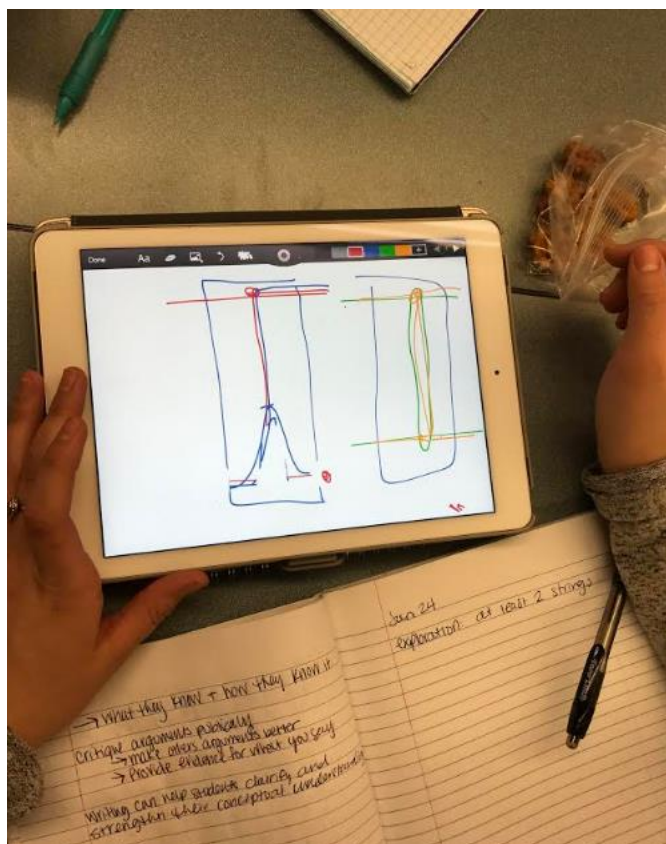


Appendix 1: Student writing sample for the activity of track tracks

| Exploration / observation | Explanation |
|---|--|
| <p>Fossil #1</p> <ul style="list-style-type: none"> • footprints (big & small) • Both going downwards in \ / motion • Both stop in central point | <ul style="list-style-type: none"> • Predator vs. prey • Got in a fight, both died |
| <p>Fossil #2</p> <p>Footprints merge together like this:</p> <pre> ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↑ </pre> <p>disorganized</p> | <ul style="list-style-type: none"> • mating or mating dance • Predator are prey • Trying to get food. |
| <p>Fossil #3</p> <ul style="list-style-type: none"> • larger footprints trail down, smaller footprints disappear | <ul style="list-style-type: none"> • larger footprints are / killed smaller |

Appendix 2. Students communicate their mental model of the tube

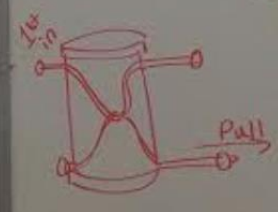


Appendix 3. Students' group writing samples of exploration and explanation

Exploration

- pulling any rope results in all ropes being pulled inward.
- ropes outside the container are the same length when taut.
- with strings at one end of the container pulled out, pulling a rope at the opposing end will result in the opposite rope pulling in 1st.

Explanation



- 2 ropes are intertwined w/in the tube.
- pulling a rope will cause the intertwined rope on the opposing end to pull in 1st due to the direction of pull.
- noise = a conspiracy...