTARY ROCK, which two processes take the material to MAGMA?)

TEST THE MODEL (SAMPLE ANSWERS)

- It leaves out erosion that moves sediments to a new place.
- It leaves out that metamorphic rock can weather into sediments.

Accept the listed word-bank processes in the shown arrow order. This model shows one main rock-cycle pathway, although real Earth materials can follow other pathways.