

ENGINEERING TOWER

Name: _____ Date: _____

1. Examine the materials that will be used to connect the toothpicks.
2. Write down your predictions. Which materials do you think will support a toothpick structure the best? The least?

3. Draft or write your plan in the space below.

Building Tips:

1. Start small with a simple cube. For each cube, you will need 8 connectors and 12 toothpicks.
2. If your simple cube holds up well, try going higher with another level.

ENGINEERING TOWER REFLECTION

Name: _____ Date: _____

In the space below, reflect on your experience. Make sure you include observations you noticed about the materials, what worked and didn't work, and if your predictions were accurate.

TOWER CHALLENGE!

Name: _____ Date: _____

Extend on what you learned by building a tower with alternating connectors on each level.

Use the space below to make a plan. When you are planning make sure you think about these questions:

- Which material is the heaviest and should be on the bottom?
- Which material is the lightest and should be on the top?
- What worked from my first tower building experience?
- What didn't work from my first tower building experience?

FALL STRUCTURE

Name: _____ Date: _____

How tall of a structure do you think you could build with nothing but a couple of simple craft materials and nature items found in your backyard?
Your challenge is to build to a structure that is at least 10 inches tall!

Steps:

1. Gather your materials.
2. Examine your materials. Decide what you should use to begin your structure with.
3. Use the craft sticks and pipe cleaners to provide necessary support and the fall nature items for decoration and added height.
4. You must incorporate one of every type of nature item in your structure.
5. Use a ruler to keep track of the height of your structure.

When your structure is complete answer these questions:

1.) Did you find that any material made a poor building material? Explain why.

2.) What item was the most fun to use? Why?

3.) Did you find it easy or difficult to include the nature items in your structure? Explain.

4.) What was the final measurement of your structure? How far over or under were you from your goal of 10 inches?

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Thanks!
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