

5.1

MODELING SEDIMENTARY BASINS

How are sediments distributed relative to their proximity to their source site?

MATERIALS

- Sediment tube (small Winogradsky column or plastic water bottle)
- Washed gravel (small)
- Sand
- Soil
- Diatomaceous Earth Powder (clay)
- Water
- Tea spoon
- Rock samples 13B, 15B, 18B, and 21B

DIRECTIONS

1. Plug one end of the sediment tube with the end cap (not required for water bottle).
Adjust the following amounts to scale for larger containers.
2. Create your own sedimentary mixture or use the following amounts:
 - 1 teaspoon of gravel
 - 2 teaspoons of sand
 - 2 teaspoons of soil
 - 2 teaspoons of clay
3. Add water until $\frac{3}{4}$ full.
4. Place the second end cap on the tube and shake vigorously for 5 seconds then quickly tip it on its side to lay flat on the surface of the table.
5. Draw the sedimentary basin demonstrated in your tube below.



REFLECTION

1. Refer to rock samples 13B, 15B, 18B, and 21B. Place these in order relative to the depositional environment where you would have expected these to form in the sediment tube.
2. Describe the changes you observe in grain size as you move from the source region (above water) to the deep water depositional environment.