



# **Introduction to Wilderness Survival**

**Basic Mountain Operations Course 13-01  
Law Enforcement Mountain Operations School  
Okanogan Integrated Border Enforcement Team**

# Targeted Learning Objectives



## The students will:

- ▲ Understand and demonstrate the importance of prevention, awareness and attitude as keys to survival.
- ▲ Understand and demonstrate the importance of shelter; create one from natural materials and those items carried in their packs.
- ▲ Understand and demonstrate the importance of warmth; start a fire using natural materials and firestarters carried on their person.
- ▲ Understand and demonstrate the importance of hydration; boil water on their fire.



# Reality Check



- Being lost or stranded doesn't necessarily constitute an emergency, *if* you are prepared.
- Nature is neutral, but unforgiving.
- Professionals in the wilderness can't merely survive; we must thrive.
- This course will **not** teach you everything you need to know. Gain and practice additional skills **before** you need them.

# Preventing Problems



## Plan ahead:

- Mission
- Team (not solo)
- Weather
- Hazards
- Nav (safety bearings)
- Emergencies
- Trip Plan





# Preventing Problems



## Prepare:

- **Mentally**  
Trained  
Focused
- **Physically**  
Fit  
Healthy
- **Equipment**  
Appropriate  
Maintained



# Gear Selection



- ▲ Reliability – will it work
- ▲ Durability – will it last
- ▲ Versatility – many uses ...
- ▲ Effectiveness – does jobs well
- ▲ Redundancy – key items
- ▲ Training – know how to use
- ▲ Simplicity – motor skills
- ▲ Integrity – waterproof
- ▲ Sensitivity – heat & cold
- ▲ Maintainability – in field
- ▲ Standardization – item / batteries
- ▲ Affordability – life vs. \$
- ▲ Size – fit pockets
- ▲ Shape – comfy
- ▲ Safety – you & others
- ▲ Weight – carry it
- ▲ Noise – tactics
- ▲ Odor – animals
- ▲ Color – hide v. seek
- ▲ Reflectivity – signal
- ▲ Luminescence – find
- ▲ Lanyards – retain
- ▲ Legality – borders & flights



**Mental Health**  
**You Plus 1**

**Extra Clothing**  
**Shelter & Protection**  
**Sharp Knives & Tools**  
**Eats**  
**Navigation & Travel**  
**Tinder & Firestarters**  
**Illumination**  
**Aid Kit**  
**Liquids**  
**Signaling Devices**

## **Building a Kit**



**Don't rely on your agency to  
adequately equip you.**

**Tailor your kit to the location,  
season and mission.**

**Practice with it.**

**Replace expired items.**

**Ruck discipline.**

**Carry it with you, always!**



I'm just going...



# 3 Layers of Defense



## 1. What is attached to your body.

- Fire starters\*
- Light
- Compass
- Etc.



A collection of items, likely evidence, laid out on a white, wrinkled fabric surface. The items include a black tactical belt with several pouches, a handgun in a black holster, a red lighter, a small round container with a yellow lid, a black bag, and a small metal object with a chain.





# 3 Layers of Defense



## 3. What is in your pack



# Situational Awareness



- ▲ Keep your head on a swivel.
- ▲ See the threat before it sees you.
- ▲ Stay hydrated, warm, and dry.
- ▲ Weigh every risk.
- ▲ Monitor your own and your partners' conditions.
- ▲ Monitor your partners' location (machines).
- ▲ Stop to fix things before they get worse.
- ▲ Navigate well; know your location and your exits.
- ▲ Be willing to change the plan (thoughtfully) or to bail out and go home.



# Human Body Requirements



- |                             |           |
|-----------------------------|-----------|
| 1. Positive Mental Attitude | 3 seconds |
| 2. Oxygen                   | 3 minutes |
| 3. Shelter                  | 3 hours   |
| 4. Warmth                   | 3 hours   |
| 5. Water                    | 3 days    |
| 6. Sleep                    | 3 days    |
| 7. Food                     | 3 weeks   |

# Human Body Requirements



- |                                    |                  |
|------------------------------------|------------------|
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| • <b>Oxygen</b>                    | <b>3 minutes</b> |
| <b>2. Shelter</b>                  | <b>3 hours</b>   |
| <b>3. Warmth</b>                   | <b>3 hours</b>   |
| <b>4. Water</b>                    | <b>3 days</b>    |
| • <b>Sleep</b>                     | <b>3 days</b>    |
| • <b>Food</b>                      | <b>3 weeks</b>   |

# Positive Mental Attitude



If the excrement collides with the rotating ventilation device:

**S**it

**T**hink

**O**bserve

**P**lan



# Positive Mental Attitude



- ▲ Be a strong (and positive) leader.
- ▲ If things go wrong, forget it and focus on doing the *next thing* correctly.
- ▲ Improvise, Overcome, Adapt: You can't change the environment, so change yourself instead.
- ▲ Think of family, your sense of pride, or anything that will motivate you to never give up.
- ▲ Pray or repeat out loud that you will survive!
- ▲ Be constructive, build tools, play games, sing.
- ▲ Laugh: it is contagious and helps relieve stress.

# Shelter



In most situations, this takes priority over starting a fire.



**Immediate Action**

**vs.**

**Long-Term**



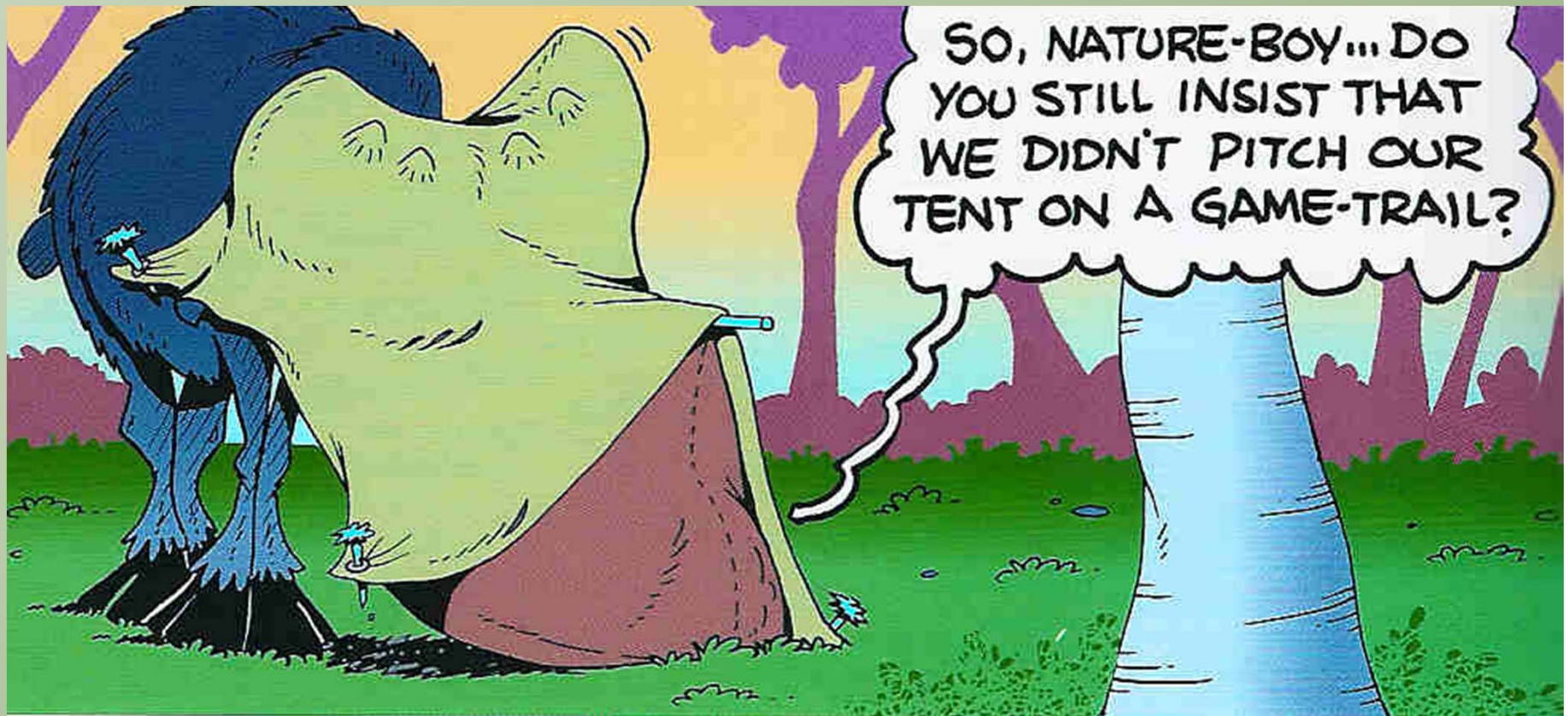


# Shelter



## Location, Location, Location

**Look up, down and all around for hazards.**



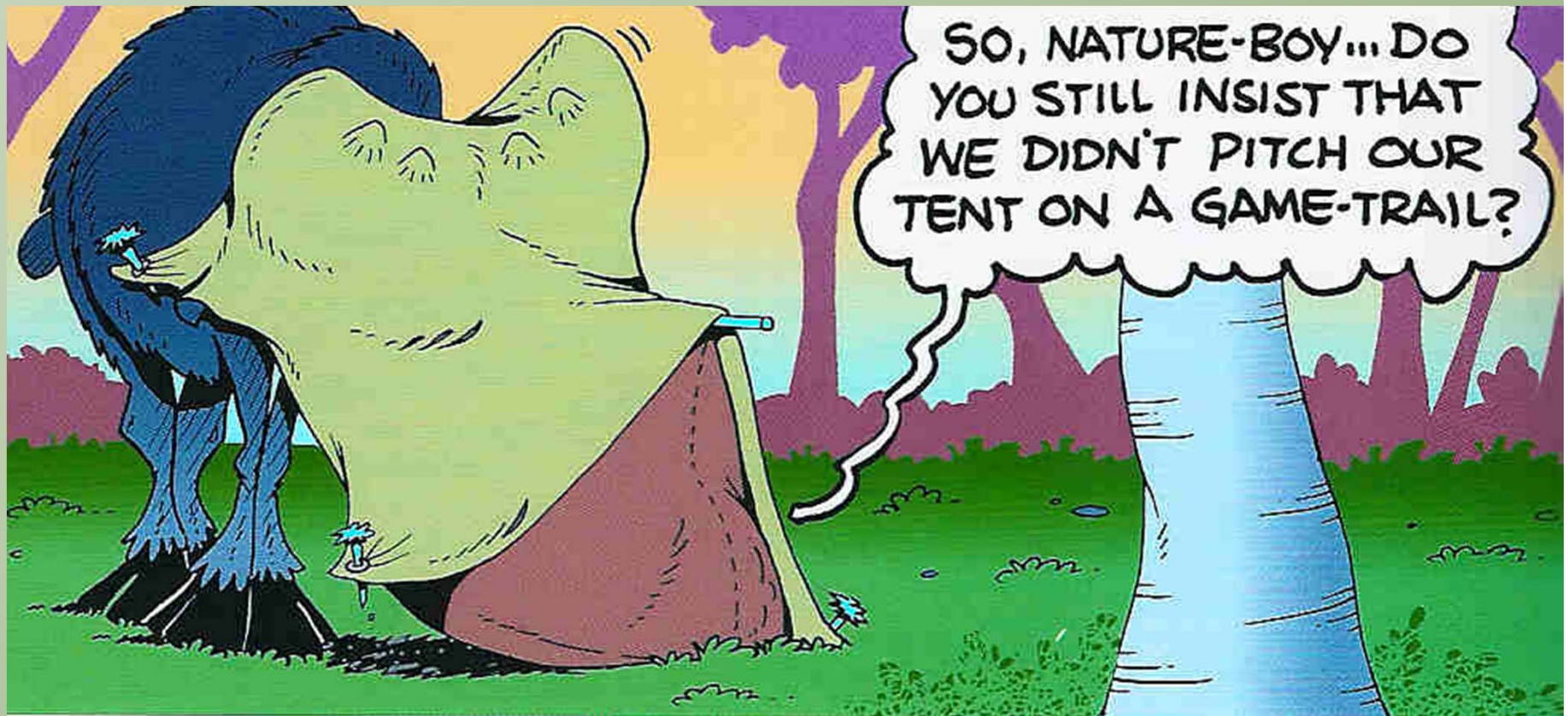


# Shelter



## Location, Location, Location

**Consider comfort, resource availability, and visibility.**





# Construction Considerations



**Objectives**

**Resources**

**Size**

**Insulation**

**Water Proofing**

**Ventilation**

**Orientation**

**Visibility**

It should provide the most protection for the least energy expended.  
It should be just big enough.



B M O C



# Utilize Natural Shelters

**Avoid caves during thunder storms!**



# Tarps



The biggest mistake in winter is to make it too big and too open.



# Tarps



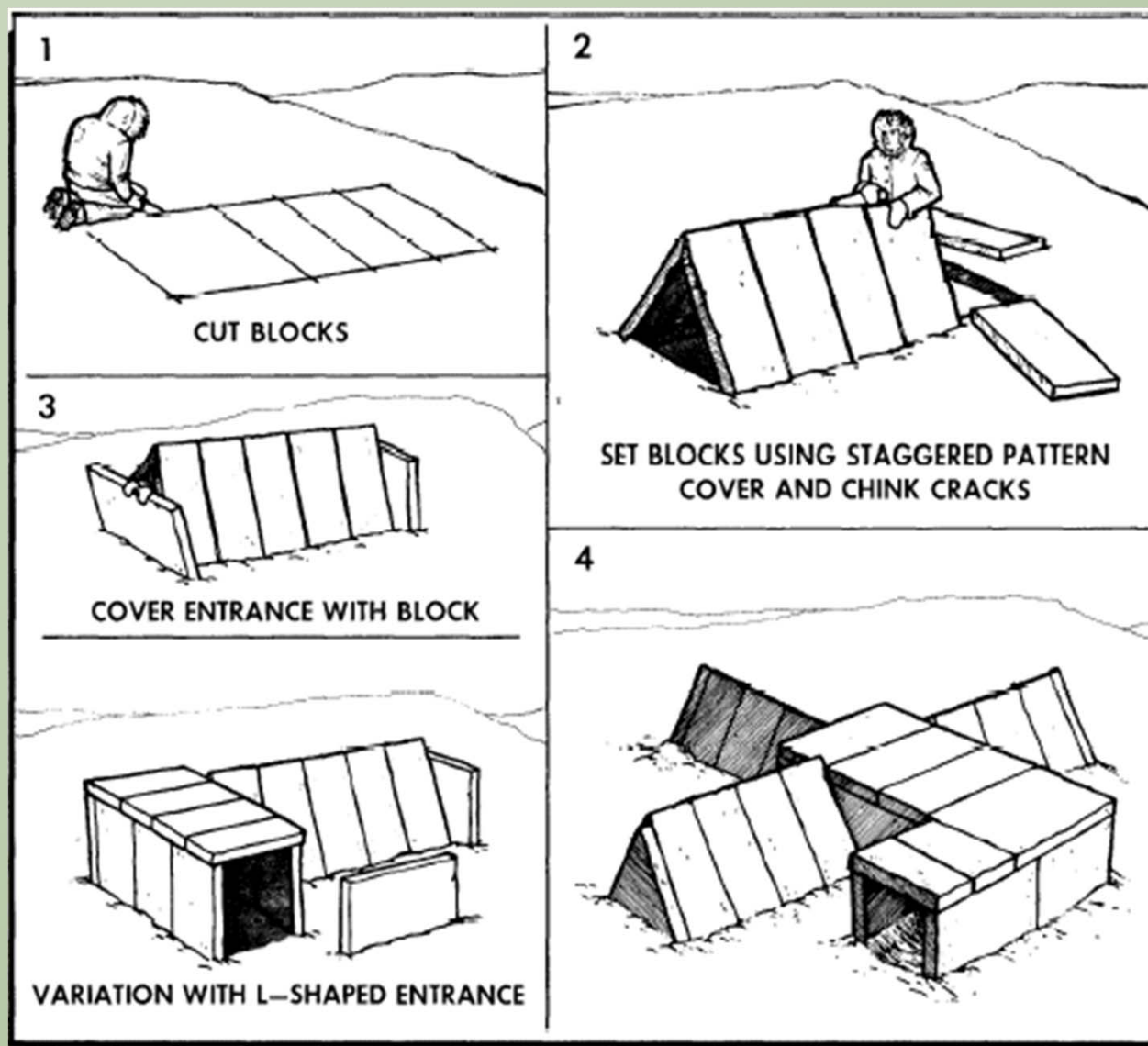
Must be taut to keep from flapping and to shed snow.

No insulation on their own.





# S n o w T r e n c h



Position entrances 90° to the wind to avoid drifting.



# Trench / Coffin



# Snow Cave



**1** DIG ENTRANCE TUNNEL 18"  
WIDE AND CHEST HIGH



**2** REMOVE RECTANGULAR  
PORTION OF SNOW  
CROSSWAYS TO ENTRANCE,  
THEN DIG UPWARD IN ALL  
DIRECTIONS  
LEAVING  
SLEEPING  
FLOOR FLAT



**3** EXTEND ENTRANCE IN  
ABOUT 2 FEET AND  
DOWNWARD ABOUT A  
FOOT



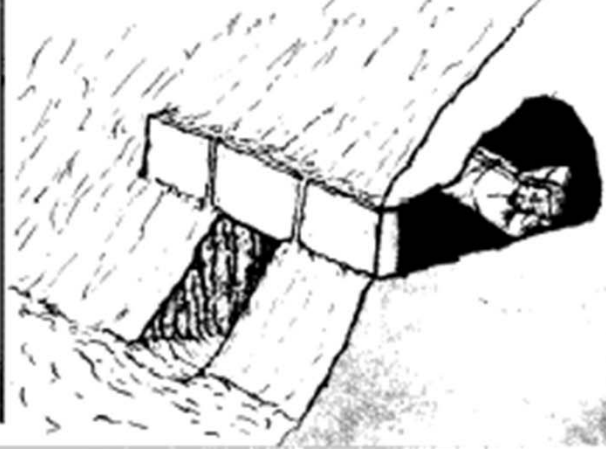
**4** CUT ENTRANCE BLOCKS  
AND PLACE ACROSS  
ENTRANCE



**5** FILL CRACKS BETWEEN  
BLOCKS WITH SNOW

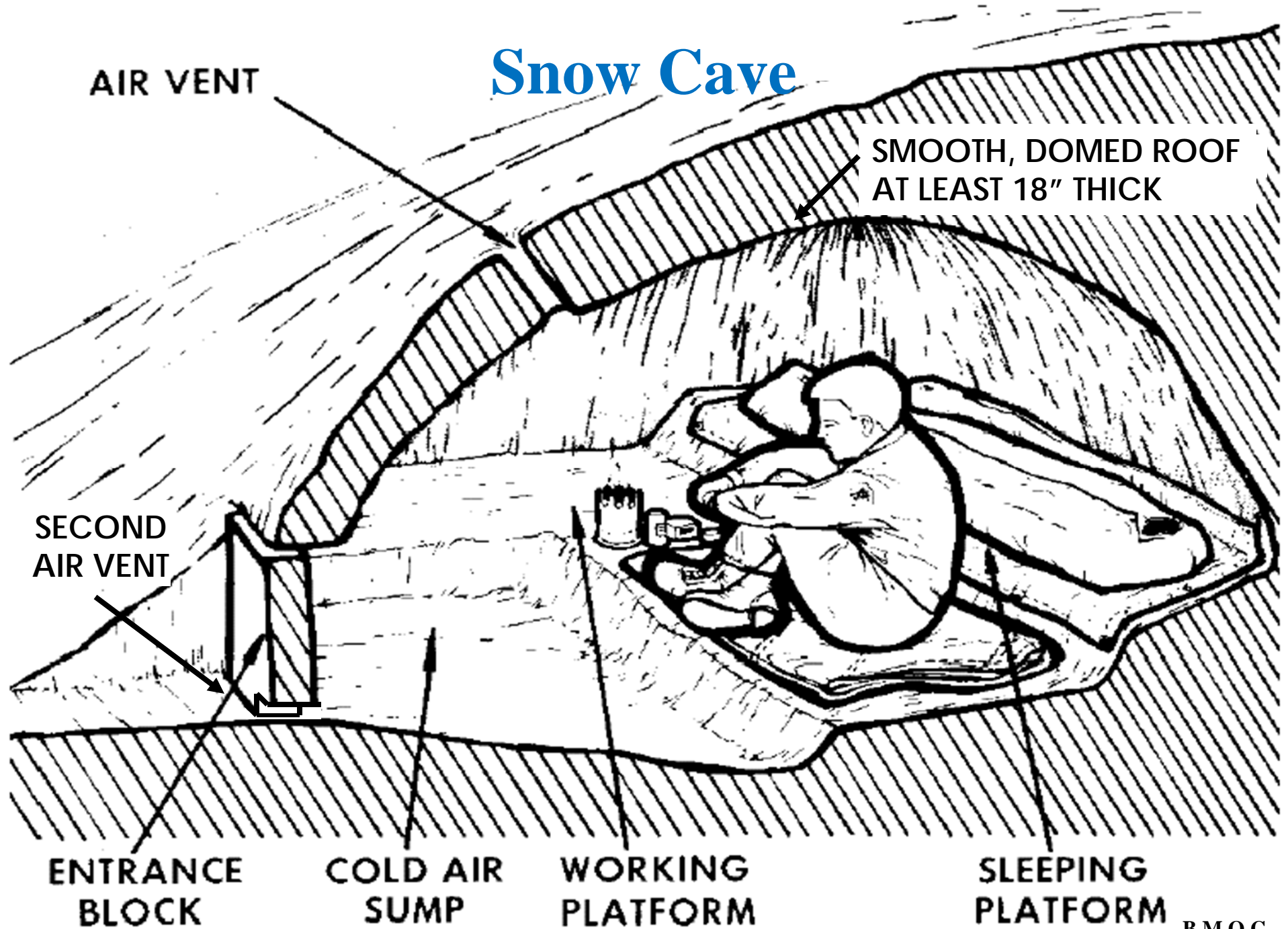


**6** CROSS SECTION OF  
COMPLETED SHELTER





# Snow Cave





# Quinzee



Pile snow and insert sticks at least 12" long.

# Thermalized A-Frame



By digging down to bare earth, it will be apx. 20°F (-7°C) inside.





# Thermalized A-Frame



Cover it with tarp or boughs.  
Add kick-out logs and make plug.



# Thermalized A-Frame

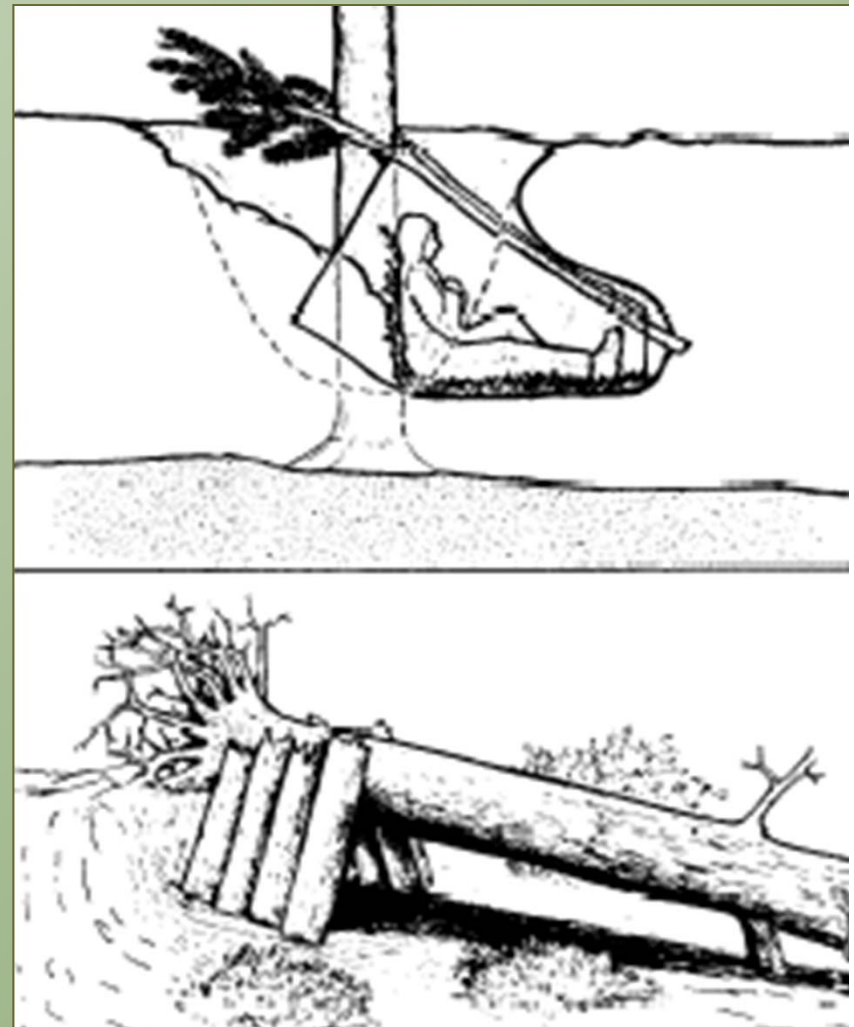
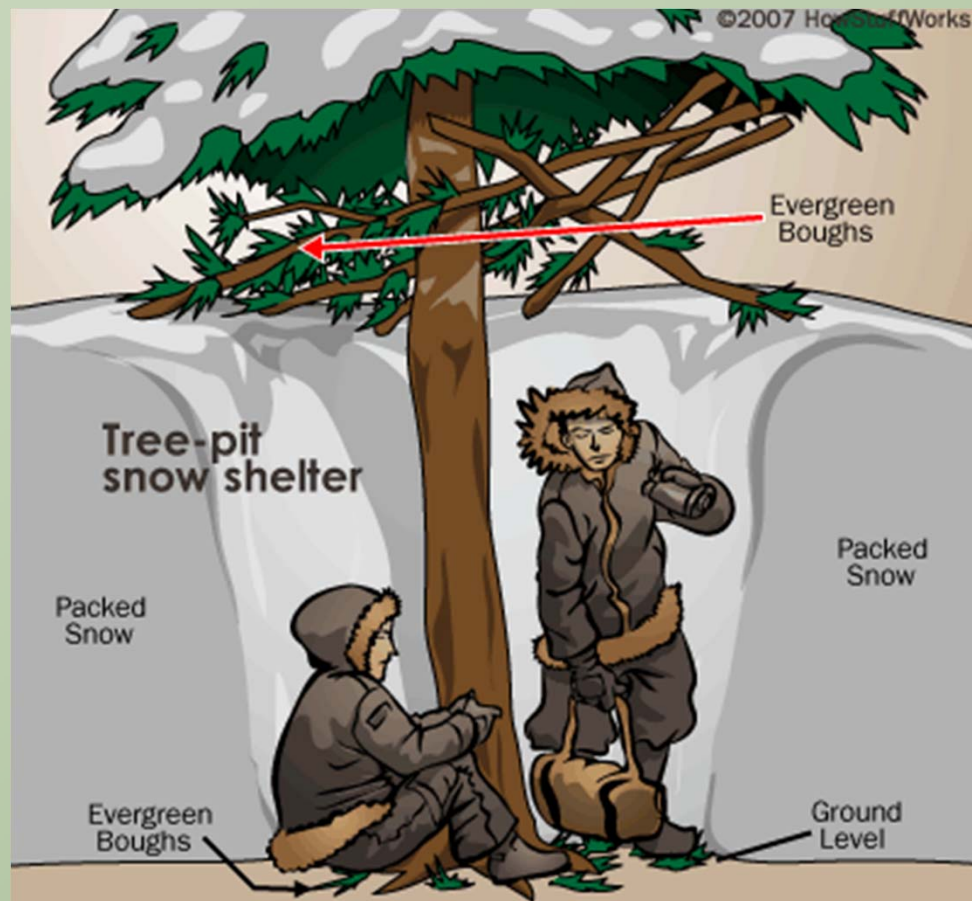


# A-Frame Video





# Trees



# Trees





# Pre-Fabricated Shelters



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# Warmth

## Remember the “Eds”

1. **Head (covered)**
2. **Dead\* (air space)**
3. **Shed\* (water & stay dry)**
4. **Bed\* (crawl into one)**
5. **Red (fire)**
6. **Fed (eat & drink)**
7. **Tread (exercise)**



# Head & Neck Covered



- ▲ **Highly vascular = lots of heat loss.**
- ▲ **Take a wool or fleece hat**
  - **Even during summer**
  - **Good weight to warmth ratio**

# Dead Air Space



- ▲ Windbreaks and other shelters.
- ▲ Improve with dry insulation.
- ▲ Don't neglect your hands & feet!







## **Shed Water**

- 1. Don't sweat!**
  - Ventilate / Layer Down**
- 2. Shelter / Raingear**
- 3. Powder snow**

## **Bed Down**

- 1. Sleeping bag**
- 2. Sleeping pad**
- 3. Hot water bottle**
- 4. Cuddle**



# Red Fire



## Fire Tripod

### 1. Fuel

- Dead
- Dry

### 2. Oxygen

- Enough
- Not too much

### 3. Heat

- Ignition
- Conservation





# Fire Video



# Fire Site Preparation



## Location

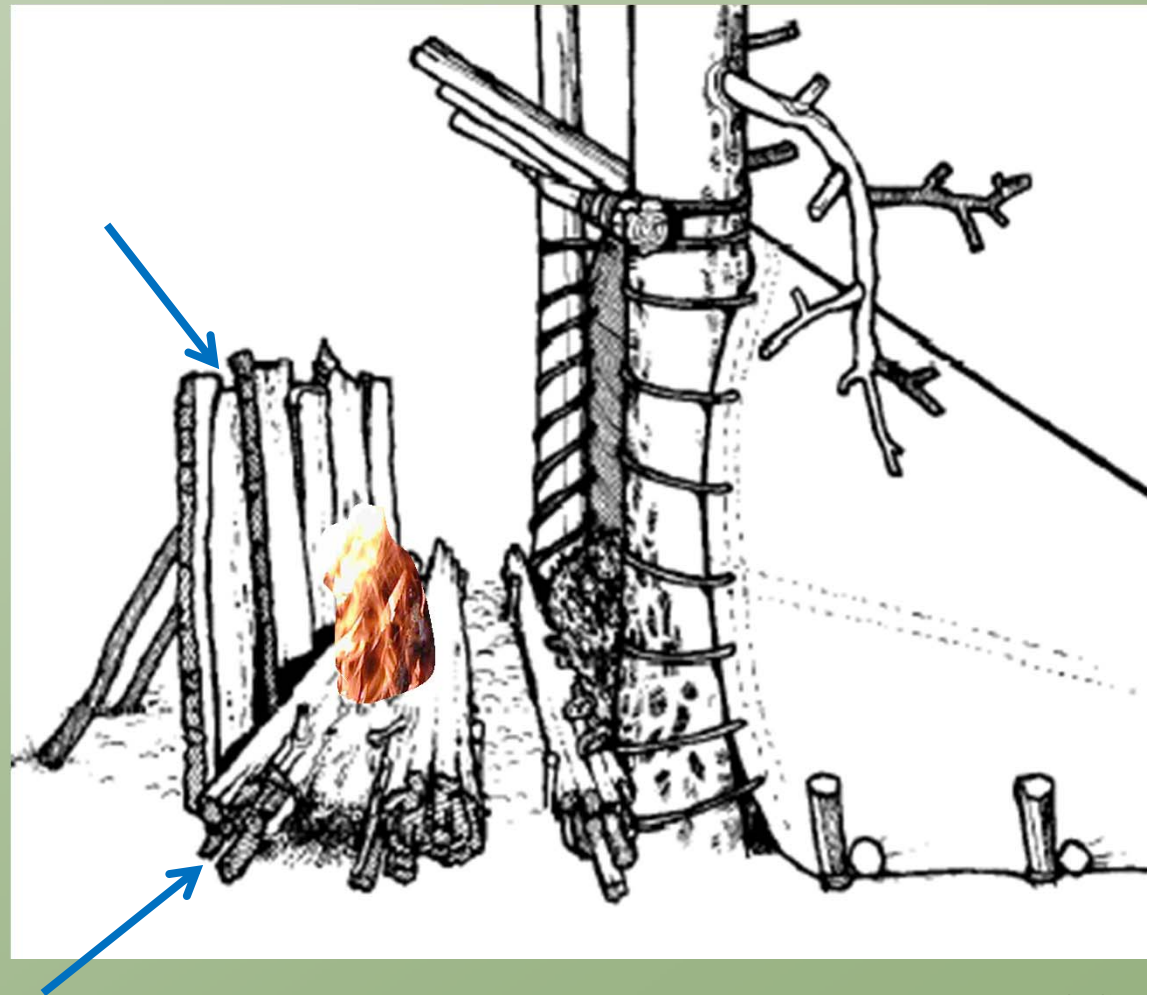
- Near shelter?
- Look up

## Clear ground

## Base

## Brace

## Reflectors





# Gathering Quality Wood

This is the hardest part, so take your time and do it well.



**Dead:** no leaves attached; top intact & bark on.

**Dry:** shave wet exterior (or split to get center) if needed.

Ideally off the ground & sheltered from the rain.



Gather 3x what you expect to need before lighting!

B M O C



# Fuel & Kindling Preparation



## Sort By Size

Large (Thumb - Wrist)

Medium (Pencil - Thumb)



Small (Pipecleaner – Pencil)

Tiny (Toothpick – Pipecleaner)



## Snap Test



# Structure



**Verticality!**



**Log Cabin**



**Tipi**



# Tinder Preparation



**Dead**

**Dry**

**Small**

- Shave
- Shred
- Pound

**Mixture**

- Fast
- Slow

**Protect**

**Gather constantly**





# Cotton Balls & Vaseline



**Quite possibly the best tinder you can carry.**

B M O C

# Local Sources



Birch bark burns, wet or dry.

B M O C





## Stay Well Fed

1. Eat carbs & fats\*
2. No nicotine
3. No caffeine
4. No alcohol

## Tread (Exercise)

1. Isometric
  2. Aerobic
- ❖ Don't sweat!

## Other

1. Heat packs
2. Sunlight



# Water

**Dehydration is a gateway illness to many other problems.**

## Maximize Ins

- ▲ Sip often, 8 - 16 oz (250-500ml) / hour.
- ▲ Drink before you're thirsty.
- ▲ Don't eat if water supply is limited.

## Minimize Outs

- ▲ Ration your sweat.
- ▲ Monitor your urine; it should be clear and copious.
- ▲ Prevent diarrhea.



# 4-6 Quarts (Liters) Per Day

It sounds like a lot... and it is.





# Water Safety



## ▲ Utilize all safe sources:

snow v. ice

rain

dew

lakes (top best) & rivers

## ▲ Boil\*, filter, or purify if you can.

chlorine dioxide

iodine

bleach

## ▲ Wash your hands!





# Summary



- ▲ Proper prevention and a heightened sense of awareness will help to keep you out of trouble.
- ▲ If you do run into problems, STOP and master a positive mental attitude.  
Then find or make shelter, warmth, and water to keep you alive.



Any  
Questions?

Go Far – Go Safe – Go Home



# Practical Exercises

1. Mix 6 cotton balls with enough petroleum jelly to coat (but not saturate) them. Massage and store in a plastic bag.
2. Review the info in the Field Guide.
3. Ensure your pack and pockets are ready for tomorrow.
4. Get some sleep.

End of Slideshow.



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