

Overview

Students have limited opportunities to learn outdoors. For example, one school representative reported four picnic tables for 1,250 students. So when these students might have times during the day to enjoy the benefits obtained from learning outside, there were few places to sit or study or enjoy a conversation. While picnic tables have typically been used as outdoor furniture, they are not the most flexible or comfortable form of seating. Also, they are not necessary ergonomically sound or easily moved! Over time, schools would like to increase outdoor learning opportunities by creating learning spaces that support learning, healthy lifestyles, and fitness.

Design Rationale

According to research, outdoor learning spaces can improve student learning. A recent article entitled *Peaceful Learning in Outdoor Spaces* is a good introduction to the topic (Retrieved January 2016, <http://www.naesp.org/communicator-august-2014/peaceful-learning-outdoor-spaces>). Sound research cites the many benefits of outdoor learning including better health, better grades, decreased stress, increased motivation, better behaviour, improved memory, and increased appreciation for the environment (Retrieved January 2016, <http://www.englishoutdoorcouncil.org/research.in.outdoor.learning.html>). However, seating is an issue due to cost, flexibility, long-term maintenance, and ergonomic issues.

Problem Scenario

Your team has been selected to develop a prototype for an outdoor learning space that is functional and will allow students to benefit from the outside environment. Your team needs to consider issues of wellness, usability, functionality, durability, long-term maintenance, and aesthetic appeal.

Your outdoor learning space prototype must be a small-scaled prototype of a space or element of the space that can accommodate learning.

It must satisfy at least two of the following identified concerns:

- Adhere to safety codes/permits
- Be accessible to all students, of all abilities
- Encompass more than just a structure (greenery, plantings, art, etc.)
- Encourage movement and flexible learning
- Enhance/support learning already taking place in the school/classroom
- Support fitness and attend to ergonomic issues

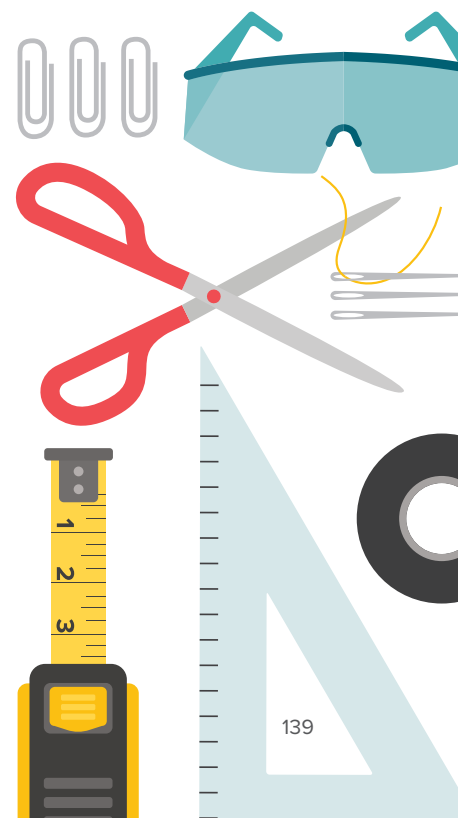


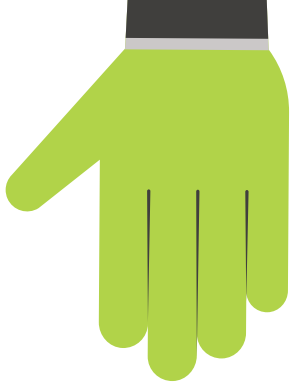
Suggested Grade Level

- Upper elementary through to secondary school
- Possibly primary grades with adult assistance

Suggested Subject Area

- Agriculture
- Citizenship—including school culture/community
- ADST
- Physical Education
- Science
- Social Studies





Success Determinants

Success will be determined by:

- Ability of your prototype to help the users enjoy outdoors
- Alignment of the prototype with the design sketch
- Alignment to design motto: “Make it smaller, stronger, do more, be easier to use, be cheaper, be clean, be greener”
- Colorfulness / design to match environment and attract users
- Degree to which it's intuitive to all users
- Ease of long term maintenance
- Ergonomic / learning-friendly design
- Functionality
- Intriguing enough to hold users' attention
- Uniqueness

Parameters

- You must consider how to make your prototype colourful, intriguing and ergonomic.
- You must prepare a group display which includes your design notes, your design thinking sketches and your prototype.
- You must use some of all the items in the participant group kit in some way.

