

Grade 3: End of Year Assessment

Lesson 1: Lincoln Lego Land

Lesson Objective:

- Use the engineering knowledge gained throughout third grade to create a Lego structure as part of a class-chosen environment.

Assessment Objective:

- Observe student mastery level of designing, building, programming, problem solving and working cooperatively with Legos.
- At least one function must be programmed in all Lego structures.

Time: Two-Four 45 minute periods

The Challenge: Can you create a working Lego structure as a part of a class-chosen environment?

Materials:

- 1 Team Challenge Lego kit for each group of 2-4 students
- Lincoln Lego Land planning sheet
- Lincoln Lego Land Evaluation

Vocabulary - Review

Procedure:

- Teacher will begin classroom review, discussing past Lego activities and challenges the students have completed throughout third grade. The following specifics should be discussed:
 1. Building a sturdy car
 2. Programming for time - Traveling inside the Earth, 1 Meter Challenge
 3. Light Sensor - Burglar, National Dogsled Race, Solar System
 4. Touch Sensor - Voting for Nutrition
 5. Designing - Magic School Bus, National Dogsled Race, Creature of the Sea

- Teacher presents challenge of creating a classroom Lego environment. Class brainstorms ideas. Possible environments could be: amusement park, toy store, city/town, mini-golf course, airport, playground, circus
- Once the classroom environment is agreed upon, the class will brainstorm ideas of building/ structures that belong there.
- Small groups will choose one of the structures to create out of Legos so that there is no duplication.
- Before building begins, students are given the task of building a structure that includes at least one programming component. This might involve any of the concepts that they have learned throughout third grade or beyond.
- Planning will begin with students completing the Lincoln Lego Land Planning Sheet.
- Once the plan is checked and accepted by a teacher, each small group will get their Team Challenge Lego kit and begin building their plan.
- Teacher will encourage individualization of projects to ensure all students are extending themselves, however as this is an assessment; these projects should be completed with limited teacher support.
- Once all projects are complete, students will fill out Lincoln Lego Land Evaluation.
- The final day will involve assembling the community and sharing work.

Assessment:

- Teacher observations
- Student's success with completing the challenge(s)
- Lincoln Lego Land Evaluation

Resources:

- CEEO Curriculum Website - <http://www.ceeo.tufts.edu/robotatceeo/>