



## **Engineering an Obstacle Course**

Students will plan and create an obstacle course using household and outdoor materials. They will test their designs and share their findings in a discussion inside of Google Classroom and respond to other students.

### **Materials**

- Google Classroom
- Example pictures of Obstacle courses
- Engineering design process example
- Engineering an Obstacle Course PDF
- Outdoor/Household Items PDF
- Online Discussion PDF

### **Student Objectives**

- Students will create artful expressions
- Students will collaborate with peers to share and reflect on their designs
- Students will engage in physical activity to test their designs
- Students will complete the Engineering Design Process to create their obstacle courses

### **Teacher Technology Skills Needed**

- Creating a Google Classroom
- Posting an Assignment to Google Classroom
- Sharing Resources via Google Classroom

### **Standards**

NGSS:

- 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- 3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

### **Procedure**

1. Post an "Assignment" to your Google Classroom in "Classwork"

- Create an obstacle course at home using the Engineering Design Process
- Include "Engineering an Obstacle Course" PDF



- Include “Outdoor/Household Items” PDF
- Give students ability to comment on each other’s responses

2. Provide students with a Due Date for answering the question.

3. Share videos and pictures of the obstacle course or even blueprint design on Google Classroom

4. Provide clear instructions that students must comment/respond to at least two other student’s answers.

### **Extension Activity**

- Task students with the challenge of creating a video game that has come to life. How can they incorporate video game elements into the obstacle course that they have designed?
- Challenge students to tell a story with their obstacle course. They can record themselves telling a story or they can write it out on paper/digitally and then share it on Classroom.