

Name _____

Extension: Popcorn Experiment

Conduction, Convection, Radiation

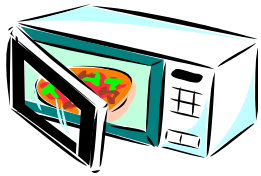


***For each station, follow the cooking directions on the lab table.

Station 1 - Microwave popcorn

Observe what happens as the popcorn is popped and fill out the chart below.

	Start Time	Time First Kernel Popped	Time Last Kernel Popped	Total Time (from start time to last kernel popped)
Microwave Popcorn	0:00			



How is heat reaching the kernels?

What type of heat transfer is this? Explain why.

In the box, draw a simple diagram showing the transfer of energy. Make sure to label how the heat is transferred.

Station 2 – Whirly Pop

Observe what happens as the popcorn is popped and fill out the chart below.



	Start Time	Time First Kernel Popped	Time Last Kernel Popped	Total Time (from start time to last kernel popped)
Whirly Pop	0:00			

How is heat reaching the kernels?

What type of heat transfer is this? Explain why.

In the box, draw a simple diagram showing the transfer of energy. Make sure to label how the heat is transferred.

Station 3 - Air popper

Observe what happens as the popcorn is popped and fill out the chart below.

	Start Time	Time First Kernel Popped	Time Last Kernel Popped	Total Time (from start time to last kernel popped)
Air Popper	0:00			

How do the kernels heat?

What type of heat transfer is this? Explain why.



In the box, draw a simple diagram showing the transfer of energy. Make sure to label how the heat is transferred.

Station 4 – Energy Transfer Examples

Directions – Identify each example as conduction, convection or radiation.

1. _____	13. _____
2. _____	14. _____
3. _____	15. _____
4. _____	16. _____
5. _____	17. _____
6. _____	18. _____
7. _____	19. _____
8. _____	20. _____
9. _____	21. _____
10. _____	22. _____
11. _____	23. _____
12. _____	24. _____

Which station had the popcorn START popping faster? _____

Which station had the popcorn FINISH popper faster? _____

Which type of heat transfer seems to be faster? _____