

Discovery Lab Description:

In this hands-on Discovery Lab, students work to design, create, test, and redesign a zip line carrier that will move an injured or stranded person safely and quickly out of danger. Students will explore varying environmental constraints that affect the zipline carrier, including the presence of a person, adverse weather, and the need to make multiple trips.

During the Discovery Lab students will be expected to:

- Sit in groups of 4 students per table.
- Students should be prepared to give their full attention to the Lab instructors when given the quiet signal.
- Work cooperatively with one another at the table.
- Follow the hands-on procedures just as the Lab teacher or assistant explains them.
- Handle materials and equipment carefully.

It is important that teachers and chaperones:

- Help focus the students' attention.
- Assist students with hands-on activities and experiments when necessary.
- Encourage students to keep trying when they feel frustrated and want to stop
- Engage students at a higher level by asking open-ended questions throughout the class.
For example: "Why did you choose _____?"
- Turn off cell phones and other electronic devices during the class.

Literary connection:

The girl in this story has a wonderful idea, "She is going to make the most MAGNIFICENT thing! She knows just how it will look. She knows just how it will work. All she has to do is make it, and she makes things all the time. Easy-peasy!" But making her magnificent thing is anything but easy, and the girl tries and fails, repeatedly. Eventually, the girl gets really, really mad. She is so mad that she quits. But after her dog convinces her to take a walk, she comes back to her project with renewed enthusiasm and manages to get it just right. This funny book offers a perfect example of the rewards of perseverance and creativity. The girl's frustration and anger are vividly depicted in the detailed art, and the story offers good options for dealing honestly with these feelings while at the same time reassuring children that it's okay to make mistakes.

Nevada Academic Content Standards in Science (NGSS):

K-2-ETS1-1 -- Ask questions, make observations, and gather information about a situation people want to change, to define a simple problem that can be solved through the development of a new or improved object or tool.

K-2-ETS1-2 -- Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

K-2-ETS1-3 -- Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

