

# Building Bridges

**Pillar: Positive Social Environment**

**Division: III**

**Grade: 7**

**Core Curriculum Links: Science and Language Arts**

## I. Rationale:

Effective communication is the foundation of all healthy relationships and high functioning teams. This activity highlights the skills required to work and communicate effectively within teams. Being able to function effectively as a team is a necessary skill to succeeding in all areas and stages of life. Students are introduced to the "Structures and Forces" unit in science by participating in an activity which restricts their ability to communicate with one another. Throughout this experiential learning opportunity, students will come to recognize and appreciate the value of communication and understand more about their own personal communication styles. Structural forms, stability, forces, design, load, and stress will be informally introduced. Cross - curricular links to Language Arts outcomes are made as students create their own metaphors to reflect what they learned about communication.

## II. Positive Social Environment Focus:

*The students will:*

- Explore and identify the various roles and skills of team members in building effective teams.
- assume varying roles to understand the factors that contribute to or detract from team effectiveness.
- Understand that communication is a vital element of effective teams.
- *recognize their own communication styles and how they impact daily interactions and relationships.*
- *develop* effective communication and problem-solving skills

## III. Curriculum Outcomes: Science and Language Arts

Unit D: Structures and Forces	Language Arts
<p><i>Students will:</i></p> <p>1. Describe and interpret different types of structures encountered in everyday objects, buildings, plants and animals; and identify materials from which they are made</p> <ul style="list-style-type: none"> <li>• recognize and classify structural forms and materials used in construction (<i>e.g., identify examples of frame structures, such as goal posts and girder bridges</i>)</li> <li>• interpret examples of variation in the design of structures that share a common function, and evaluate the effectiveness of the designs</li> </ul> <p>2. Investigate and analyze forces within structures, and</p>	<p><b>General Outcome 2</b></p> <p>Students will listen, speak, read, write, view and represent to comprehend and respond personally and critically to oral, print and other media texts.</p> <p><b>Experiment with language</b></p> <ul style="list-style-type: none"> <li>· explore surprising and playful uses of language and visuals in popular culture, such as cartoons, animated films and limericks; explain ways in which imagery and figurative language, such as simile, convey meaning</li> </ul>

<p>forces applied to them</p> <ul style="list-style-type: none"> <li>infer how the stability of a model structure will be affected by changes in the distribution of mass within the structure and by changes in the design of its foundation (<i>e.g., infer how the stability of a structure will be affected by increasing the width of its foundation</i>)</li> </ul>	
<p>Collaboration</p> <p><i>Students will be encouraged to:</i></p> <p>Work collaboratively in carrying out investigations and in generating and evaluating ideas (<i>e.g., accept various roles within a group, including that of leadership; remain interested and involved in decision making that requires full-group participation; understand that they may disagree with others but still work in a collaborative manner</i>)</p>	
<p>Communication and Teamwork</p> <p><i>Students will:</i></p> <p>Work collaboratively on problems; and use appropriate language and formats to communicate ideas, procedures and results</p> <ul style="list-style-type: none"> <li>communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means (<i>e.g., produce a work plan, in cooperation with other team members, that identifies criteria for selecting materials and evaluating designs</i>)</li> <li>work cooperatively with team members to develop and carry out a plan, and troubleshoot problems as they arise</li> </ul>	

#### IV. Materials:

- a large handful of uncooked spaghetti noodles for each group
- a Ziploc bag full of jubejubes

#### V. Procedure:

- Separate students into groups of 4 - 6.
- Pass out the materials
- Explain the rules of the activity. Within the group, half of the team members will be the "builders" and the other half will be the "talkers". The "builders" are not permitted to communicate verbally with one another or to the "talkers". They are only allowed to physically touch and manipulate the materials and the structure. In contrast, the "talkers" must refrain from touching the materials and the structure, but are permitted to provide verbal instructions and advice to the "builders".
- Have the group members determine roles amongst themselves and separate their team into "builders" and "talkers".
- Review the rules to ensure that each group clearly understands them before beginning.
- Inform the students that they will have only 10 minutes to build the biggest structure possible, by following the rules and only using the materials provided. Reinforce that they must stop when you indicate that their time is up.
- After they have completed the activity, debrief and discuss the challenges thoroughly as a group . Also, introduce some key terms at the end.
- Some sample questions to guide the discussion and debrief may include:

1. How did you assign/decide the roles of the group members?
2. What did you learn through this building activity about the functioning of a team?
3. In general terms, how was communication used (e.g., positive, negative, neutral)? Give examples of words, phrases, or expressions used and/or heard? Did the type of communication used help or hinder group progress? Explain.
4. What were your team's strengths and possible areas for improvement? How could you contribute better to your team's effectiveness?
5. What was the biggest challenge faced by the doers? talkers?
6. If you had a chance to do this activity again, which role would you choose? Why?
7. What helped and hindered the success of your group?

9. After allowing adequate time for reflection, have students reverse roles and then complete the activity again.

10. Discuss the activity once more, and then provide students a third attempt. This time allow adequate time to develop a plan, strategize, and troubleshoot throughout the entire building process.

11. Compare results and discuss the importance of

- appropriate communication
- shared decision making
- adequate time to develop and carry out a plan
- collaboration
- consensus building
- respect others ideas and leadership styles
- active listening skills

12. Have students compare this activity to another experience they have had in life. Spend some time discussing these situations, drawing out the importance of healthy communication.

13. Ask students to experiment with figurative language to represent what they learned by participating in this activity. Similes, metaphors, and other playful uses of language can be used to convey the meaning and importance of communication, teamwork, listening, planning etc.