

TYPES OF ROCKS MOVIE TRANSCRIPT

Text reads: The Mysteries of Life with Tim and Moby

A robot, Moby, is juggling rocks of different types. A boy, Tim, reads from a typed letter.

TIM: Dear Tim and Moby, what are the different types of rocks? From, Sandy.

TIM: Rocks are split into **three basic types: igneous, metamorphic, and sedimentary.**

*Moby holds up a sign that reads, **Igneous Rock.***

An animation shows an erupting volcano.

TIM: Uh, magma is molten material from deep inside the Earth that comes to the surface through volcanoes.

An animation shows lava cooling and darkening.

TIM: You may know it as lava. That is what it's called when it's above ground. Igneous rocks form when this molten material cools.

An image shows a volcano going dormant.

TIM: Not all of the magma makes it out of the volcano. The rocks that form when trapped magma cools are called intrusive igneous rocks.

Tim holds up an intrusive igneous rock.

TIM: See those big crystals? Trapped magma takes longer to cool than magma that reaches the surface. This gives the atoms time to arrange into big crystals called mineral grains.

An image shows a close-up of the mineral grains.

TIM: Extrusive igneous rocks form from the lava that flows out of volcanoes or from magma found very near the earth's surface

Tim holds up an extrusive igneous rock.

TIM: Lava cools pretty quickly when it gets near the Earth's surface, so extrusive rocks have much smaller mineral grains than intrusive rocks.

An image shows a close-up for an intrusive rock's small mineral grains.

*Moby clicks his heels together. Tim & Moby are transported to an underground cave. Moby holds a sign that reads, **Metamorphic Rock.***

TIM: Sure, is hot down here.

Moby holds up a rock.

TIM: Hey, that is a metamorphic rock. The rocks below the earth's surface are under a lot of pressure from the rock layers above. Enough heat and pressure will turn those rocks back into molten magma. But if it does not get quite hot enough for the rocks to melt, the rocks will be cooked and smooshed into a new type of rock.

Animations and graphics illustrate rocks heating up and moving as in Tim's description.

TIM: Metamorphic rocks have mineral grains that are flattened and aligned.

An image shows mineral grains in metamorphic rocks.

Moby clicks his heels together.

TIM: An igneous rock can be transformed into a metamorphic rock when enough heat and pressure are applied. So, can a sedimentary.

Tim trails off because he and Moby are suddenly at a beach.

TIM: OK, how would we get here?

*Moby holds up a sign that reads, **Sedimentary Rock** and points at a large rock formation behind them.*

TIM: Oh, those are sedimentary rocks! They are made from bits of eroded rock, mineral grains, and plant and animal remains that have been pressed together over time.

Animation of layers of rock getting compressed as Tim describes the process.

Tim holds up a sedimentary rock.

TIM: Lots of times, sedimentary rocks form from the remains of other rocks. The layers are important because the oldest rock is at the bottom.

An image shows rock layers.

MOBY: Beep.

TIM: True, if you were to dig in and upset the layers, some old rock pieces might be overturned and move to the surface.

Moby moves to the rock formation behind them and scrapes something against it.

TIM: What are you doing?

Moby steps back. He has carved an image of his own face into the rock.

TIM: Um, we better get going.

Moby clicks his heels together and disappears, leaving Tim alone.

TIM: Moby?