# Rock Cycle Worksheet Questions and Answers PDF

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## Part 1: Building a Foundation

**What type of rock is formed from the solidification of molten magma?**

*Hint: Think about the different types of rocks and their formation processes.*

- ◯ Sedimentary
- ◯ Metamorphic
- ◯ **Igneous ✓**
- ◯ Sediment

> Igneous rocks are formed from the solidification of molten magma.

**Which of the following are examples of sedimentary rocks?**

*Hint: Consider the types of rocks formed through sedimentation.*

- ☐ **Limestone ✓**
- ☐ Granite
- ☐ **Sandstone ✓**
- ☐ Basalt

> Limestone and sandstone are examples of sedimentary rocks.

**Define the rock cycle in your own words.**

*Hint: Think about the processes that rocks undergo over time.*

**The rock cycle describes the continuous process of rock formation, breakdown, and transformation.**

**List two processes involved in the formation of metamorphic rocks.**

*Hint: Consider the conditions that lead to metamorphism.*

1. Process 1

Heat

2. Process 2

Pressure

Processes include heat and pressure.

**Which process involves the breakdown of rocks into smaller particles by natural forces?**

*Hint: Think about the forces of nature that affect rocks.*

- ◯ Melting
- ◯ **Weather and Erosion ✓**
- ◯ Compaction
- ◯ Uplift

Weather and erosion are processes that break down rocks.

## Part 2: Application and Analysis

**Identify the processes that lead to the formation of sedimentary rocks.**

*Hint: Consider how sediments are formed and compact.*

- [ ] Cooling and Solidification
- [ ] **Compaction and Cementation ✓**
- [ ] Melting
- [ ] Weather and Erosion

> Compaction and cementation are key processes in forming sedimentary rocks.

**Explain how igneous rocks can transform into sedimentary rocks.**

*Hint: Think about the processes that involve weather and erosion.*

> **Igneous rocks can break down into sediments through weather and erosion, which can then form sedimentary rocks.**

**If a rock is exposed to high heat and pressure but does not melt, what type of rock is it likely to become?**

*Hint: Consider the effects of heat and pressure on rocks.*

- ◯ Igneous
- ◯ Sedimentary
- ◯ **Metamorphic ✓**
- ◯ magma

> It is likely to become a metamorphic rock.

**Which of the following scenarios can lead to the formation of igneous rocks?**

*Hint: Think about volcanic activity and magma.*

- [x] **A volcanic eruption ✓**
- [ ] Sediments accumulating in a riverbed
- [x] **magma cooling beneath the Earth's surface ✓**
- [ ] Rocks being buried and exposed to pressure

> Volcanic eruptions and magma cooling can lead to the formation of igneous rocks.

**Compare and contrast the processes of compaction and cementation in the formation of sedimentary rocks.**

*Hint: Think about how sediments are transformed into solid rock.*

> **Compaction involves the squeezing of sediments, while cementation involves the binding of sediments together.**

## Part 3: Evaluation and Creation

**Which rock type would you expect to find at the site of an ancient volcanic eruption?**

*Hint: Consider the types of rocks formed from volcanic activity.*

- ○ Sedimentary
- ○ Metamorphic
- ○ **Igneous ✓**
- ○ None of the above

> You would expect to find igneous rocks at the site of an ancient volcanic eruption.

**Evaluate the following statements and select those that accurately describe the rock cycle.**

*Hint: Consider the nature of the rock cycle and its processes.*

- [ ] It is a linear process.
- [ ] **Rocks can transform from one type to another in multiple ways. ✓**
- [ ] It involves only igneous and sedimentary rocks.
- [ ] **It is a continuous and dynamic process. ✓**

> The rock cycle is a continuous and dynamic process where rocks can transform in multiple ways.

**Propose a creative way to demonstrate the rock cycle in a classroom setting, using everyday materials.**

*Hint: Think about hands-on activities that illustrate rock formation processes.*

> **A creative demonstration could involve using sand, water, and heat to simulate rock formation.**