Name:

Period:

The Effect of a Paper Helicopter's Weight on Target Landing

Question: How does a paper helicopter's _____ affect that same paper helicopter's _____ consistently in a predetermined spot?

Hypothesis: The *(more or less)* _____ a paper helicopter weighs, the more consistently it will _____ in a predetermined spot.

Prediction: **If** a paper helicopter's weight is tested to determine the consistency of it landing in a predetermined spot, **then** the *(more or less)* _____ a paper helicopter weighs, the more consistently it will _____ in a predetermined spot, **because** _____

_____

_____.

List of Materials:

-
-
-
-
-
-
-
-

Variables:

Independent (what will be changing)**:** _____

Dependent (what will respond to the change)**:** _____

Constants (what must remain the same)**:** _____

_____

Experimental Setup: (a labeled conceptual model of your experiment)

Procedure:

1. Prepare the _____ for flight. Cut on the solid lines and fold on the dotted lines.
2. Add one small _____ to the paper helicopter for its initial weight.
3. Stand on a chair to _____ the paper helicopter from a height of _____.
4. _____ the paper helicopter attempting to land it as close to the target as possible.
5. _____ the distance from the center of the target landing spot to wherever the helicopter actually lands.
6. In the data table, record the number of _____ the paper helicopter is from the predetermined target landing spot.
7. Repeat steps three through six, four more times for the first helicopter.
8. Remove the small paperclip and add one large _____ to the paper helicopter.
9. Complete steps three through six, five times with the _____ paperclip.
10. Add the small paperclip to the paper helicopter along with the large _____.
11. Complete steps _____ through _____, _____ times with both paperclips.
12.

Data:

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Trial	Helicopter One (small paperclip)	Helicopter Two (large paperclip)	Helicopter Three (both paperclips)
One			
Two			
Three			
Four			
Five			
AVERAGE			

The Effect of a Paper Helicopter's Weight on Target Landing

Qualitative Observations for Helicopter Drops from 2 m Height

Helicopter One (small paperclip)	**Helicopter Two (large paperclip)**	**Helicopter Three (both paperclips)**

Results: (Explain what happened in the experiment, observations made, and which paper helicopter had the most consistent, on-target landings according to your table and graph) _____

_____

_____

_____

_____

_____.

Discussion:

1. Restate the Question.
2. State the Claim.
3. Explain the Evidence for the Claim (Summarize the data from the experiements).
4. Provide Reasoning of the Evidence (Compare the data to the hypothesis. Do the Results support hypothesis? Why?)
5. Discuss what was learned and what is the relationship between the variables.

Reflection:

1. What went well with the experiment?
2. What were problems with the experiment?
3. What would be done differently in the experiment next time?
4. Based on the data and what was learned, what other questions are there to investigate?