

Grit Leads to Greatness Lesson Plan Overview

NCCER has teamed up with Delmarva to bring Construction Education into the elementary classrooms! "Grit Leads to Greatness" takes students into an imaginary world that has forgotten how to build... After a devastating earthquake causes the city to teeter on the edge of a cliff, the duo embarks on an epic journey to a place called Greatness, believing it holds the key to saving their city from disaster.

The story focuses on the jobs of a mason, electrician, welder, plumber, and carpenter. This lesson helps students understand a variety of construction jobs and the hard-but-rewarding work that goes along with them. This lesson can be implemented into math, science, and/or reading curricula. We focused on a third grade ELA target to go along with this story, incorporating hands-on activities to deliver an engaging experience of the construction industry.

What better way to bring construction education and career awareness into the classroom?

Grit Leads to Greatness Lesson Plan: Bringing Construction into the Classroom

Standards (this offers a possible standard to use, but you can also integrate this lesson plan into science, math, or communications):

ELA.3.R.2.2 Identify the central idea and explain how relevant details support that idea in a text.

Learning Target: Students will demonstrate an understanding of multiple construction careers and how they are relevant in the real world.

Goal: Inspire the kids to consider careers in construction (this lesson is not performance based).

Materials/Resources:

- Chart paper
- Chocolate candy (Hersey's rectangles)
- Copper wires
- Craft sticks (used to spread paste)
- Gloves/goggles
- Graham crackers
- Grit Leads to Greatness Book
- Marshmallow paste
- Mason jar with lids
- Mini jumper wires with alligator clips
- Nails (zinc)
- Pennies
- Potatoes
- Small jigs
- Small LED lights

Station Prep (Teachers)

- Prep the marshmallow paste with craft stick in a bowl; make one prep bowl per station.
- Organize the safety gear as well as the pipe fitting stations.
- Have a way to get hot water for the jar in welding station.
- Ensure all stations have what is needed to complete the activity without interrupting others.
- Review the "how to" for welding station: [Welding With Chocolate : 6 Steps \(with Pictures\) - Instructables](#).
- Review the "how to" for electrician/lighting station: [Potato Battery Experiment: Powering a Light Bulb With a Potato](#).

Daily Plan:

Day 1: Read "Grit Leads to Greatness" with the class.

- While reading, stop and discuss details of the story.
- Have students work in groups to use details discussed to determine the central idea of the story.

Day(s) 2(+): Review the story "Grit Leads to Greatness."

- Make a chart of what careers were within the story, jot down a couple characteristics of each career.
- Review each station that the students will complete in groups; discuss procedures of each station.
- Break students into groups—rotate every 20 minutes if you're completing this activity in a day; alternatively, you can spread these activities out over several days.

***Note:** students should complete Carpentry station prior to Masonry station.

Stations:

- Safety station: Students will try on googles and gloves; they will create a poster with 3 reasons it is important to use safety gear.
- Masonry station: Students will construct a brick sidewalk using Pez candy with marshmallow paste. (This will be the sidewalk to their constructed house in the carpentry station.)
- Welding station: Students will weld together pieces of chocolate or Andes Mints with hot water in a jar to create I-beams or box welds, then test their strength. Students can use random classroom items such as books, blocks, etc. to test the strength.
- Carpenters/roof trusses station: Students will use graham crackers and marshmallow paste to construct four walls and a roof to build a house structure.
- Plumbing station: Students will practice reconnecting pipes using clamps, seals, and couplings.
- Electrician/lighting station: Students will use potatoes along with cables, pennies, nails, copper wires, and small LED lights. Lead students through the process of (or have a how-to document for) creating electricity using these items. Alternatively, have students discuss the role of electricity in their lives.

Assessment (If needed/wanted)

- Can have students present as a group what they learned about each career and how they are importantly contributing to our lives.