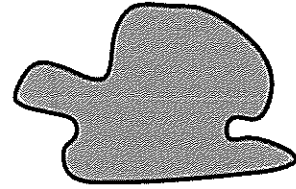
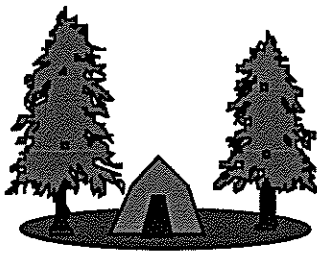


*Heat Transfer:
A Practical Application*

Name: _____

Per: _____



Hikers and hunters often discuss the relative merits of wearing wool and cotton as well as other fabrics when out in cold weather. This is particularly important when their clothing gets wet. If you spend much time in outdoor activities, you'll be particularly interested in the results of this experiment. Before starting this inquiry, answer the question below on your own experience or on any other information.

1. If you were on a hike on a cold windy day, which would keep you warmer, wet wool clothing or dry cotton clothing?

PROBLEM: In what order, from best to worst, would the following materials prevent heat loss from a heat source: wet wool, wet cotton, dry wool, dry cotton?

BEST(keeps you the warmest)

NEXT(medium best)

NEXT(least best)

WORST(loses the most heat)

HYPOTHESIS: _____

MATERIALS AVAILABLE PER TABLE:

MATERIALS AVAILABLE PER TABLE:

- 5 Celsius thermometers
- pieces of string
- 5 150 mm X 20 mm test tubes
- 2 500 or 600 ml beakers
- wire test tube holder
- 2 squares of wool
- 2 squares of cotton and water
- 2 25 ml graduated cylinders (or 100 ml graduated cylinders)
- hot and cold water
- Fan

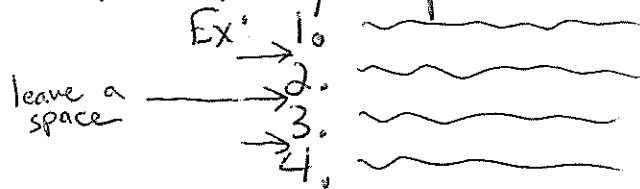
EXPERIMENTAL DESIGN:

Design an experiment that would test your hypothesis using the materials listed above. Remember to have appropriate controls. Draw how the experiment will be set.

* On a separate sheet of paper:

Procedure: List the instructions for implementing your experiment. Be specific enough so that anyone can follow. Write in 3rd person (like a recipe).

* Number your procedures



Experimental Design: Draw a picture which represents your experimental set-up. Label your drawings & include a control set-up.

Data: Make blank data tables for recording. Use a ruler & title all columns.

Ex:

Growth of a plant	
Time (days)	Height (cm)
1	
2	
3	
4	
5	
6	