Investigating refraction 1

Name _____ **Class** _____ **Date** _____

Your teacher may watch to see if you can:
- make accurate measurements of angles.

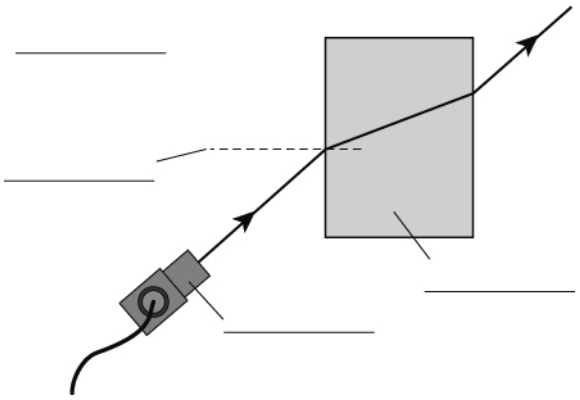
Aim

To investigate what happens when a ray of light travels through a glass block.

Apparatus

- ray box
- rectangular glass
- plastic block
- pencil
- ruler
- sheet of plain paper

⚠ Do not look directly at the bulb or touch it while it is hot.



1 Label the diagram using words from the box.

air	glass	normal	ray box

Method

2 Fill in the gaps in these sentences, using words from the box below.

angle	block	draw	glass	light	move	ray	ruler

I will find out what happens when a ray of light travels from air into _____.

I will do this by shining a ray of _____ into the glass block. Before I start I will _____around the glass block so that I can put it back in the same place if I _____ it. I will mark the path of the _____ of light where it goes into the glass block. I will mark the path of the ray where it comes out of the glass _____. I will use a _____ to join the rays to show where the ray of light went inside the glass block. I will repeat the experiment by changing the _____ that the light hits the glass.

Considering your results/conclusions

3 Look at the lines you have drawn on your paper, then complete these sentences.

I noticed that the ray of light is refracted _____ (away from/towards) the normal when it goes into a glass block. The ray of light is refracted _____ (away from/towards) the normal when it comes out of a glass block. The ray coming out of the glass block is _____ (parallel/at right angles) to the ray going into the block.

I can...
- make careful observations
- draw conclusions from my observations.