



# PROGRAMMING AND ROCK HUNT

Grades 4-8



## SEDIMENTARY ROCK HUNT

K-3 Students will program their robots.

4-8 Students go on a scavenger hunt for rocks which they test and observe.

### KON'NICHIIWA

5 min

#### Kon'nichiwa is Japanese 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.

### SNACK / FREEPLAY

30 min

#### Enjoy Free Play:

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

### STORY TIME

15 min

#### Read the story:

Read the story of the day to your students. Older students may choose to read their own books.

### STEM TIME

50 min

#### Grades K-3: Program Your Robot

##### Instructions:

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: Sedimentary Rock Hunt

##### Instructions:

Say- Students will go on a scavenger hunt around campus to find sedimentary rocks which they test and observe. The most important tool for a geologist or a paleontologist is their hammer. Today you get to go find rocks and break them open to discover the unseen treasures of the earth. The outer surface of a rock can look completely different than what is on the inside. The outside of a rock gets tumbled and weathered, and the inside is where you will find the fresh mineral surfaces.

#### Materials:

- Chromebooks
- Robots
- Legos



### Materials:

- Student worksheets
- Petri dishes
- Meeka microscopes
- Magnets
- Steel scratchers (nails)
- Hammer
- Sedimentary rocks
- Clipboards
- Measuring tape
- Straws
- Scale to weigh sediments

### Instructions:

1. Watch the teacher prep video to prepare for the lab.
2. Hide the provided sedimentary rocks around campus outside, one per student, or have them find their own rocks already on campus.
3. The students may spend 25 minutes searching for the rocks outside. It might take time for them to find their own rock, but doing so is an important part of fostering excitement and curiosity in the kids.

Allow students to crack open the rocks they find on campus with a hammer, but they need to have safety glasses or goggles. All students must wear safety goggles at all times even when they are not currently breaking open rocks. Rock fragments can fly far, so it is important to protect everyone's eyes.

It is also important for the students to be spaced out so that no one is injured by swinging hammers.

Insure they do not break the STEMtaught rocks, or hammer on the school's cement. It is okay for them to break the rocks open on the asphalt around the playground area. Have the students break open their rocks the ground either on the side of the playground or a gutter area. This helps maintain the mess, and makes cleaning up easier. Do not let them break open rocks on tables or chairs. These surfaces can be unstable and pose a hazard.

4. Students will use their rock dust to experiment which size sediment they can blow using their straws. They may use their measuring tapes to measure how far their sediments go. Students may use their scales to weigh the different size sediments.

5. They may spend the remainder of Stem Time indoors using a scratcher, a magnet and microscope to test and observe their rock samples.

## SPORTS / GAMES

25 min

### Brontosaurus, Brontosaurus, T-Rex

Instructions- Players will gather and sit in a circle. One player will be chosen to be "It." The player who is "It" will walk around the circle, and one by one tap the players on the head. As the player who is "It" taps each player, they will say "Brontosaurus." When the player who is "It" comes to the player they choose to be the T-Rex, they will tap them on the head then say "T-Rex!" The T-Rex will then jump up and begin chasing the one who is "It" in an attempt to tag them before they are able to make it around the circle and sit down. If the T-Rex is successful, the one who is "It" continues in that role, but if they are unsuccessful, the T-Rex now becomes "It." The game continues in this pattern.

### 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/pack up/dismissal

Clean up, pack up and practice lining up.

## HOMEWORK / FREEPLAY

20 min

## CLEAN UP / DISMISSAL

5 min

[www.stemelop.com](http://www.stemelop.com)

