Name:_____ Date: _____ Bell: _____

Lab: Erosion and Deposition

Question: How does erosion and deposition change how a stream is shaped over time?

Materials:

- 1 stream table with an electric pump (you can make your own here for less than $50)
- 2-3 kg of fine grain sand
- 3-4 gallons of water
- 5-gallon bucket
- Food coloring of your choice

Procedure:

1. Put the sand in your stream table so that two-thirds of one end of the table is nearly full of sand. That should leave some space without sand on the end of the table with the drain.
2. Create a small curving channel down the middle of the sand about 5 cm deep. **Don't make your channel too curvy.**

Observation:

Make a sketch of your stream thus far.

3. Prop up the sand filled end of your stream table by placing some textbooks underneath (about 5 to 10 cm will do).
4. Set up your reservoir by filling your 5-gallon bucket up most of the way. Place your water pump and drain hose in the bucket and secure your pump hose at the top of the stream table so that the water flows through the channel you created.
5. Turn your pump on and watch the water as it flows through the sand. After a few minutes, put a couple of drops of food coloring at the top of the stream.

Observation:
Is there a pattern to how the food coloring moves as it moves down the stream? What do you think that means for fast the water in the stream is moving?

_____

_____

_____

6. Let your stream run and draw a sketch every 10 minutes to see how the landscape changes over time. Label your sketch by writing “deposition” where the sand building up in the stream and “erosion” where the stream is cutting into the landscape.

Data:

10 minutes

20 minutes

30 minutes

Analysis

Where in the stream did sand get deposited? Where did the stream erode the landscape?

_____

_____

_____

How does erosion and deposition relate to how fast the water in the stream is moving?

_____

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_____

Conclusions:

Based off your data, what can you claim about the how the shape of stream changes over time? Cite your sketches as evidence and explain your reasoning in terms of deposition, erosion, and stream velocity.

Claim: _____

_____

Evidence: _____

_____

Reasoning: _____

_____

_____

_____