

Fourth Grade Science Fair Project

Heat Transfer:

Heat is transferred by conduction, convection and radiation.



- Insulators help to reduce thermal conduction.
- Thermal conduction is the transfer of heat by the direct contact of particles of matter.

PURPOSE (This is the question to the experiment.)	How do I know what material is the best insulator?
PROCEDURE (This is the list of steps in this experiment)	Goal: Testing temperature over time Only one experimental variable should be changed at a time. Students could take 3 identical containers of hot water (all at same starting temp) and surround with varying insulators and take temperature at different time intervals.
MATERIALS (List or drawing of materials)	Thermometer, containers, Insulating Materials: fleece, shredded newspaper, cotton balls, sawdust, bubble wrap, Styrofoam, wool, sand, nothing...
HYPOTHESIS (Educated guess to what might happen)	I think the material that will be the best insulator is.....
OBSERVATIONS (Actual data)	1. A table or chart of the time and temperatures of varying insulators 2. Pictures taken during the experiment.
CONCLUSION (Answer to the initial question)	My experiment proved that the best insulating material is... Insulators are important because The test was a fair and controlled experiment because.....

Questions? Email Sally Fitzgerald sfitzgerald@thacherschool.org

Resource: Search for Bill Nye Heat videos