Name: **Date:** **Class:**

Biodegradable Packaging Worksheet Answers

Research:
Watch the video and read the resources provided by your teacher and then answer the questions below.

1. Write down three things you learned about plastics:
   Answers will vary.

2. Write down three things you learned about banana leaves:
   Answers will vary.

Brainstorm:
How do you think banana leaves and/or other biodegradable materials could replace plastic packaging?
Answers will vary.

Instructions for testing materials:
For each material below:
1. Place the material over the top of the trash can or box and secure it to the edges with clamps or binder clips. (Note: One team member can also hold the material while another student applies weights on top.)
2. Once the material is placed securely, have one team member place the lightest weight on top.
3. Keep adding weight in increments until the material tears.
4. Record the last weight the material could hold without tearing below.

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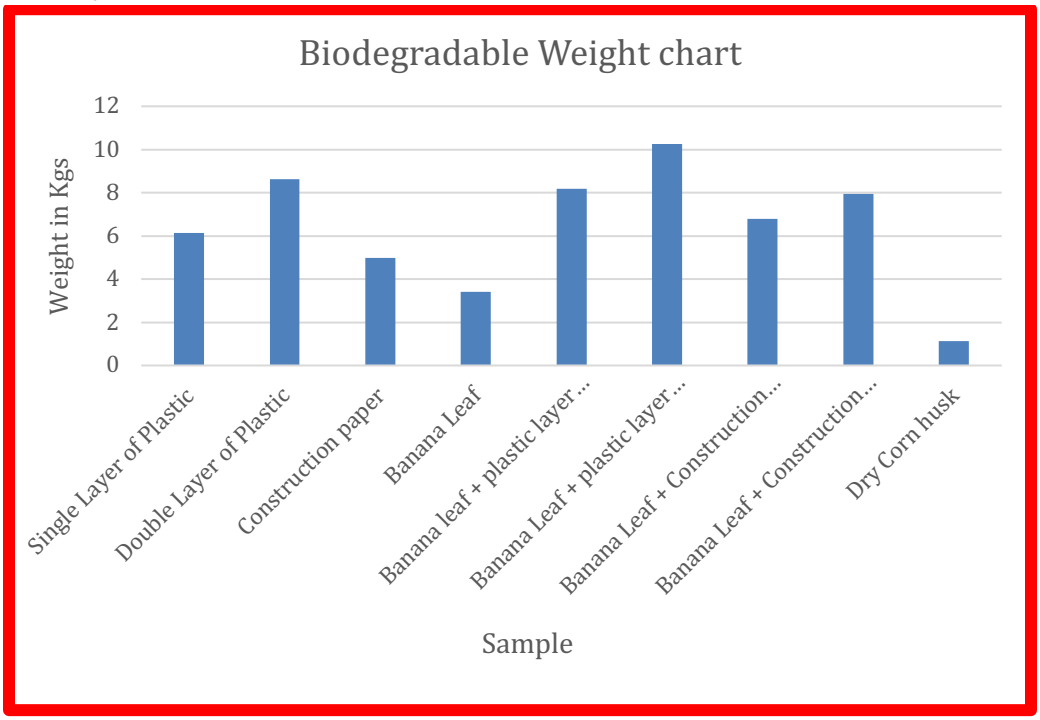
Sample	Weight (lbs.)	Weight (kg)
Single layer of plastic	13.5	6.123
Double layer of plastic	19	8.626
Construction paper	11	4.990
Banana leaf	7.5	3.402
Banana leaf + plastic layer below	18	8.172
Banana leaf + plastic layers on both sides	22.5	10.250
Banana leaf + construction paper	15	6.803
Banana leaf + construction paper + plastic layer	17.5	7.937
Dry corn husk	2.5	1.134

Plotting materials data:

Plot the data collected above by creating a bar graph. Put the sample name on the x-axis and the associated weight on the y-axis.



Reflection:

1. How did the testing experiment go? What worked and didn't work?
   Answers will vary.

2. Based on your data, which layer was the strongest?
   Banana leaf with a plastic layer on both sides

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3. Based on your data, which layer was the weakest?
   Dry corn husk

4. How would you run the experiment if you redid this activity? Why?
   Answers will vary.

5. What combination of layers would you test that didn't get tested? Why?
   Answers will vary.

6. What other ideas could improve your results? Why?
   Answers will vary.