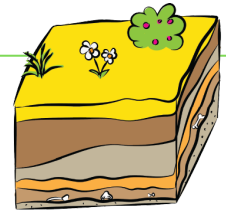




PROGRAMMING AND MICROFOSSILS

Grades K-8



SORT MICROFOSSILS

K-3 Students will program their robots.
4-8 Students sort 20 million year old microfossils.

G'DAY!

5 min

SNACK & FREE PLAY

30 min

STORY TIME

15 min

STEM TIME

50 min

Materials:

- Chromebooks
- Robots
- *Optional- Legos

Materials:

- Tobey tweezers
- Meeka microscopes
- Petri dishes
- Microfossil sediment
- Fossil Identification
- Guides
- Fossil Sorting Sheets

G'day is Australian for hello!

Greet your students. Be friendly. Use their name, ask a question, give a high five, or thumbs-up! Take roll. Mark down which students took a snack and tally how many snacks were given out.

Enjoy Free Play:

Students will have their snack and enjoy time to free play.

Read the story:

Read the first half of the story The Princess of Paleontology. Older students may choose to read their own books.

Grades K-3: Program Your Robot

STEM Coaches will go to the portal and help students with the next Edison programming lesson they are on. Students may choose to build a Lego creation on top of their robots.

Link to portal: <https://www.stemexpandedlearning.com/robotics>

Grades 4-8: Sort microfossils

In this lab students will be sorting through a 20 million year old fossil-rich sediment from an age called the Miocene. The microfossils they will find will give them clues about what the ancient ecosystem was like.

Project link: <https://www.stemtaught.com/fossil-discovery>

Note: If you are using a STEMtaught fossil sediment sample, please notify students that they cannot keep the fossils and they must return them to their teacher after the activity. These fossils are very special samples for your school and scientific collections need to stay together!

Instructions:

1. Before administering this activity watch the teacher prep movie to get ready. (https://www.youtube.com/watch?v=w0N6eU_zB88)
2. Show class movie: "Digging for Fossils". (<https://youtu.be/YcvOjfDtcIM>)
3. Each student gets a scoop of sediment in a petri dish and takes it to their desk.



4. Students identify, tally, and graph the microfossils that they find using the Fossil Identification Guide.

Look through the guide with your students and have them sort their microfossils into categories and tally up the fossils of each type using the lab sheet.

5. Have students graph the fossils they found on their lab sheet.

6. Give the students a plain piece of paper to draw a picture of a fossil they observed. Have them spend 10 minutes or so to draw the fossil with all the details they saw under the microscope.

SPORTS / GAMES

25 min

Materials:

- 4 different colored Hula Hoops
- 10+ balls and beanbags

* Older students may choose to practice their sport instead of playing the game of the day.

Capture the Dino Eggs

This game is a variation of the game Rob the Nest. Students will work in teams to get as many balls to their base as possible.

Instructions- Set up the four different colored hoops. One for each corner of the playing field. These hoops will be the dinosaur nests. Put all the balls and bean bags in a pile in the center of the playing field. These will be the dinosaur eggs. Organize the students into four dinosaur families. Have each family stand at their nests. The colored hoops will be the family names (blue family, red family, etc.). The families will compete to try to get as many eggs in their nest as possible. When the instructor says "Go!" One player at a time from each family will run to collect one egg at a time, and bring it back to their nest. The type of egg the player picks will determine the way the player brings back the egg. If it is a soccer ball, the player must kick the ball between their feet on their way back to the nest. If it is a basketball, the player must dribble the ball. If it is a bean bag, they must balance it on their head. If it is a soft foam ball or bouncy ball, they must put it between their legs and hop back to the nest. Players will run to collect eggs from the nest until all the eggs have been collected. Once all the eggs are in the nests, the instructor will shout, "Capture the Dino Eggs!" At this point, all the players will be given 1 to 2 minutes to run to the other players' nest and collect one egg at a time. Players are not allowed to guard or block others from taking the eggs from their nests. Once the time is up, the instructor will shout, "Stop!" The team with the most eggs in their nest wins.

HOMEWORK / FREEPLAY

20 min

Instructions:

Allow your students some homework time. If they need help let them know you can help them. If they do not have any homework they can have some reading time, or they can have free time to go outside and play.

CLEAN UP / FREE PLAY

5 min

Clean up/Free play/Dismissal

Allow your students some free time. Some students may wish to finish working on their STEM project. Others may want to journal or scrapbook about their day. Other students may want to go outside to play. Clean up, pack up.

