

**ANSWER KEY**  
**Sedimentary Structures & Environments**  
**(green tray)**

Answer the following questions by observing the eight sedimentary rock samples on the green tray.

1. Are there any sedimentary structures present in this sample? If so, name it/them.

Ripple marks

Was this sample deposited in an oxygen-rich (oxic) or oxygen-poor (anoxic) environment?

Oxygen-rich (oxic)

Name this sedimentary rock.

Mudstone

2. Are there any sedimentary structures present in this sample? If so, name it/them.

Mudcracks

In what sedimentary environment was this sample likely deposited?

Tidal flat / peritidal

Lagoon

Name this sedimentary rock.

Micrite

3. Are there any sedimentary structures present in this sample? If so, name it/them.

No

In what sedimentary environment was this sample likely deposited?

Offshore shelf, relatively clear water, relatively low-nutrient, normal marine salinity, out beyond the shales: carbonate shelf

Name this sedimentary rock.

Fossiliferous limestone

4. Are there any sedimentary structures present in this sample? If so, name it/them. (Look closely at both the smooth, cut surface and the uncut surface with a hand lens.)

Graded beds

Was this sample deposited in an oxygen-rich (oxic) or oxygen-poor (anoxic) environment?

Oxygen-poor (anoxic)

In what sedimentary environment was this sample likely deposited?

Deep water

Continental slope

Name this sedimentary rock.

Graywacke

5. Are there any sedimentary structures present in this sample? If so, name it/them.

No

In what sedimentary environment was this sample likely deposited?

Peritidal environment

Name this sedimentary rock.

Intraclastic limestone or intramicrite (those are rip-up clasts)

Tempestite

6. Are there any sedimentary structures present in this sample? If so, name it/them.

None

In what sedimentary environment was this sample likely deposited?

Stream channel / fluvial, alluvial fan

Name this sedimentary rock.

Conglomerate

7. Are there any sedimentary structures present in this sample? If so, name it/them.

No

In what sedimentary environment was this sample likely deposited?

A building site, but you could be forgiven for thinking it was deposited in a mass wasting site, a slope where weathered rock accumulates, or a stream channel close to an outcrop.

Name this sedimentary rock.

Urbanite, but you could be forgiven for thinking it's breccia.

8. Are there any sedimentary structures present in this sample? If so, name it/them.

No

In what sedimentary environment was this sample likely deposited?

River floodplain

Name this sedimentary rock.

Fine sandstone