

Lydon

Welcome to Mr. Lydon's Wiki Page!

Spring 2013

Fellows: [Hannah Garfield and Emily Eickhoff](#)

Semester Theme: Types of Engineering - related to the Westing Game

Topic 1: Civil Engineering: Gumdrop Bridges (modified [Gumdrop Structures](#))

Week 1: steps 1 - 4 of EDP, [civil engineering ppt](#) and group discussion about civil engineering, introduction to civil project, and small group planning /sketching project ideas

Week 2: steps 5 - 8 of EDP, review plans from last week, building, testing, redesigning, and testing again!

Topic 2: Mechanical Engineering: Service Learning/Elevator-Pulley System

Week 1: steps 1 - 4 of EDP, [mechanical engineering ppt](#) and group discussion about mechanical engineering, intro to project - talk about problems that [Westing Game](#) character (Sydelle) might have because she broke her leg (how can she go up stairs?, etc.), and small group planning/sketching project ideas

Week 2: steps 5 - 8 of EDP, review plans from last week, building, testing, redesigning, and testing again!

Topic 3: FINAL PROJECT: Mars Rovers (Lego vehicle base with modified [Parachutes](#))

Week 1: showed Aeronautical Engineering ppt, Mars Rover entry and landing procedure, discussion about design considerations in space. Watched a short [NASA Mars Rover Video](#) to get them excited about the project. Small groups planned and then built a Lego rover which could survive a fall from Mr. Lydon's height

Week 2: Finished Mars rover by creating a parachute out of different materials (plastic garbage bags, paper bags, aluminum foil, coffee filters, string). Discussed purpose of a parachute, design considerations. The groups were asked to create several parachutes out of different materials to compare material properties. Rovers were "tested" by dropping down stairwell. The students really enjoyed this work period/project.

Fall 2012

Fellows: Hannah Garfield and Cameron Jackson

Week 1: Egg Drop to introduce to STOMP and idea of engineering time

Week 2: Introduction to NXT piece by making a bridge

Week 3: Continuation of bridges, testing of bridges, introduction to programming through human robot

Week 4: Introduction to Mindstorms, writing simple program

Week 5: Continuation of introduction, write and test programs