



BRINE SHRIMP AND PROGRAMMING

Grades K-3/4-8



STUDENTS OBSERVE FRESHLY HATCHED BRINE SHRIMP

K-3 Students observe their brine shrimp once they have hatched.

4-8 Students will program the robots.

ALOHA!

5 min

Aloha is Hawaiian 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. Older students may choose to read their own books.

STEM TIME

50 min

Grades K-3: Observe freshly hatched brine shrimp

Students observe their newly hatched brine shrimp. This activity will work best with microscopes if available.

Materials:

- Brine shrimp in Tedros test tubes
- Yeast
- Spirulina powder
- Petri dishes
- Pippi pipettes
- Scoopy spoons
- Meeka microscopes
- Pencils
- Baby Shrimp Birth Certificates

Instructions:

1. Watch the teacher prep video before conducting the lab.
2. Show students the in-class video.
3. Students use Pippi pipette to transfer some of their brine shrimp from their Tedros test tube into a petri dish to observe under Meeka microscope.
4. Students observe their brine shrimp with Meeka microscope, filling out their Baby Shrimp Birth Certificate with their observations.
5. In order to care for their brine shrimp, students must blow into the water with a straw or Pippi pipette for 10 seconds once a day to oxygenate the water. To feed their brine shrimp, students should put a tiny Scoopy spoonful (a pinch) of spirulina powder in the water and another Scoopy spoonful (a pinch) of yeast in the water. Brine shrimp have special needs when they are newly hatched; their mouths are too small for them to eat spirulina powder. Yeast cells are about the size of bacteria, and so the hatchlings can eat the yeast. When the shrimp grow a little larger they will eat the spirulina powder. Too much yeast (more than a pinch) will kill them. Students should then put a small Scoopy spoonful of spirulina powder in the water once every few days until the water is a little green, then leave it alone for a while. If the water is a little green, the shrimp have plenty of food; they should not be fed every day or the water will become dirty with uneaten food. Brine shrimp are filter feeders, so if the water is a little green, then they have plenty of food.



4-8 Materials:

-  Chromebooks
-  Robots
-  Legos

SPORTS / GAMES

25 min

*Older students may practice their sport if they don't want to play the game.

Materials:

-  Play area with lots of obstacles, such as trees, jungle gym equipment, etc.

HOMEWORK / FREE PLAY

20 min

CLEAN UP / DISMISSAL

5 min

Grades 4-8: Program your robots

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>

Birds and brine shrimp

Students will play Birds and Brine Shrimp, a variation of Cops and Robbers.

Instructions- Choose a play area with lots of obstacles for player to hide behind. Designate one area to be the Bird Belly, otherwise known as Jail in Cops and Robbers. Preferably an area with jungle gym equipment or balls to play with to keep players occupied once they have been caught. Choose two students to be the birds. All the other students will be the brine shrimp. To play the game, have the birds go to the center of the play area, close their eyes, and count to thirty. During this time all the brine shrimp will hide. When the birds are done counting, they will run around to catch the brine shrimp. Players do not need to stay hidden. They can run around to get away from the birds. When a player is caught, they will be sent to the Bird Belly where they will stay until the next round.

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.

