

# Depositional Environments Lab

Name \_\_\_\_\_

## **Limestone**

1. Which of these places might limestone form? (Select all that apply)
- a) Fast-moving river
  - b) a coral reef
  - c) Shallow ocean water
  - d) deep ocean water

## **Sandstone**

2. What are some places where sandstone would form? Name 3 specific watery environments and 1 land environment where sandstone could form.

Watery a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

Land d. \_\_\_\_\_

## **Conglomerate and Breccia**

3. Explain which type of rock (Conglomerate or Breccia) may have formed in each of these environments, and how it formed:

a) in a glacial environment \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

b) In a fast-moving river \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

c) Volcanic area \_\_\_\_\_

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\_\_\_\_\_

## Coal

Which of these environments would be a better place for coal to form? Explain.

4. Swamps or forests? (may need to look up what a swamp is)

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5. Wetlands or grasslands?

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## Evaporite Deposits

7. Explain how plate tectonics might contribute to large salt deposits in the future for the Mediterranean area.

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8. If you found salt deposits in an area, what would you know about what that area was like in the past?

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## Glacial Till

9. If you found a rock that looked like glacial till, what would you know about the area when it formed?

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## Ripple Marks

10. What types of environments would create ripple marks?

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## Mud cracks

11. What areas would be common places to find mud cracks? In what climate would you expect to find mud cracks? Why?

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## Fossils

12. Make a Chart in your answers and tell what the fossil is in column 1, and what this fossil would tell us about the depositional environment in column 2.

## Grain Size

13. Which of these rocks would have probably been formed in the bottom of a lake? How about the edge of a river?

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**Angular vs. Rounded grains**

14. Was this rock more likely formed in water or in a dry environment?

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**Faulting and Folding**

15. Where would we find lots of folding and faulting in rocks? What would these folds and faults tell us about what's going on in that area in the past?

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**Igneous rock**

16. Which of these rocks probably formed by cooling inside the earth?

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17. Which of them indicate that a volcano may have been there? Explain.

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**Fossil size and O<sub>2</sub>**

18. The fossils in front of you, which look like rice grains, are called foraminifera. They are marine organisms that float about in the ocean, making up a basis for much of the food chain.

Today, they are microscopic. What does their size tell you about when these organisms were alive?

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### **Rusting**

19. What can these rocks tell us about the depositional environment?

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20. These 2 rocks had the exact same chemical composition, but one of them underwent rusting. The rusted one was formed about 1 billion years ago, while the other one is far older. What do these rocks tell us about the atmosphere when the rusted rock formed versus when the other rock formed? What could have contributed to this change in the atmosphere?

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Types of Depositional Environments- Do a short internet search and define these.

Continental\_\_\_\_\_

Alluvial an aquatic - \_\_\_\_\_

Aeolian-\_\_\_\_\_

Fluvial-\_\_\_\_\_

Lacustrine-\_\_\_\_\_

Transitional-\_\_\_\_\_

Deltaic-\_\_\_\_\_

Tidal-\_\_\_\_\_

Lagoonal-\_\_\_\_\_

Beach-\_\_\_\_\_

Lake-\_\_\_\_\_

Marine-\_\_\_\_\_

Shallow water marine environment\_\_\_\_\_

Deep water marine environment\_\_\_\_\_

Reef-\_\_\_\_\_

Others

Evaporite-\_\_\_\_\_

Glacial-\_\_\_\_\_

Volcanic-\_\_\_\_\_

<b>Fossil Type</b>	<b>Depositional Environment</b>