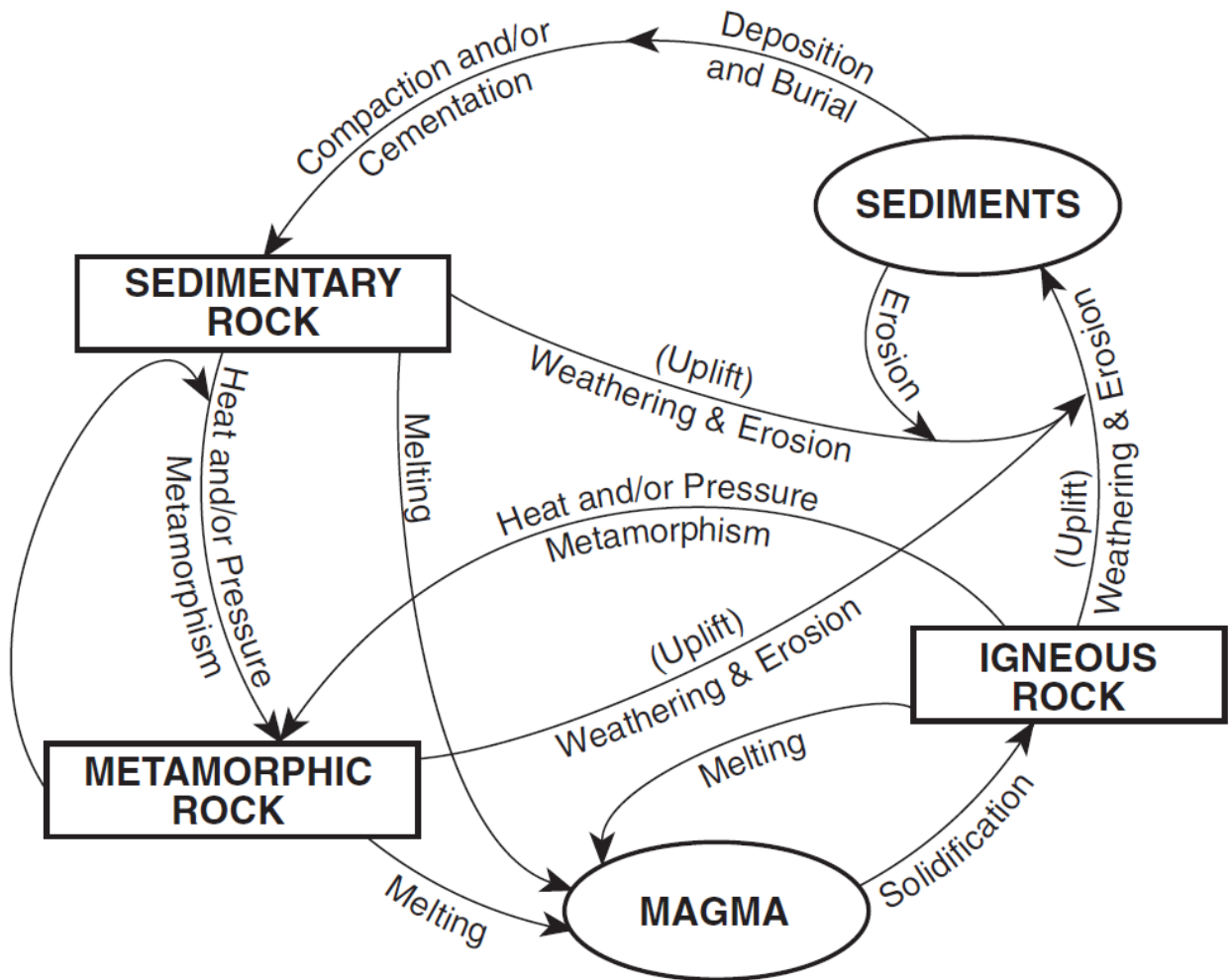


Name: _____ Date: _____ Period: _____

Rock Cycle Diagram

The Rock Cycle diagram below is an easy-to-read model of how rocks can change over time.



Directions: Use the diagram above to answer the questions below.

1. What are the three classes of rocks?
2. Follow the arrow from sedimentary rock to metamorphic rock. What process is necessary to change a sedimentary rock to a metamorphic rock

3. Follow the arrow from sediments to sedimentary rock. How do sediments become sedimentary rock?
4. How is magma formed?
5. How does magma become igneous rock?
6. How does igneous rock become metamorphic rock?
7. How does a metamorphic rock become an igneous rock?
8. How are sediments formed?
9. Which process *cannot* happen?
 - a. Igneous rock → heat and or pressure → metamorphic rock
 - b. Igneous rock → weathering and erosion → burial → deposition → cementation → sedimentary rock
 - c. Metamorphic rock → melting → solidification → igneous rock
 - d. Sedimentary rock → melting → solidification → metamorphic rock
10. Can an igneous rock become another igneous rock? If so, how?
11. A sedimentary rock can become an igneous rock by melting and solidification. According to the diagram, what's one other, more indirect, way a sedimentary rock become an igneous rock
12. According to the Rock Cycle diagram, how long does it take for an igneous rock to become a metamorphic rock?

ANSWER KEY

1. What are the three classes of rocks?
Sedimentary, Igneous, and Metamorphic
2. Follow the arrow from sedimentary rock to metamorphic rock. What process is necessary to change a sedimentary rock to a metamorphic rock
Heat and/or pressure
3. Follow the arrow from sediments to sedimentary rock. How do sediments become sedimentary rock?
Deposition, burial, compaction, and cementation
4. How is magma formed?
From melting rock
5. How does magma become igneous rock?
From solidification
6. How does igneous rock become metamorphic rock?
Heat and/or pressure
7. How does a metamorphic rock become an igneous rock?
Melting to magma, then solidification
8. How are sediments formed?
Uplift, weathering, and erosion
9. Which process *cannot* happen?
 - a. Igneous rock → heat and or pressure → metamorphic rock
 - b. Igneous rock → weathering and erosion → deposition → burial, compaction → deposition → cementation → sedimentary rock
 - c. Metamorphic rock → melting → solidification → igneous rock
 - d. **Sedimentary rock → melting → solidification → metamorphic rock**
10. Can an igneous rock become another igneous rock? If so, how?
Yes, by melting again and then solidification.
11. A sedimentary rock can become an igneous rock by melting and solidification. According to the diagram, what's one other, more indirect, way a sedimentary rock become an igneous rock
By becoming a metamorphic rock first.
12. According to the Rock Cycle diagram, how long does it take for an igneous rock to become a metamorphic rock?
Trick Question! The Rock Cycle diagram does not give that information.