Name: _____

Period:_____

HW Unit 7:4 — Experiments
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Assigned: Thurs., 2/1 and Fri., 2/2
Due: Mon., 2/5 and Tues., 2/6

1) A 20 N object is pushed. Is 20 N the mass or weight?
2) A 15 kg object is pulled. Is 15 kg mass or weight?
3) Find the mass of a 2 kg object.

4) Find the weight of a 50 N object.

5) Find the weight of a 4 kg object.

6) Find the mass of a 30 N object.

7) What do we call a variable that doesn't change in an experiment?

8) What do we call a variable that we change in an experiment?

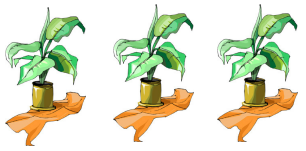
9) How many variables do we change in a good experiment?

10) Why?

11) What is the control setup for this experiment?

12) Which plant food is better?

13) What does the "No plant food" setup tell you about plant food A?



Plant Food A | *Plant Food B* | *No Plant Food*

Start	10 cm	10.1 cm	9.8 cm
week 1	11.1 cm	12.2 cm	11.8 cm
week 2	12.7 cm	14.5 cm	13.2 cm

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14) Procedures are how someone performs an experiment. Why is it important that a scientist records their procedures?

15) Why is it important that experiments are repeated several times?

16) In our experiment with the car and hanging mass.
A) What was "m" in F = ma?
B) What was the force in F = ma?
C) What did we measure in place of acceleration?
D) If the time it took the car to go down the track was smaller (decreased), the acceleration of the car:
E) When you increased the hanging mass, did the cart accelerate faster or slower?

17) When you increased the car's mass,
A) Did it go faster or slower?
B) Did the time increase or decrease?

18) Use the data table to answer the following:
A) What is the control variable?

B) What is the experimental variable?

C) Which car accelerated the fastest?

Mass	Force	Time
just car	2N	1.1 sec
car + 1 bar	2N	1.63 sec
car + 2 bars	2N	2.1 sec

19) Find the acceleration of this object