

Name: _____

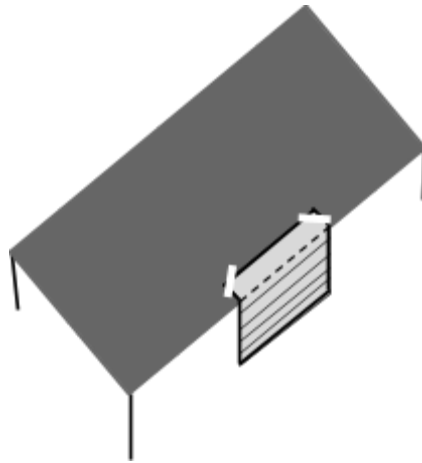
Activity 2: Lever Bending

Materials-

- 1 printed backdrop template (printer paper)
- 1 printed leaf template for part A, B, C(printer paper)
- Scissors
- Paperclips (all about the same size)
- Tape or Heavy Books

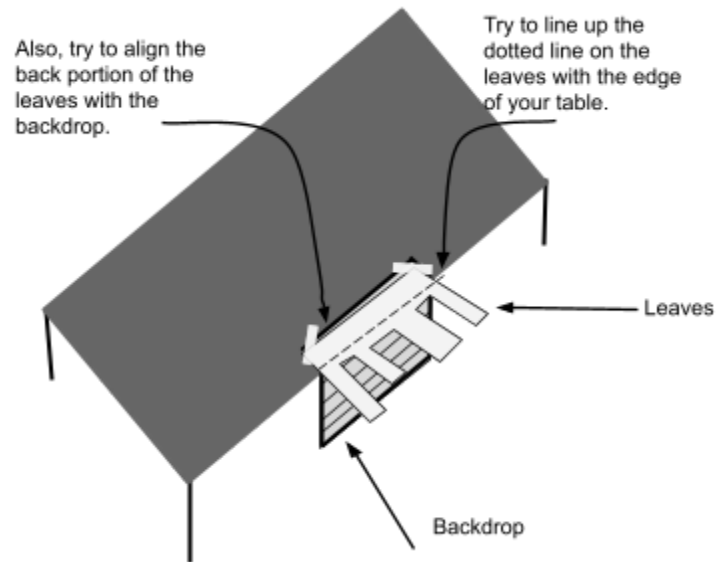
Setup-

Fold the backdrop template on the top line (below the instructions). Tape or place the backdrop template so that it hangs off of your desk or table. (In this picture, it is taped so you can clearly see what is happening). It should look like this:



For each part of this activity, you will use a **different** print out of the leaves. This is an example of how you will set up the leaves with the backdrop:

Name: _____



If possible, try to tape the leaves onto the table--not onto the backdrop piece of paper. For each part of the activity, just replace the leaves.

Name: _____

Experiments-

Part A: Different Lengths

1. Put a paperclip on the line closest to the table on leaf A. HINT: look at how close the leaf gets to the backdrop.
 - a. What happens to the leaf when the paperclip is on the first line?
 - b. Slide the paperclip to the third line. What has changed?
 - c. Keep watching what happens to the leaf as it is slid further down the leaf. What happens?
 - d. What can you conclude about how much the leaf bends to where the paperclip is placed?
2. Put a paperclip on the 3rd line of each leaf.
 - a. What do you notice about the leaves?
3. Put a paperclip on the last line of each leaf.
 - a. Which leaf bent the most? Which leaf bent the least?
 - b. Write down the order of which leaf bent the most. (Write the leaf that bent the most first. If leaves bent an equal amount, write an = sign.)

Conclusion: What can you conclude about how far away you place the paperclip from the beginning of the leaf and how much the leaf bends? What can you conclude about the length of a leaf and how much it bends?

Name: _____

Part B: Different Widths

4. Put a paperclip on the following lines (counting from the table):
 - Leaf A: 3rd line
 - Leaf B: 4th line
 - Leaf C: 5th line
 - Leaf D: 6th line
 - a. For the most part, what do you notice about the leaves?
5. Put a paperclip on the 3rd line of each leaf.
 - a. Which leaf bent the most? Which leaf bent the least?
 - b. Write down the order of which leaf bent the most. (Write the leaf that bent the most first. If leaves bent an equal amount, write an = sign.)

Conclusion: What can you conclude about how wide the leaf is and how much it bends?

Part C: Different Widths & Lengths

6. Put a paperclip on the last line of each leaf.
 - a. Which leaf bent the most? Which leaf bent the least?
 - b. Write down the order of which leaf bent the most. (Write the leaf that bent the most first. If leaves bent an equal amount, write an = sign.)

Conclusion: What type of leaf bends the least easily? What type of leaf bends the most easily? (i.e., long and wide leaves or short and thin leaves)