MIND TREKKERS
Building Bridges Lesson Plan

Amount of time Demo takes: 3:00 min
Materials:
1. 4x12 strips of poster board
2. 2 cans of the same size
3. Pink rectangular erasers
4. Laminated paper with circles on it

Set up instructions:
1. Lay the paper with circles on it out on the table and place the cans in the circles.
2. Place 2 paper strips and the erasers on the table in front of the cans.

SAFETY!
1. Safe Demo

Lesson’s big idea:
• Arches are stronger than a linear design. Bridges are built with arches to strengthen them so that they can hold more weight.

Instructional Procedure:
1. Give the students one strip of paper and instruct them to design a bridge that can hold the most amount of erasers.
2. Discuss what worked and what didn’t work.
3. Give them a second strip and ask them to do it again. See if a different design works better.
4. Compare how many erasers you can hold with one piece of paper versus two.

Assessment
Sample questions you can ask:
1. What is the best design? Why?
2. Does having a second piece of paper make a difference?

Conclusion:
Arched designs are stronger because they have two supports helping them whereas a linear design puts all the weight in the middle.

Clean Up:
Clean up between demonstrations if needed. When completely finished gather all materials listed for this demonstration and make sure everything is accounted for. If something was used up, broken or damaged. Let someone know so it can get replaced or fixed.

References:
National Standards:
K-4 Content Standard B: Physical Science, Light, heat, electricity and magnetism
5-8 Content Standard B: Physical Science, Transfer of energy, Motions and forces
9-12 Content Standard B: Physical Science, Motions and forces, Interactions of energy and matter
K-12 Content Standard A: Science as inquiry