



# Science Experiment: Building a Firm Foundation

## Project: Construction Toys, Models, Reading

### Supplies:

- *Cotton Swabs*
- *Paper Plates*
- *Straws*
- *Index Cards*
- *Various materials that could be used to build a structure*
- *Masking Tape*
- *This list is not extensive. These materials are suggestions for what you can use to accomplish the task.*

**Time: 30 minutes**

### What to Do:

1. Divide the participants into groups of various age and ability levels and explain the various materials they can use to build a structure.
2. Give youth approximately 20-25 minutes to build a structure using the materials on hand. (*Very little instruction is given by the instructor during this time. The goal is for participants to work together and be creative using their own skills and background knowledge.*)
3. Give each group time to share how they created their structures. They can discuss what worked well and what did not work well when creating their structures.
4. 4-H projects overlap each other in the skills they teach children. An optional activity to supplement this experiment would be to read children's books to reinforce concepts and inspire children. There are a variety of children's books that promote engineering. *Iggy Peck, Architect* by Andrea Beaty and *Rosie Revere Engineer* by Andrea Beaty are both great resources.

### Reflect:

1. How did your group work together to create your structure?
2. Did you have difficulties getting your structure to stand up?
3. What does a building need in order to stand? (a firm foundation)

### Apply:

Just as a building needs a firm foundation to stand, education gives us a firm foundation for life. Education opens doors for the future that might not otherwise be opened. Now that you have learned every building needs a firm foundation to stand, you can experiment with building different types of structures. As you go out into the world, take the time to look at the buildings around you. Every building has a firm foundation. *How long do you think it took to plan and build those structures?*