

Theme Park Designer: Building a Halloween Bone Bridge

Adventure Description:

In this adventure, students will think like a theme park designer and build a spooky bone bridge for Halloween!



Activity

Step One: Background Information on Theme Park Designers and Halloween Decorations (5 minutes)

- Ask students if they have ever been to a theme park before. Show [Handout: Examples of Theme Parks](#).
- Explain to students that theme park designers are the people who are responsible for creating and decorating theme parks.
- Tell students that theme park designers often use holidays as inspiration for decorating their theme parks! For example, theme parks use decorations for Thanksgiving, Valentine's Day, and Christmas.
- Ask students to imagine that they are in charge of their own theme park, and Halloween is coming up! There is a bridge in the theme park that would look really neat as a bone bridge! Show [Handout: Theme Park Bridge](#).
- Explain to students that they will think like a theme park designer and build a special bone bridge for their theme park!

Step Two: Planning a Bone Bridge (10 minutes)

- Explain to students that they will first brainstorm and plan how they will build their bone bridge.
- Divide students into pairs or small groups.
- Provide students with [Handout: Building a Bone Bridge](#). Explain to students that they will be creating a plan for their bridge on the handout.
- Explain to students that they can choose to compete with other students to create a bridge that can hold the most weight or has the most usable space on top of the bridge where people would walk. Have them select their choice on Step 1 on the handout.
- Provide students with the following materials:
 - Orange and black (or any color available) pipe cleaners
 - Pom poms
 - Q-tips
 - Wooden popsicle sticks
 - Straws
 - Clothespins (optional)

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- Have students discuss bridge plans with their group. How will they use each material? Have students brainstorm ideas and draw a final design plan for what their bridge will look like on Step 2 on the handout.

Step Three: Building a Bone Bridge (20–25 minutes)

- Explain to students that they will now create their bone bridge!
- Instruct students to work together in their groups to create a bone bridge out of their materials!
 - If students need help, encourage them to use their pipe cleaners to fasten Q-tips together into a triangle. They can use the popsicle sticks to create legs for the bridge, or planks that go across the top of the Q-tip legs that a person could walk on!

Step Four: Testing Bridges (10 minutes)

- Explain to students that they will now perform a test to see which group has the strongest bridge, or the one with the highest weight capacity.
- Provide groups that built a high capacity bridge with pumpkin candies. Ask them to stack their pumpkins to see how many they can fit in a single layer on the bridge (no stacking).
- Provide groups that built a weight-bearing bridge with pumpkin candies, candy bars, and other materials to use as weights. Ask students to stack these materials on their bridge until it collapses.
- After you figure out which bridge is the best in each category, have students discuss what worked best for them when they were building their bridges, and what didn't work. Which techniques created the best bridges and which didn't?

Materials List

Provided online:

- Handout: Examples of Theme Parks
- Handout: Theme Park Bridge
- Handout: Building a Bone Bridge

Not provided (each group or student needs):

- Orange and black (or any color available)
- pipe cleaners and pom poms
- Q-tips
- Wooden popsicle sticks
- Straws
- Clothespins (optional)
- Bag of pumpkin candies, candy bars, other materials to use as weights

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