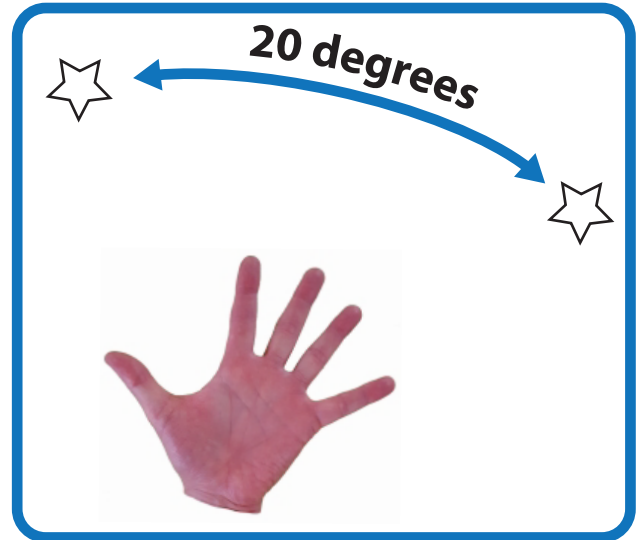


# Measuring the sky

How do you measure where objects are in the night sky? To do this, astronomers possibly two thousand years ago adopted the degree as their unit of measurement. No one is sure which country the degree originated from or even why. Regardless of that, astronomers (and mathematicians) all agree that a complete rotation is made of 360 degrees (or divisions). A degree can also be divided into 60 further divisions (or minutes).

## Use your hand

You can use your finger or hand to measure how close two stars are to each other. Just hold your hand up to the night sky and put it between two stars. For instance, if you can only fit a finger between the two, then they are approximately one degree apart.



**Finger**  
1 degree



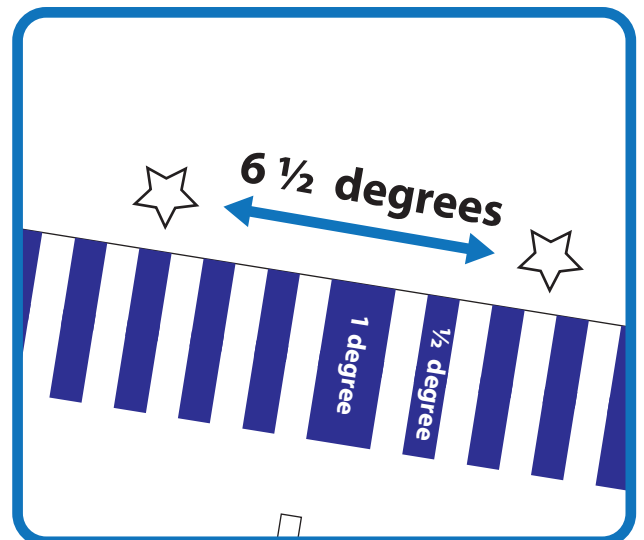
**Handspan**  
10 degrees



**Stretched hand**  
20 degrees

## Make a cross staff

Astronomers invented the cross staff to measure the night sky. Using a cross staff also avoids the fact that people have differing hand sizes or arm lengths. Make your own cross staff using only a 30 cm ruler and the 'Cross staff angle arm'.

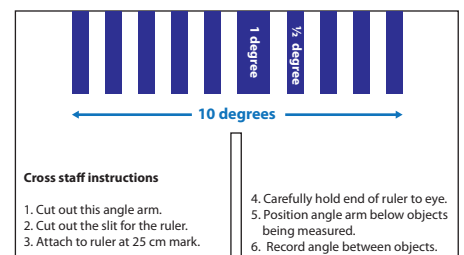


## Cross staff assembly instructions

1. Cut out the 'Cross staff angle arm' (bottom right on this page).
2. Cut out the slit for the ruler.
3. Attach to the ruler at the 25 cm mark.
4. Carefully hold end of ruler to your eye.
5. Position the angle arm below the objects being measured.
6. Record the angle between objects.



**Cross staff  
 angle arm**



### Cross staff instructions

1. Cut out this angle arm.
2. Cut out the slit for the ruler.
3. Attach to ruler at 25 cm mark.
4. Carefully hold end of ruler to eye.
5. Position angle arm below objects being measured.
6. Record angle between objects.

**Caution!** Do not enlarge the size of the Cross staff angle arm. This will affect its accuracy.

