



# ENGINEER CHALLENGE: SHOWCASE

Grades K-3/Grades 4-8

## SHOWCASE YOUR INVENTION

K-8: Students will finish and showcase their inventions

### MOÏEN!

5 min

### SNACK & FREE PLAY

30 min

### STORY TIME

15 min

### STEM TIME

50 min

### Materials:

- Peephole boxes
- Tedros test tubes
- Plastic bottles
- Water
- Tin foil
- Tissue paper
- Cardboard
- Glitter
- Plastic bags
- Magnifying glasses
- Small mirrors
- Pencils
- Scissors
- Other items you think students may want to use

### Moïen is Luxembourgish 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 to your students outside as they sit in a circle. Older students may choose to read their own books.

### Finish and showcase your improved soda bottle light

Students will finish making their design improvements to make a better solar light. When they have completed the challenge, they will get the chance to showcase what they have come up with!

### Instructions:

1. Students will continue to work on the engineer challenge they were given to make a better light. Then they will implement the design into their peephole boxes.
2. When everyone is happy with their new inventions they can showcase their designs. Encourage each student to discuss the light they have invented, as well as the box they have been decorating, with their fellow students and explain all of the features.
3. Once everyone has had the opportunity to showcase their designs, then it is time to vote! Students can vote for their favorite K-3 and 4-8 dioramas. The students with the most votes can be given a ribbon or a prize that the STEM coaches prepare!
4. Have fun with this, and remember to complement the students on all of their great work and efforts!

**\*Optional-** Another idea for this activity is to have the students each vote for their favorite K-3 and 4-8 dioramas, as well as their favorite light invention.

The STEM coaches can also come up with various awards for the dioramas and light inventions: such as "first, second or third place, and honorable mention," or "most creative" and "best in show." etc.



## SPORTS / GAMES

25 min

### Materials:

- 2 foam balls per 10 students

### Straddle Ball

Students will play straddle ball to try to score a goal through the legs of the other players in the circle, and they will try to keep the others from scoring a goal between their own legs.

Instructions- For groups with more than 20-30 students, students can be organized into two groups. Students will form a circle standing with their legs wide apart and their feet touching the other players' feet on either side of them. The goal is the space between the players feet. To keep the ball from making a goal, the players can defend their space only by using their hands with their palms out and fingers facing down. To play the game, students will bend their knees to get low, and the player/players with the ball/balls, will begin by tapping the ball with their palm to try to get it through a goal. Students will continue to tap the ball with their palms to try to make goals, while the other students will try to block the goals. Students may not reach in front of another student's goal, and they may not hold onto the ball or stop it at any time. If the ball gets through a student's legs, then that student is out. If the ball goes out of the circle any other way besides through a goal, then the game starts over with all the players. The game will end when the instructor decides.

## HOMEWORK / FREEPLAY

20 min

### Instructions:

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 / DISMISSAL

5 min

### Clean up/pack up/dismissal

Clean up, pack up and practice lining up.

