

Print these two slides, cut out parts, and glue them on cardboard to make a demo compass. One copy of this slide for the background and another copy for the needle.

Cut out the dial from this slide. Drill a hole and use a rivet so the dial and needle can be turned independently

## T5,9 Rules of Safe Hiking

Hike with a buddy (why?). Wear good shoes.
Hike single file on left side of road.
Wear highly visible clothes.
Never hitchhike.
Stay on trail, away from dangerous terrain. Know where you are, use map \& compass. Watch for landmarks, ahead \& behind. Lost? STOP: Stay calm, Think, Observe, Plan. Still Lost? Stay put.

Three signals. Make smokey fire. Be visible. Stay warm \& dry.

## S1a: Compass \& Map

## Compass.

Points North.
Measures direction (or bearing)
Example $\mathrm{N} 15^{\circ} \mathrm{W}$, or $\mathrm{N} 130^{\circ} \mathrm{E}$ or just $130^{\circ}$
Helps orient a map.
What direction is $0^{\circ}, 90^{\circ}, 180^{\circ}, 270^{\circ}$
Map.
Find North arrow on map.
Orient: turn map so North arrow points north.
Symbols: show features and landmarks.
Legend: defines the symbols.
Scale: shows map distances.
Get bearings using map and compass.

## F1: Day/Night Directions

## Day - use the sun <br> Wrist - Watch method.

Shadow - Stick method.


Stick points at sun no shadow


## Night - moon and stars

North Star


Moon
rises in east, sets in west. Use shadow-stick \& wrist-watch methods.
Constellations

## F2: Orienteering

## Dead Reckoning

$20^{\circ}$ for 400 feet to large rock, then
$80^{\circ}$ for 100 feet to fork in road, then ...
First find out how many paces in 50 feet.
Test: Use compass to follow a course
$20^{\circ}$ for 50 feet, then $206^{\circ}$ for 50 feet, then
$130^{\circ}$ for 50 feet to the candy.
Test: Use map and compass
Get bearings from map points.
Get distances from map.
Write down the course.
Use compass to follow the course

Measuring Height
F2


Measuring Width





## Boulder Creek Scout Reservation: Orienteering Course

\(\left.\begin{array}{l}This is a tough course for 11-13 year old boys. Use the topo <br>
map and the following bearings and features. All bearings <br>
are from magnetic north, distances are in meters. Red <br>

markers are 4 " square red/white triangles.\end{array}\right]\)| Start the course at the flag poles near the archery range. |  |
| :--- | :--- |
| $76^{\circ}$ for 130 m | to rough dirt steps on north side of a <br> bridge |
| $104^{\circ}$ for 200 m | to red marker on redwood stump, <br> just left of the ridge line |
| $158^{\circ}$ for 210 m | to big bridge near water tanks |
| $130^{\circ}$ for 75 m | to red marker on dead stump |
| $228^{\circ}$ for 100 m | to red marker on small tree at trail <br> turn; nature trail 20, right of big <br> rock, on small tree |
| $\mathbf{3 3 7}^{\circ}$ for 30 m | to bend in trail with exposed roots |
| $268^{\circ}$ for 70 m | to bend in trail |
| $132^{\circ}$ for 25 m | to bend in trail |
| $290^{\circ}$ for 19 m | to bend in trail |
| $172^{\circ}$ for 30 m | to nature trail 22 |

This is a tough course for 11-13 year old boys. Use the topo
map and the following bearings and features. All bearings
are from magnetic north, distances are in meters. Red
markers are 4 " square red/white triangles.
Start the course at the flag poles near the archery range.
$76^{\circ}$ for 130 m to rough dirt steps on north side of a
bridge
$104^{\circ}$ for 200 m to red marker on redwood stump,
just left of the ridge line
$158^{\circ}$ for 210 m to big bridge near water tanks
$130^{\circ}$ for 75 m to red marker on dead stump
$228^{\circ}$ for 100 m to red marker on small tree at trail
turn; nature trail 20, right of big
rock, on small tree
$337^{\circ}$ for 30 m to bend in trail with exposed roots
or 30 m to nature trail 22
$238^{\circ}$ for 80 m to red marker on upright standing sign tree.
$180^{\circ}$ for 140 m to red marker
$161^{\circ}$ for 150 m to red marker on tree by trail
$48^{\circ}$ for 200 m to huge redwood with metal tag just northeast of Mt. Radin peak
$306^{\circ}$ for 100 m to red marker on tree with \#5 sign, on ridge line near point of knoll
$90^{\circ}$ for 200 m to red marker on small oak on ridge trust your compass. This one is much easier if you use the map and plot a less difficult path.

## Hints:

Rough terrain. Set bearing, select a target feature and walk there trying to estimate the distance. Then take another bearing and locate another target. Sometimes you will have to move far from the straight line path. Try to remember how far and then get back to it later. Distances are approximate. Use the topographical map to help locate terrain features. The circles on the map are the red marker locations numbered in sequence.

