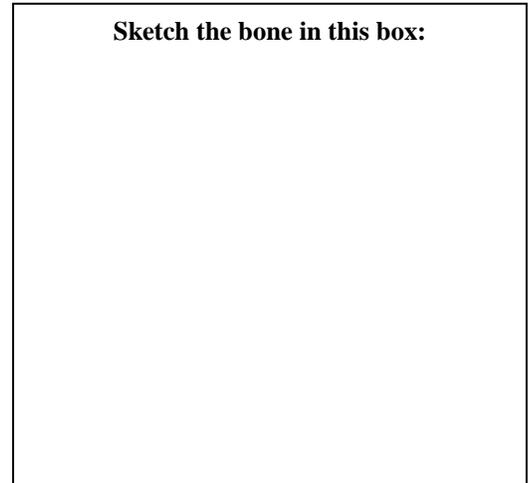


Bone Breaking Design Worksheet

Part 1 *Gathering information*

1. What does the chicken bone look like? Draw it here:
2. Write down as many things as you can that you noticed about the bone through your observation, such its size, color, shape and texture. Is it tough or soft? Is it smooth or rough?

Sketch the bone in this box:



Testing: Write your prediction about the total amount of weight you think the bone will be able to support (hold) before it fails (breaks).

3. I think the chicken bone will be able to hold _____ lbs before it breaks.
4. The actual weight the chicken bone held was _____ lbs.

Part 2: *Analyzing the information*

5. Were you surprised the chicken bone was able to carry as much weight as it did? Explain why or why not?

6. What did you notice about the chicken bone as more weight was added?

7. If we conducted the same test with a human bone, do you think it would be able to hold more, less or the same weight as the chicken bone? Explain why.

Part 3: *Engineering Design:*

8. Select the type of cast your team will choose to design by circling one item below.

cast

splint

Names: _____ **Date:** _____

9. Sketch a drawing of your design in the box below. Make sure to label your parts.



10. Make a list of the items you need to purchase at the “class store,” below. Remember — you have a limited amount of money to use.

<u>Item Name</u>	<u># of Items</u>	<u>Cost</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

11. How did you use the information you found during the demonstration in the design of your cast/splint (Part 1 and Part 2)?
