How to Pop Popcorn Data Collection

Name: _____

How are you collecting data:

Step 1: _____

Step 2: _____

Step 3: _____

Data:

	Time	Kernels
Experiment 1: _____		
Experiment 2: _____		
Experiment 3: _____		

What can you determine from your data?

(Example: What method popped the best? What data supports your claim?)

_____

_____

Lab Write Up

Use what you have learned about heat transfer and the ways heat is transferred (conduction, convection, and radiation) to answer the question in CERS format. Be sure to do the following. Check off when done.

☐ **Claim:** Restate and answer the question of what method popped the best popcorn.

☐ **Evidence:** Describe the data from all 3 experiments with NUMBERS.

☐ **Reasoning:** How does energy transfer (conduction, convection, or radiation) affect the way the kernels pop? Describe how the energy moves.

☐ **Summary:** Summarize your findings and how it relates to the claim. (Don't forget transition words…)

Question: How does the method of popping popcorn affect the way the kernels are popped?

_____

_____

_____

_____

_____

_____

How are you collecting data: *Check the box*

How to Pop Popcorn Data Collection

Name: _____

☐ I am collecting time from the first pop to the last pop.

☐ I am collecting time from when the time begins to the first pop

☐ I am collecting time from the first pop to the last pop

☐ I am counting the number of kernels left at the end of the experiment.

Data:

	Time	Kernels Left
Experiment 1: Air Popper		
Experiment 2: Pan Popping		
Experiment 3: Microwave		

What can you determine from your data?

I can determine that popcorn popped by the _____ popped the best.

Time: I know this because the time was _____- _____ for the kernels to pop

Kernels: I know this because there were _____ kernels left in the _____ experiment.

Lab Write Up

Use what you have learned about heat transfer and the ways heat is transferred (conduction, convection, and radiation) to answer the question in CER format. Be sure to include your claim (what popped the best), evidence (data from all 3 experiments), reasoning (the description of energy transfer – conduction, convection, or radiation) and why that made a difference in the results.

Question: How does the method of popping popcorn affect the way the kernels are popped?

Claim: The popcorn popped by the _____ popped the best.

Evidence (data): The air popper was _____ energy transfer and the results were _____. The pan popping was _____ energy transfer and the results were _____. The microwave was _____ energy transfer and the results were _____.

Reasoning (scientific explanation): The _____energy transfer popped the best. The way the energy is transferred is by _____.

Summary: Therefore, popcorn placed in the _____ using _____ energy transfers creates the best popped popcorn.