



PAPER TUBE TELESCOPE AND PROGRAMMING

Grades K-3/Grades 4-8



MAKE A PAPER TUBE TELESCOPE & TRACE SHADOWS

K-3 Students use a roll of paper like a telescope to discover what materials let light shine through and which don't.

4-8 Students will program their robots.

MERHABA!

5 min

SNACK & FREE PLAY

30 min






STORY TIME

15 min

STEM TIME

50 min

Materials:

-  Cardstock paper
-  Tape
-  Plain paper
-  Pencils
-  Toys

Merhaba is Turkish 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.

Grades K-3: Paper tube telescope

Students make a paper tube telescope to see what materials or objects block light and which let some light shine through.

Instructions:

1. Have students roll a piece of paper into a tube.
2. Have your class take their paper tube telescopes outside to observe and test the materials that they find. They could test a tree, a rock, a leaf, a lunchbox, a backpack, a slide or a ball to see if light shines through it. They will hold their object up to the paper tube telescope as they look through it to see if light shines through it or not. **Caution: Discuss with your students that they cannot look at the sun as a light source to test an object. Looking at the sun is dangerous and will damage their vision. They must look forward with their paper tube telescope, not up to the sky.**

Trace the shadow of your favorite toy

Students can trace the shadow of their favorite toys or of another object on a piece of paper. Keep the paper in the same place on the ground and come back to it in an hour to trace the toy's shadow again to see how it changed.



STEM TIME

50 min

Materials:

- Chromebooks
- Robots
- Legos

SPORTS / GAMES

25 min

Materials:

- Ball

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

HOMEWORK / FREEPLAY

20 min

CLEAN UP / DISMISSAL

5 min

Grades 4-8: Programming

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>

Hot Potato Hide and Seek

Instructions- This is a variation of the classic game of Hide and Seek. To play, one player will be chosen to be the “seeker.” This player will be given a ball and count to 100 as the other players hide. Once they reach 100, they will go out and try to find the players. The STEM Coach will set a timer for a set amount of time. When the seeker finds a player, they will pass the ball to that player and that player becomes the new seeker. The game will continue in this order. All the previous seekers will gather together in a predesignated spot. When the timer goes off the game ends, and a new round of the game can be played. The STEM Coach can reset the timer and the player holding the ball when the previous game ended will become the next counter and seeker.

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.

