

# Outdoor Education Group Travel, Blue Jeans, Heat Equation, and Snow Flake Principle TAKE HOME TEST /28

Name: \_\_\_\_\_

## Two Keys to Group Travel

1. Visual Contact  
You should have visual contact with all group members
2. Verbal Contact  
You should be able to hear from front to back



## Leadership Roles

1. Front Leadership  
Function: To lead and warn group of upcoming obstacles
2. Middle Leadership  
Function: To be the glue that holds the group together
3. Rear Leadership  
Function: To encourage and keep the group moving

## Why we don't we wear "Blue Jeans

- \_ Porous (Wind Proof ?)
- \_ Restrictive
- \_ Wick Moisture
- \_ Slow Drying
- \_ Heavy
- \_ No insulation value (cotton)
- \_ Wide openings (Heat Escape)
- \_ Attract Bugs and opportunity to get at you

## The Heat Equation

How we are able to regulate our body's heat so that when we are in the outdoors we are not too hot so that we sweat or too cold so that we stay warm and not get hypothermia. The following factors (heat helpers and heat enemies) all contribute to this equation:



Heat      Heat  
Helpers    Enemies

## A. HEAT HELPERS

### 1. RADIANT HEAT

*radiant heat is heat that is produced from an external source.*

*E.g. – a camp fire, the sun*

### 2. METABOLIC RATE –

*metabolic heat is a result of bodily functions working that produces heat.*

*There are two main ways*

1. *Exercising,*
2. *Eating*

### 3. LAYERING

*is actually a way to trap dead space and your body heats it up and that area to keep you warm. The actual advantage of layering is that you can control the amount of dead space that you create almost like a thermostat Also you can have your layering system be very functional. Whereas if you only have one layer, your thermostat is not so sensitive and functional*

## B. HEAT ENEMIES

### 1. CONDUCTION -

*is the principle that heat move from hot to cold simply stated. So if you sit in the snow the heat will be transferred out of your butt. Also water speeds up conduction by 25 times*

### 2. TEMPRATURE

*the colder the temperature is outside, the tougher it is to retain heat or trap heat*

### 3. WIND –

*Wind causes convection to occur. This result in body heat being transferred off the body surface at a quicker rate Also wind is also the cause of the wind chill factor that can result in a lower temperature. To avoid stand on lee side of object*

### 4. MOISTURE –

*moisture causes evaporation to occur that results in body cooling. Also moisture speeds up conduction*

### 5. FITNESS

*The more that you are out of shape the heavier you breath, the more warm air you breath out which causes your body core to cool*

## X – FACTORS

### 1. ALCOHOL

*After the first drink, alcohol vasodilates you blood vessels in the bodies core which cause the warm blood to leave to the periphery and the cool blood from the periphery to the body core which cools the body core temperature and accelerates hypothermia*

### 2. CIGARETTES

*Cigarettes causes vasoconstriction of the periphery which leads to cold hands. Besides that fact that it causes lung cancer, throat cancer, yellow teeth, burnt fingers and major wrinkles around the mouth*



## Snow Flake Principle

A snowflake represents our Class, with each point representing the attitude of each student in the class. In order for the class to be successful we must “Check our attitudes or ego’s at the door”. If in fact we do that then the snowflake’s point will be come smooth, which allows us to work in harmony and be very successful this semester . How high is your point on the snowflake?

Start of Semester End of Semester - (pointy attitudes) (nice and smooth)

**Short Answer Questions – Answer on a separate piece of paper /28**

1. List the two important factors involved in safe and effective group travel (2)
2. List 5 reasons why you don't wear blue jeans in the outdoors? (5)
3. What is the heat equation? (1)
4. What are the three heat helpers? (3)
5. What are the 5 heat enemies? (5)

6. According to one of the heat helpers what should you do, when camping to keep warm just before you go to bed? (2)
  
  
  
  
  
  
  
  
  
  
7. According to the heat enemies, list two reasons why it is crucial that you stay dry in the outdoors if you want to warm? (2)
  
  
  
  
  
  
  
  
  
  
8. What are the 2 X factors that accelerate the process of hypothermia? (2)
  
  
  
  
  
  
  
  
  
  
9. How does smoking make your hands colder, than if you did not smoke? (2)
  
  
  
  
  
  
  
  
  
  
10. How does alcohol accelerate the process of hypothermia? (1)
  
  
  
  
  
  
  
  
  
  
11. What is the snowflake principle? (1)
  
  
  
  
  
  
  
  
  
  
12. List two ways you can make the snowflake smoother? (2)