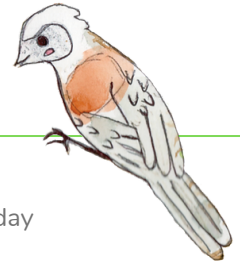




# ENGINEER EGG DROP AND PROGRAMMING

Grade K-3/4-8



## ENGINEER EGG DROP AND PROGRAMMING

K-8 Students will observe bird feet at their bird feeders, then do the activity for the day

### NAMASTE!

5 min

#### Namaste is Hindi 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-8 Bird observation

Students will observe bird feet, and then do the activity of the day.

### Materials:

- Pencil
- Paper
- Clipboard

#### Instructions: Bird feet observation

Explain: Today we're going outside to visit the birds at our birdfeeders! We will be observing the features of bird feet and recording our findings.

Have each student bring a paper, pencil, and clipboard with them outside. Allow them to take 15 minutes or so to make and record observations of the birds visiting their bird feeders.

Ask: "What do you notice about the bird feet you see?"

"Do different types of birds seem to have differences in their feet?"

"What are those differences? What about similarities?"

#### Grades K-3: Egg drop engineer challenge

#### Instructions:

Say- "Today we're going outside to do begin designing and constructing our boxes for the egg drop experiment that will take place on Friday! We will use our STEM Taught scientist minds to engineer a box that will hold our eggs, and protect them from breaking when they are dropped."

For this activity the students will construct their designs. Each group will be given a box. The boxes can be various sizes. The students will also have access to a pile of happy trash. The happy trash will be the materials the students use as they engineer their box. Allow students to be as creative with their design as possible!

\*Students will construct their box, and will carry out the egg drop during Friday's activity.



## STEM TIME CONTINUED...

50 min

### K-3 Materials:

- Cardboard boxes
- Happy trash (bubble wrap, tissue paper, toilet paper, plastic wrap, string, etc.)

### 4-8 Materials:

- Chromebooks
- Robots
- Legos

## SPORTS / GAMES

25 min

### Materials:

- Buckets
- Soft foam balls or rubber balls

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

## HOMEWORK / FREE PLAY

20 min

## CLEAN UP

5 min



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1. Organize students into groups of three.
2. Each group of students will receive a box and happy trash which they will use to design their box.
3. Encourage students to come up with a design that they think will keep their egg from breaking.

Ask- "What materials do you think will help protect your egg from breaking during the drop?"

\*Remember, the egg drop activity will take place during Friday's activity. Each group will need an egg or two for their egg drop. After they have tried the egg drop challenge, they may want to redesign their box and try again.

### 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>

### Chicken egg relay

Objective- Students will relay race while holding a ball between their legs to deposit their ball into the bucket without using their hands.

Instructions- Organize players evenly into teams with about 5 to 7 players per team. Teams will line up at one end of playing field, about 6 feet apart from other teams. At the other end of the playing field there will be a bucket waiting for each team. Each team will be given a ball. Students will play pretend that they are chickens running to drop their eggs into their nests.

To play the game, the STEM Coach says "Go!" and the first player in line from each team will put the ball between their legs and race to the other side of the playing field where they will drop the ball into the bucket without using their hands. Once they drop the ball into the bucket they may pick it up and race back to give the ball to the next person in line, and the next player may go. The game continues until everyone in the relay has had a turn to race. The team whose players make it all back first wins!

#### 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.