



SNOW PIT



<http://learners.gsfc.nasa.gov/HOWmedia/SnowPitProtocol/>

PURPOSE
 DIG A TRENCH THAT EXPOSES THE FULL THICKNESS OF THE SNOW ON THE GROUND. THEN CHARACTERIZE THE PROFILE OF SNOW LAYERING:
 • TEMPERATURE GRADIENT, • DENSITY, • SNOW/WATER EQUIVALENT, • HARDNESS, • GRAIN SHAPE AND SIZE

HYPOTHESIS
 THE SNOW COVER CONTAINS INFORMATION THAT REFLECTS THE CONDITIONS OF SNOW DEPOSITION AND METAMORPHISM.
 CAN THE ANALYSIS OF THE SNOW COVER, USING SCIENTIFIC PROTOCOLS, PROVIDE A SNOW COVER CLASSIFICATION INDICATIVE OF THE LOCAL TO REGIONAL CLIMATE CONDITIONS DURING THE WINTER WHEN SNOW IS ON THE GROUND?

MATERIALS

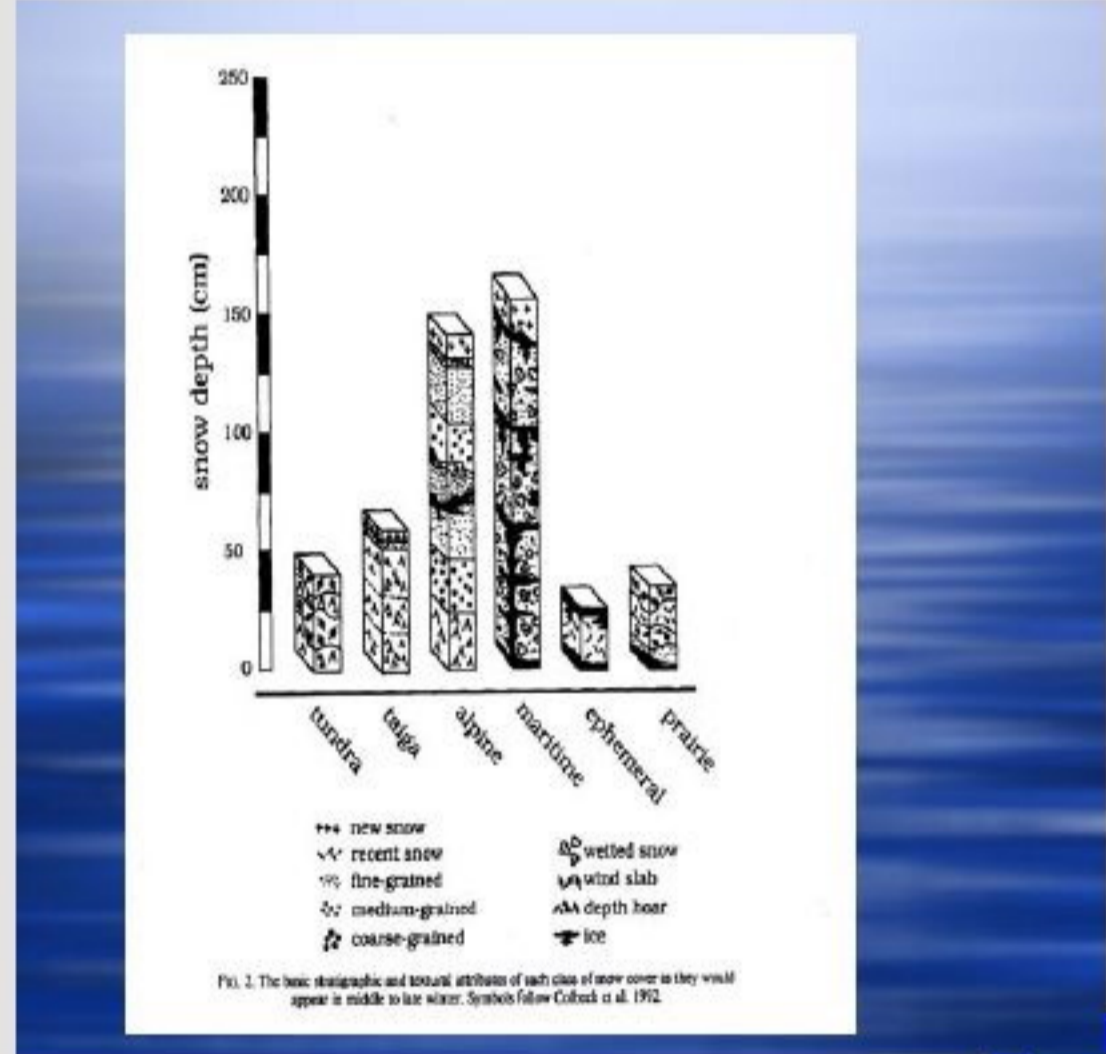
FLAT FACED SHOVEL,
 METRIC TAPE MEASURE

CALIBRATED
 THERMOMETER

DENSITY TUBES , SCALE
 TO WEIGH THE TUBES
 (EMPTY AND WITH SNOW)

YOUR INDEX FINGER,
 GOLF TEES OR POPSICLE
 STICK OR OTHER
 MARKERS,

SNOW CARD OR PLASTIC
 CARD OF SOME SORT,
 MAGNIFYING GLASS OR
 LOUPE TO EXAMINE SNOW
 GRAINS ON CARD



METHODS

DIG TRENCH IN THE SNOW COVER
 DOWN TO GROUND SURFACE

DETERMINE THE TEMPERATURE
 PROFILE OF THE SNOW COVER

DETERMINE THE DENSITY OF THE
 SNOW IN PROFILE AND
 CALCULATE THE WATER
 EQUIVALENCE OF THE SNOW IN
 PROFILE

DETERMINE THE HARDNESS OF
 THE SNOW PROFILE AND IDENTIFY
 THE PRESENCE OF LAYERING

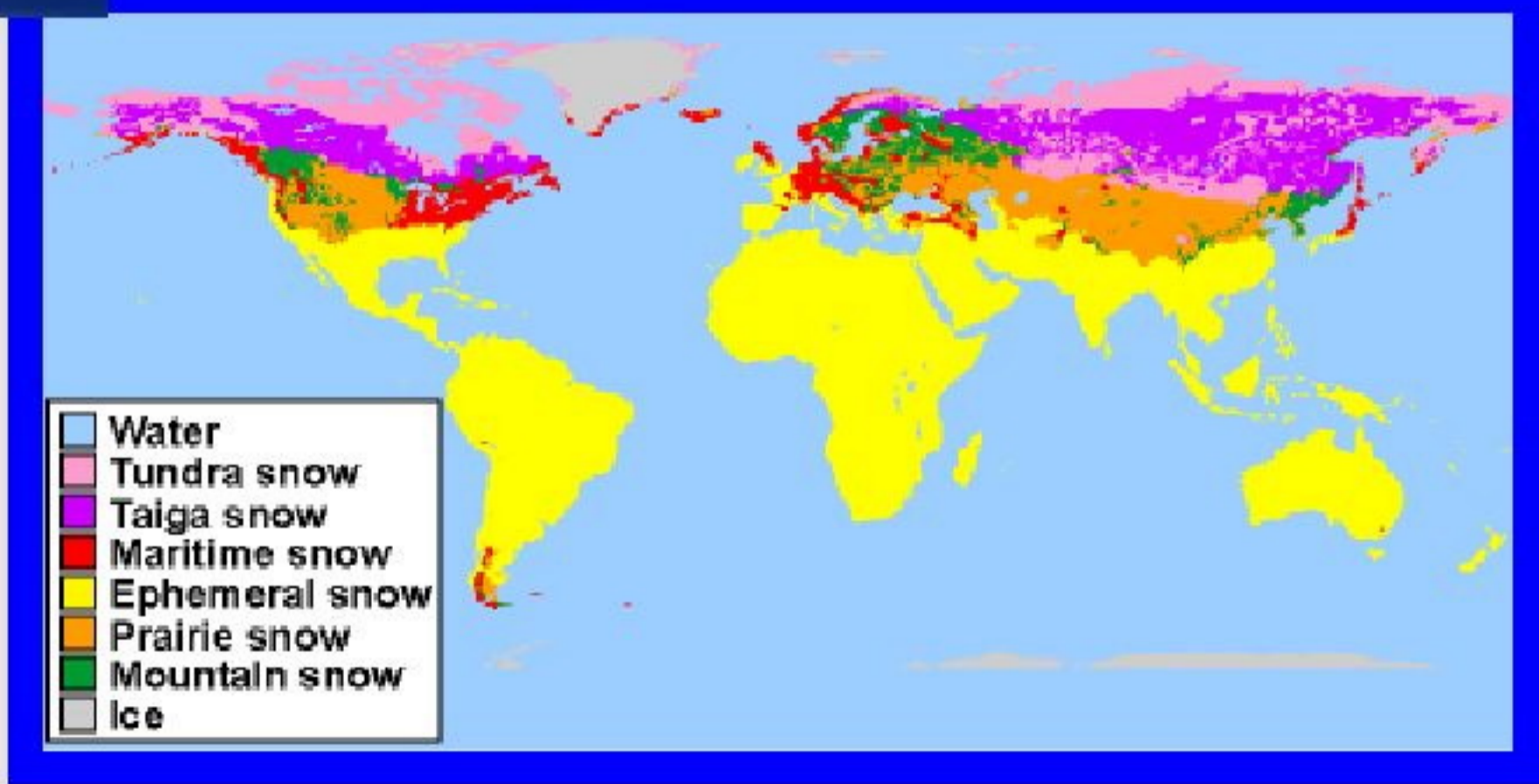
DETERMINE THE GRAIN SIZE AND
 SHAPE OF SNOW GRAINS IN THE
 PROFILE

DECIPHERING THE HISTORY OF WINTER IN THE SNOW
 Examine and describe snow metamorphism in the snowcover

Snow Pit Measurements



DATA



ANALYSIS

AFTER THE SNOW FALLS TO THE GROUND IT CONTINUES TO CHANGE ITS CHARACTERISTICS OVER TIME. IDEALLY, EACH OF THE "SNOW BIOMES" WILL HAVE A DIFFERENT AND RECOGNIZABLE SNOW PROFILE THAT CAN BE ANALYZED TO REFLECT THE CLIMATE CONDITIONS VIA THE VAGARIES OF ON GROUND METAMORPHISM IN EACH OF THE 'BIOMES'