

Evolution and Common Ancestors Lab: Paleontology at Cookieopolis Lab Sheet - Page 1

The cookie models a type of rock called **sedimentary rock**. Sedimentary rock is the most common type of rock to find fossils. The chocolate layer models lava that has cooled and solidified to form a type of rock called **igneous rock**. The lava spewed from a nearby volcano and spread across the land, before cooling to rock.

Color the bubble to choose the sentence you think is correct.

- I think the lava was there first and the sedimentary rock formed on top of it.
- I think the lava spread across the sedimentary rock that was already there.

Based on your choice from above, which layer do you expect to have older fossils in it?

- The sedimentary rock layer
- The lava layer

	1	2
A	<p>Raisins =</p> <p>Peanuts =</p> <p>Red M&M's =</p> <p>Pretzels =</p> <p>Walnuts =</p> <p>Yellow M&M's =</p> <p>Which were found in the lower level:</p> <p>Which were found in the upper level:</p>	<p>Raisins =</p> <p>Peanuts =</p> <p>Red M&M's =</p> <p>Pretzels =</p> <p>Walnuts =</p> <p>Yellow M&M's =</p> <p>Which were found in the lower level:</p> <p>Which were found in the upper level:</p>
B	<p>Raisins =</p> <p>Peanuts =</p> <p>Red M&M's =</p> <p>Pretzels =</p> <p>Walnuts =</p> <p>Yellow M&M's =</p> <p>Which were found in the lower level:</p> <p>Which were found in the upper level:</p>	<p>Raisins =</p> <p>Peanuts =</p> <p>Red M&M's =</p> <p>Pretzels =</p> <p>Walnuts =</p> <p>Yellow M&M's =</p> <p>Which were found in the lower level:</p> <p>Which were found in the upper level:</p>

Evolution and Common Ancestors Lab: Paleontology at Cookieopolis Lab Sheet - Page 2

Instructions

Fill in the bar graph for each quadrant with the number of each type of fossil found in that section of Cookieopolis. As you count from the bottom of the graph to the number of fossils found, make a small rectangle, called a **bar**. Choose a color for the bar for each type of fossil and color the circle next to its name in The Legend to show which color is used for each type of fossil.

Data

Instructions for bar graph: A bar graph goes here with 4 sections

Legend: *(include circles after the names)*

R = Raisins

B = Nuts

M = M&M's

P = Pretzels

The bottom axis of the bar graph:

A1 R A1 M A1 B A1 P A2 R A2 M A2 B A2 P B1 R B1 M B1 B B1 P B2 R B2 M B2 B B2 P

The side axis will go from 1 to 20 with larger hash marks at multiples of 5.

Conclusions and Discussion

Were the numbers of fossils in each quadrant the same or different?

The nuts and raisins simulate the fossils of extinct plants, and the M&Ms and Pretzels simulate the fossils of extinct animals. Did you discover more plants or animal fossils at Cookieopolis?

Which fossil was most numerous overall?

How could a paleontologist at a real dig site use this method to look for fossils?

Back at the lab scientists ran some genetic tests and learned that the different colored M&Ms were not the same species. One of them is the common ancestor to the other. Which color M&M was the ancestor?

- The red M&Ms
- The yellow M&Ms

Which color M&M lived more recently?

- The red M&Ms
- The yellow M&Ms

There is another closely related species in the two layers, which do you think it is? Color the bubble for the two that have the most in common with each other.

- Raisins
- Peanuts
- Pretzels
- Walnuts

One type of fossil is found in both layers. Which was it?

- The red M&Ms
- The yellow M&Ms
- Raisins
- Peanuts
- Pretzels
- Walnuts

What does that tell you?

- That organism went extinct.
- That organism went extinct and evolved from another species.
- That organism lived in both time periods.