

Name: \_\_\_\_\_


## Refraction Investigation



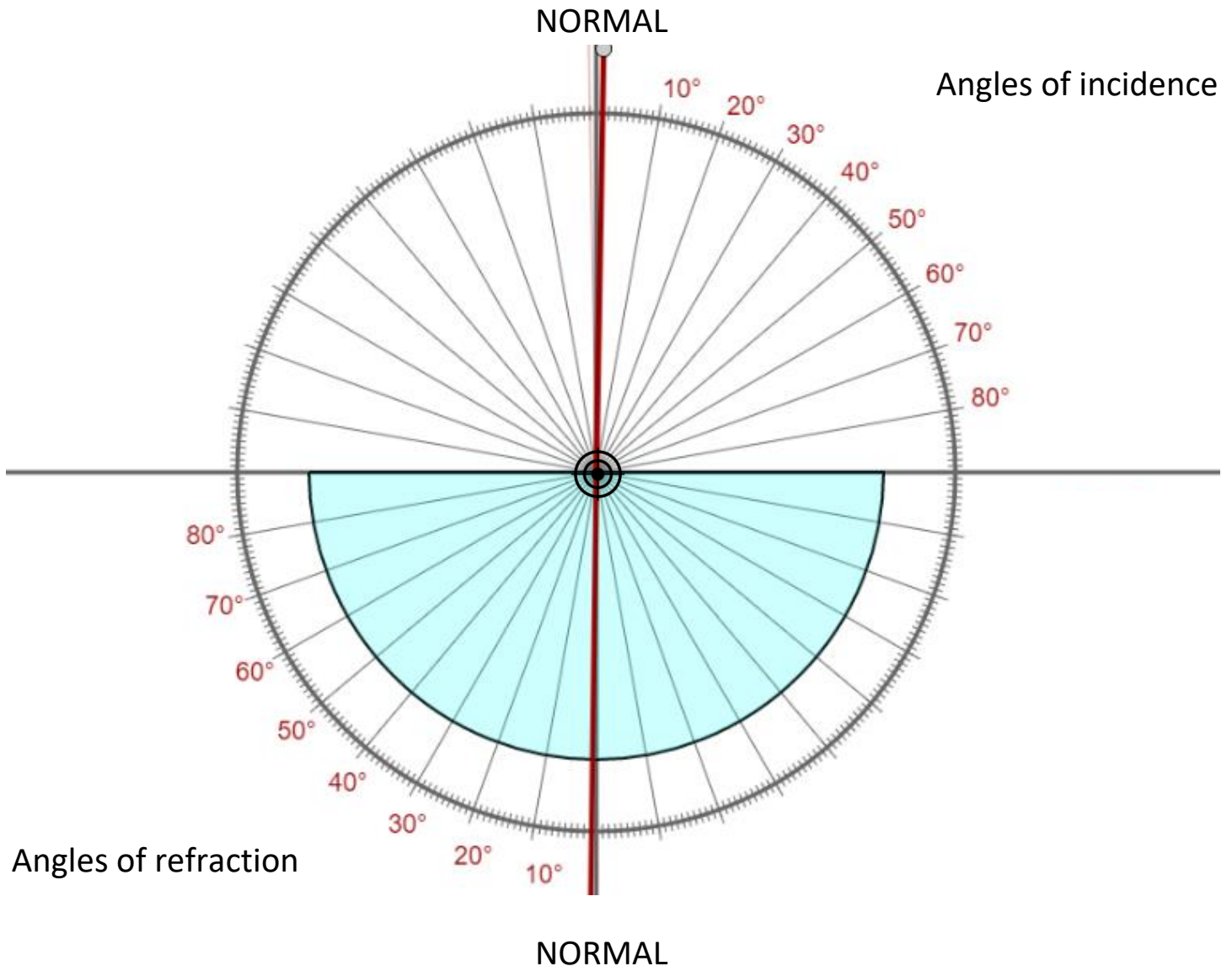
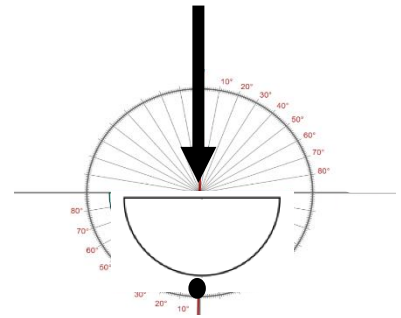
**Questions:** How does light bend (refract) when it passes from air into another medium?

### Procedure:

1. Put glass block diagram outline below.
3. Shine a ray of light along the **normal line** (angle of incidence =  $0^\circ$ ).
4. Mark the point where the ray exits the block with a dot.
5. Remove the block and draw both the **incident ray** and the **refracted ray**.

*Both meet at the target* 

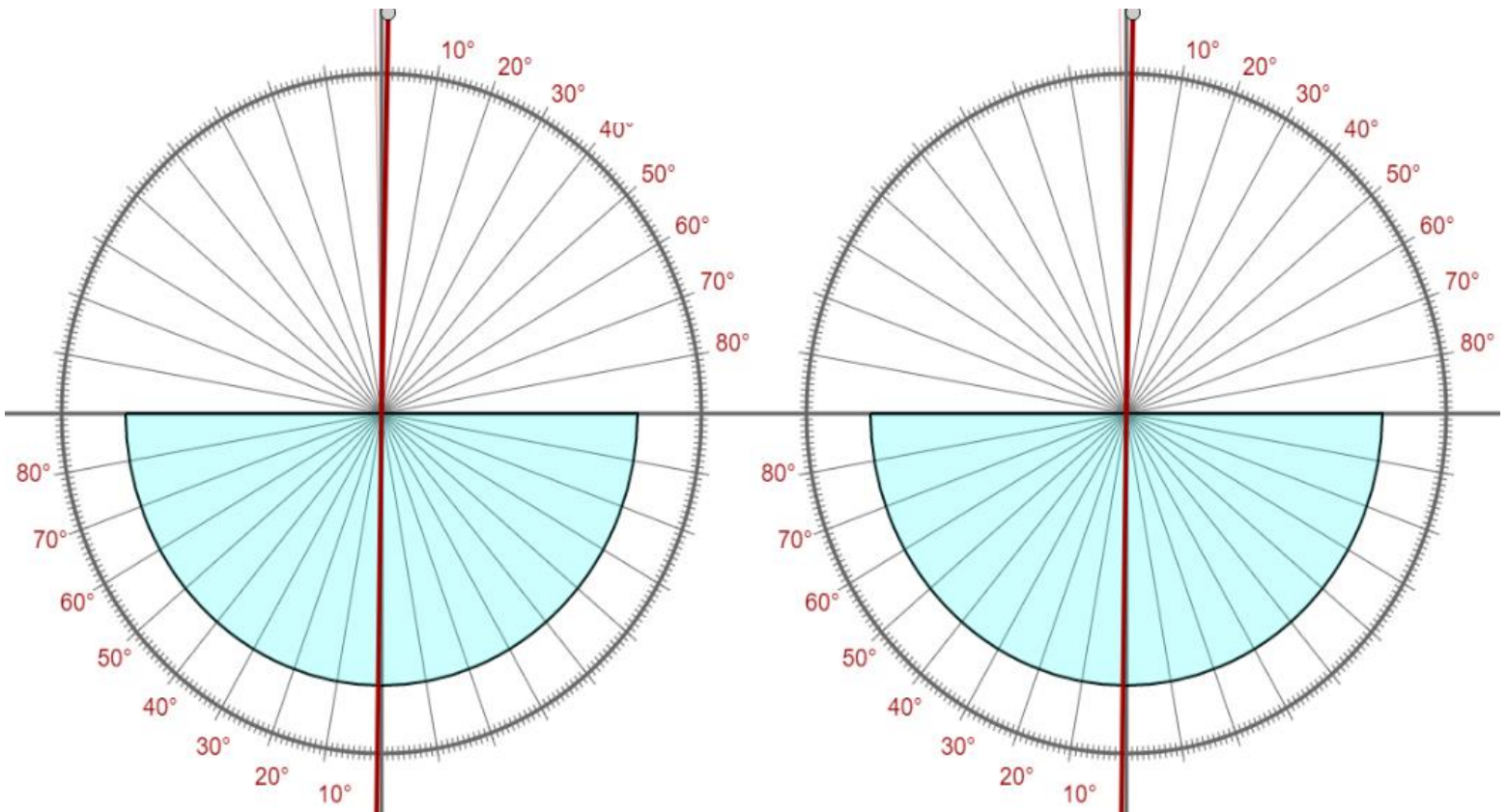
6. Measure and record the angle of refraction (*angle between the normal and the refracted ray*)
7. Repeat steps for incident angles:  $20^\circ$ ,  $40^\circ$ ,  $60^\circ$  using a **different colour** for each set of incident and refracted rays.



# Refraction Investigation

**Observations:**

Angle of Incidence	Angle of Refraction <b>Glass</b>	Angle of Refraction <b>Substance:</b>	Angle of Refraction <b>Substance:</b>
0°			
20°			
40°			
60°			
Does light bend <b>Towards</b> <b>OR</b> <b>Away</b> from the normal?			



**Analysis:**

1. Why does light refract?
2. When light goes into a more dense medium does it bend towards or away from the normal? WHY?
3. Which angle is always greater in this experiment, the angle of incidence or the angle of refraction?
4. Which substance was the most dense? How do you know?