

Skyscraper Challenge

Pre-field trip preparation suggestions

In this hands on Discovery Lab students work to design, create, test and redesign free-standing, weight-bearing towers using KEVA® Planks. The challenge is to build the tallest tower while meeting the design criteria and minimizing the amount of material used—all within a time limit. Students experiment with different geometric shapes used in structural designs and determine how design choices affect the height and strength of structures, becoming comfortable with the concepts of structural members and modeling.

During your Discovery Lab students will be expected to:

- Sit in groups of four 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 the hands-on activities and experiments when necessary.
- 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 lab.

Literary connection:

To get students excited about the upcoming Discovery Lab we suggest reading the following story with your students: *Let's Build* by Sue Fliess. This book follows a son and his dad as they plan and build the best fort ever.

Nevada Academic Content Standards in Science (NGSS):

2-PS1 -2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.

