

# Purpose of the Training



To provide you with an understanding of the process & techniques to enable you to undertake Tree surveys in the field with equipment & resources to enable you to do the surveys.

# What Support will be Provided?



- We will pair you with experienced BTF volunteer
- Equipment to do the survey
- Guidance & support
- Tree identification support if you get stuck.

# Tree Survey Kit List

- Clinometer
- 50m Surveyor's Tape
- A compass
- Flagging Tape / Sports markers
- Clipboard, data sheets
- Area Map showing tree location
- Scientific calculator

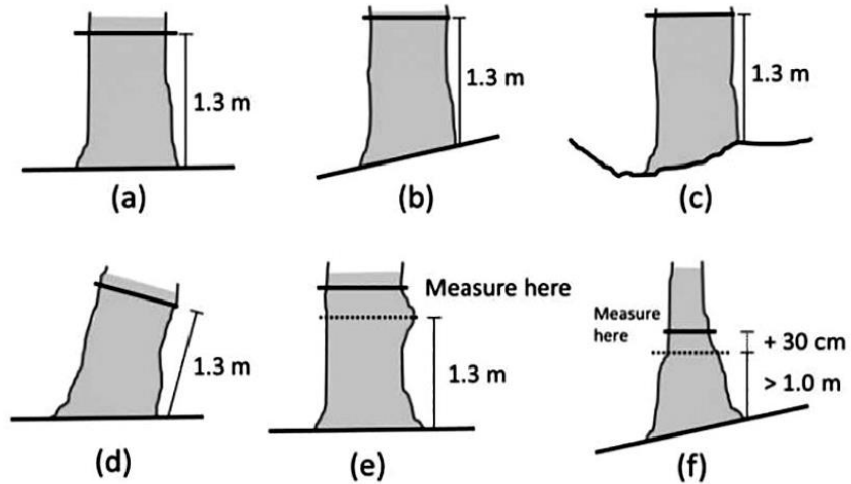
## Optional

- Camera
- Smartphone

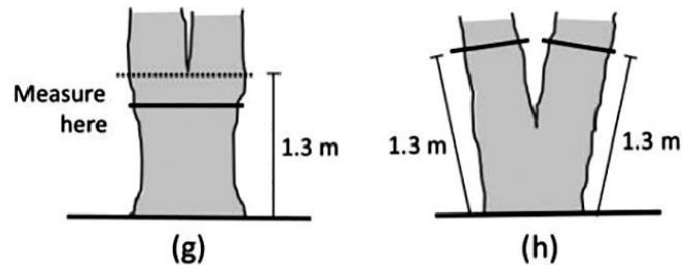




# MEASURING DIAMETER AT BREAST HEIGHT (DBH)



Trees with multiple stems



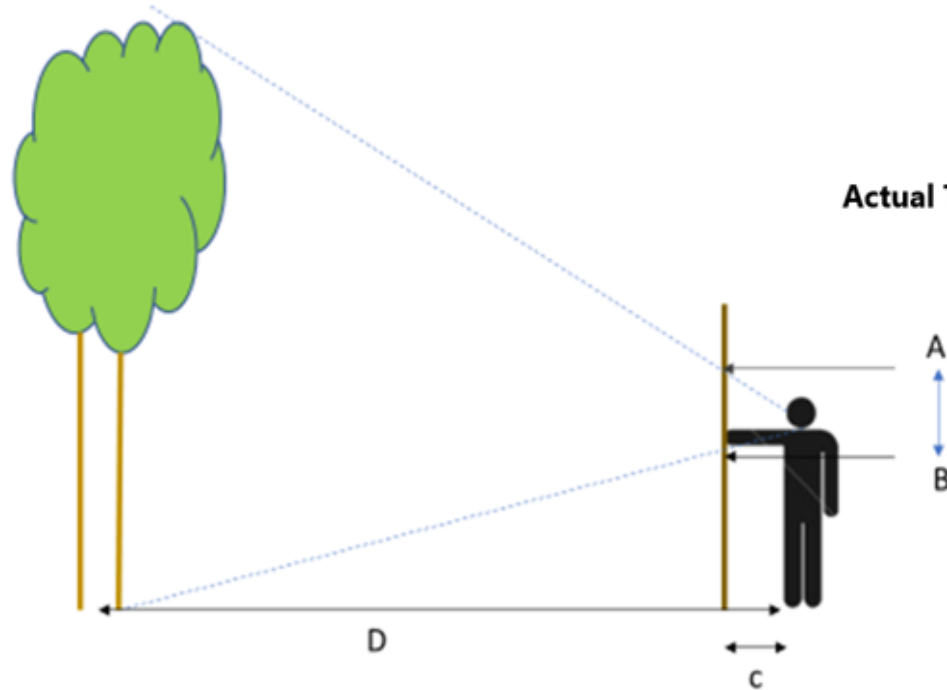
- Measure on the uphill side of tree.
- Measure 1.3m up the stem or as close to this as possible.
- Measure the circumference of the stem(s) in centimetres (cm).

$$\text{DBH} = \text{CIRCUMFERENCE} / \text{Pi}$$

For multi-stem trunks, Circumference = the sum the individual circumferences.

# MEASURING TREE HEIGHT

## MEASURING TREE HEIGHT ON LEVEL GROUND



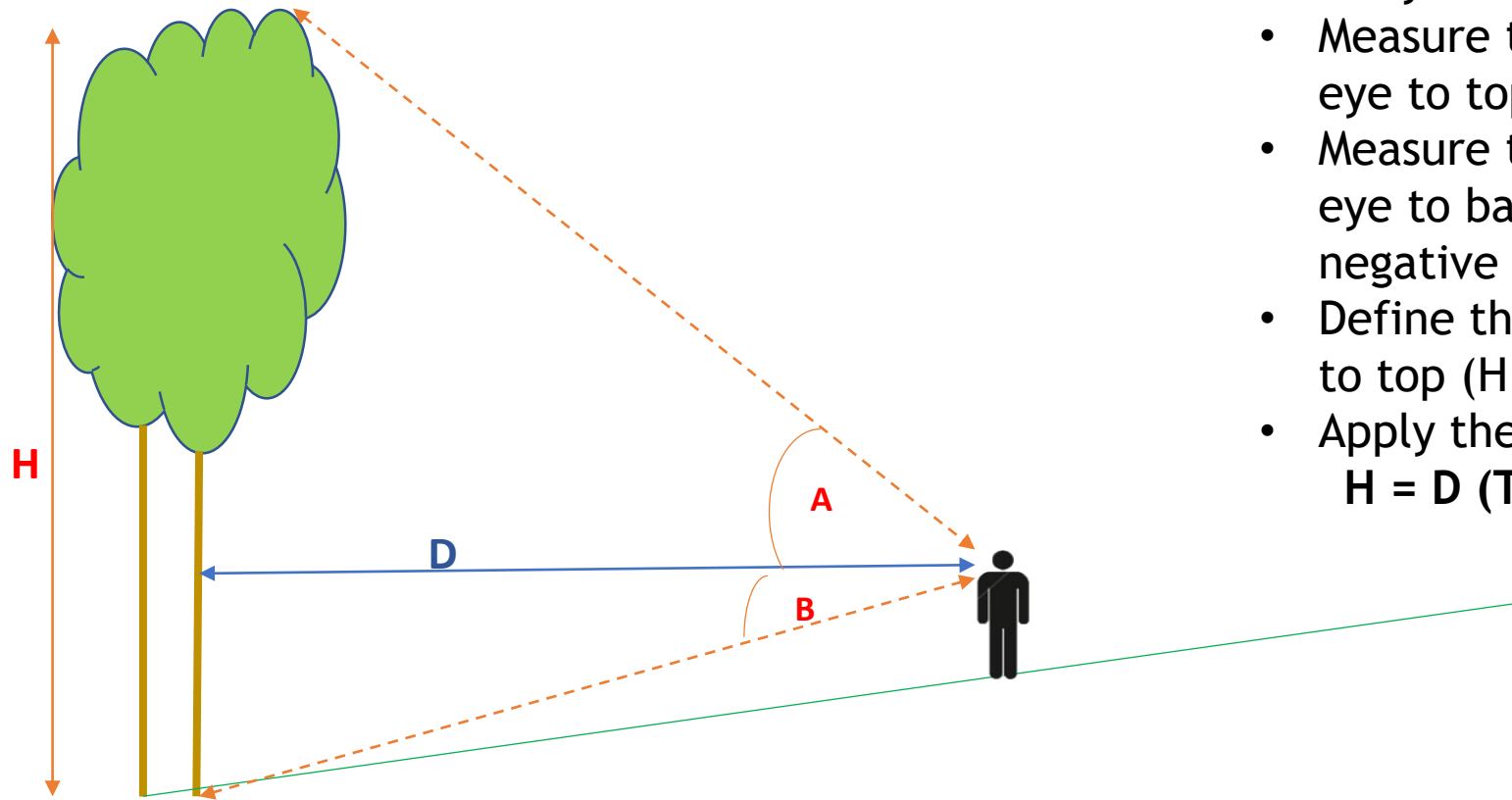
D = distance from tree

h = A to B

c = Distance of eye  
from stake

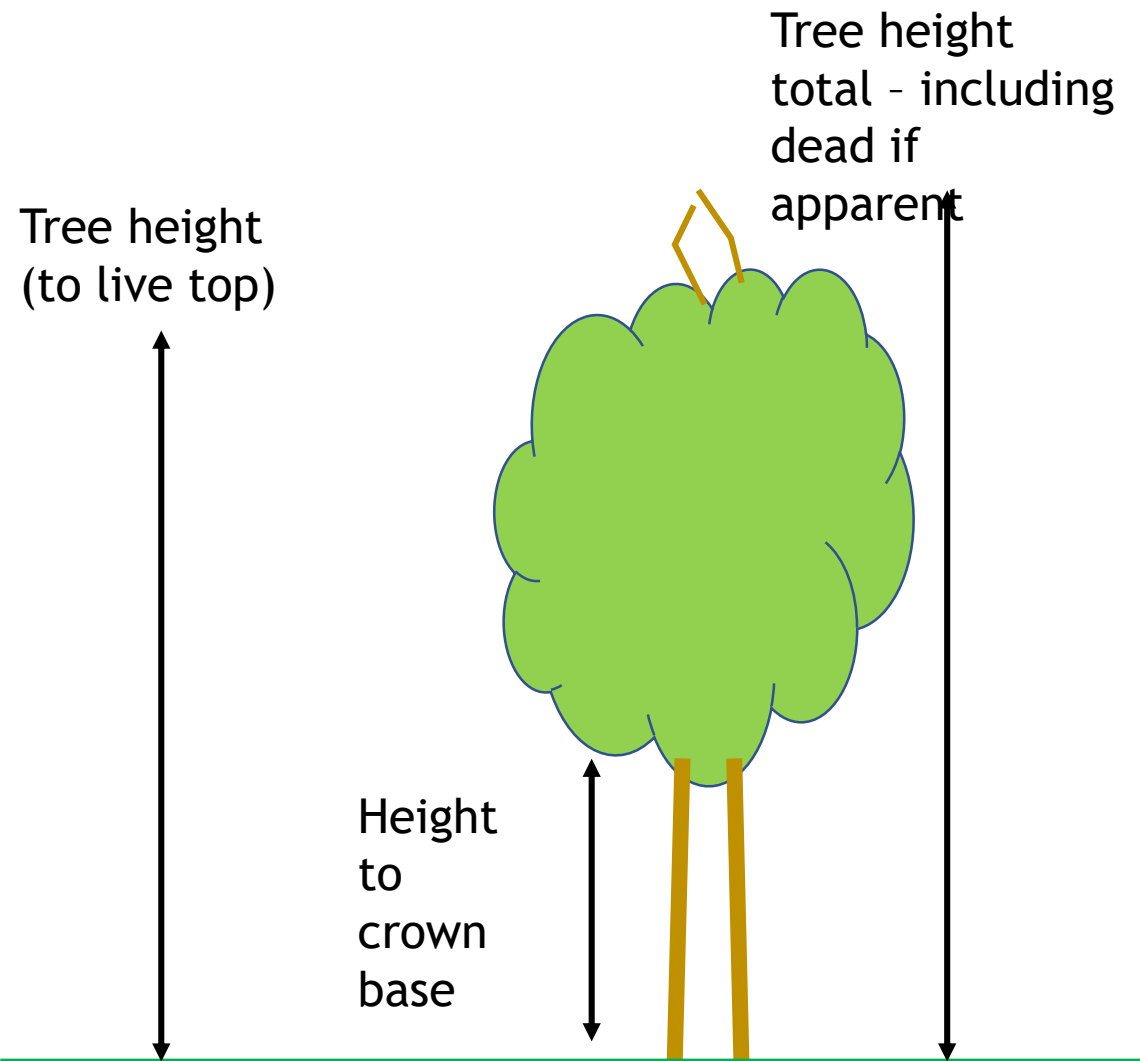
$$\text{Actual Tree height} = \frac{h \times D}{c}$$

# MEASURING TREE HEIGHT ON SLOPING GROUND



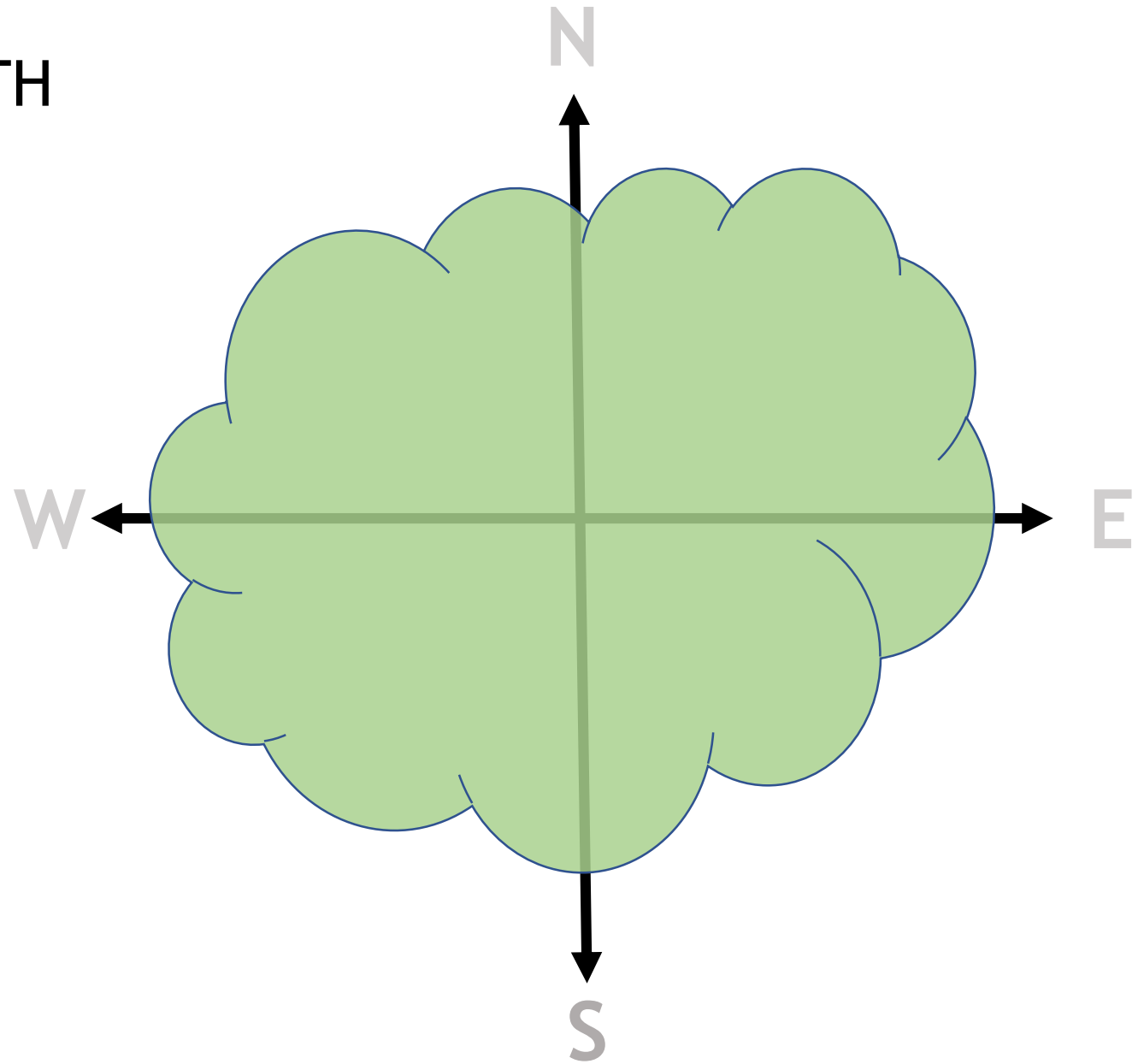
- Measure horizontal distance at eye level to the trunk (D).
- Measure the angle from the eye to top (A).
- Measure the angle from the eye to base (B). B will be negative if below eye level.
- Define the Height from base to top (H).
- Apply the following formula:  
$$H = D (\tan A - \tan B)$$

# TREE HEIGHT



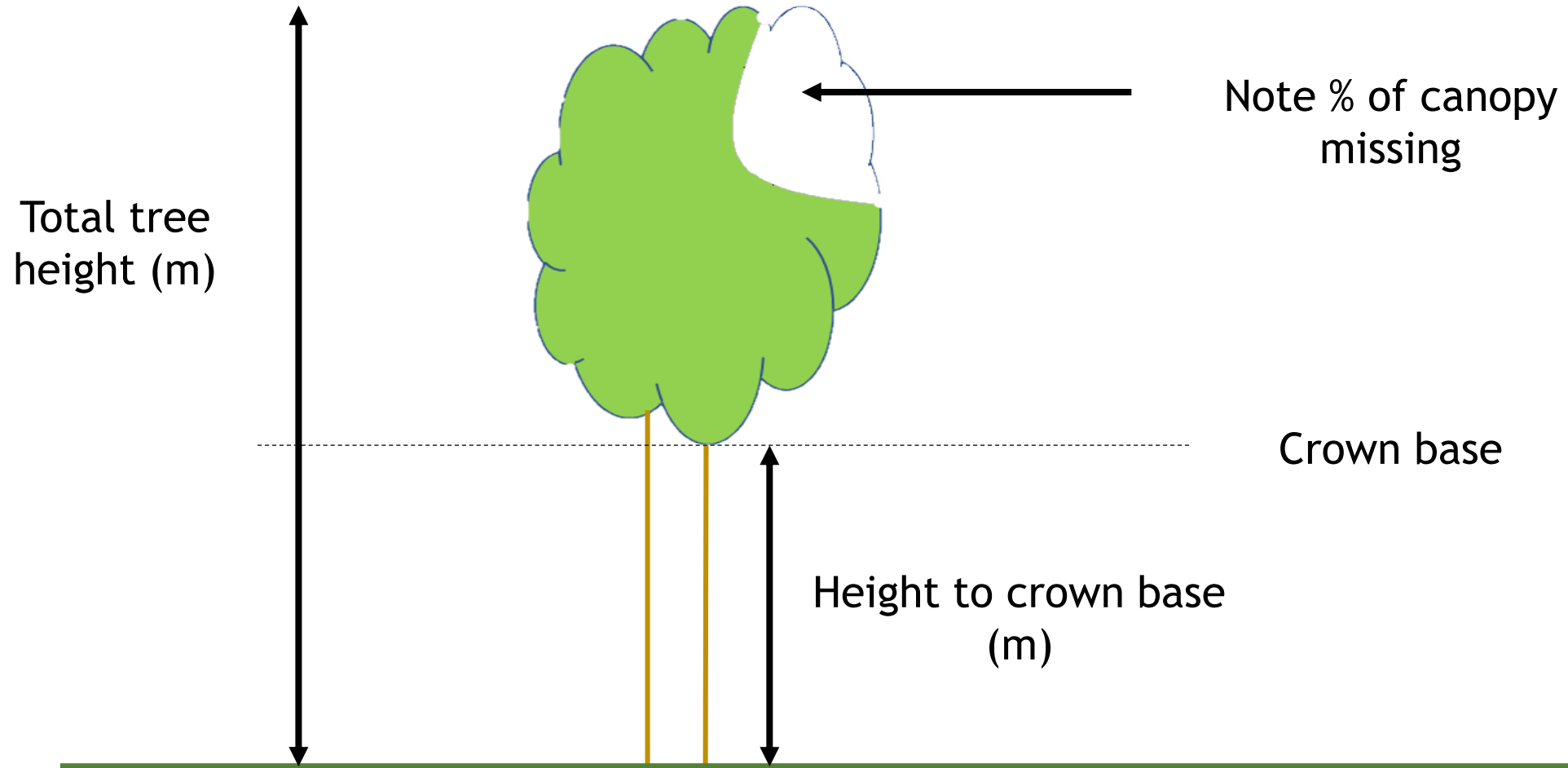
# MEASURING CROWN WIDTH

Measure crown width on the ground from the trunk to the outer edge of the crown along each of the four cardinal points (add the trunk radius)

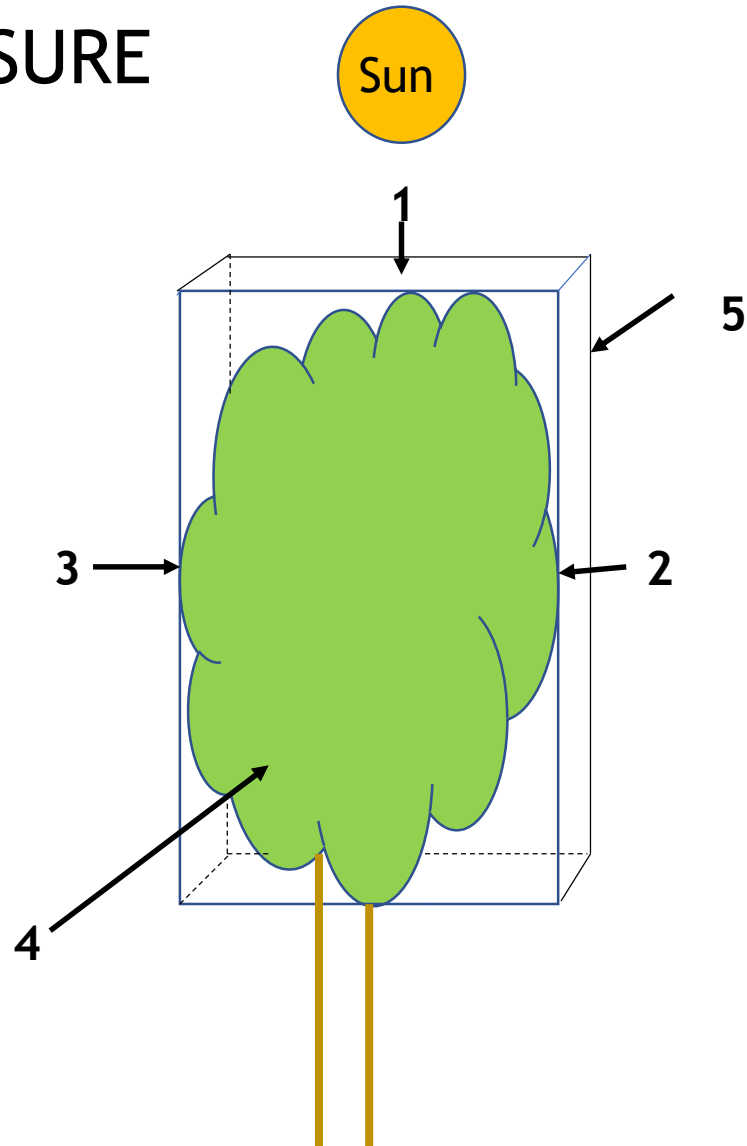




# MEASURE TREE CANOPY



# CROWN LIGHT EXPOSURE



The number of sides of the tree receiving sunlight from above.

The top of the tree is counted as one side.

0 - Tree Receives no full light

1 - Tree receives full light from the top or one side

2 - Tree receives full light from the top and one side (two sides without the top)

3 - Tree receives full light from the top and two sides (or three sides without top)

4 - Tree receives full light from the top and three sides

5 - Tree receives full light from the top