**Reflection At Home Activity**

**Purpose:** To demonstrate the Law of Reflection of Light

**Materials:** Flashlight, cardboard, scissors, flat mirror with flat edge, plain piece of paper, tape, ruler, protractor, two different colour pencils.

Procedure:

1. Watch video to show you the set up: <https://www.google.com/search?q=demonstrating+law+of+relflection&rlz=1C1OKWM_enCA892CA892&oq=demonstrating+law+of+relflection&aqs=chrome..69i57j33.7217j1j7&sourceid=chrome&ie=UTF-8#kpvalbx=_VcRzXv22C4_x-gSrjZu4BQ26>
2. Cut a thin slit in a card, enough for a very thin beam of light to shine through.
3. Tape card to face of flashlight. Lay flashlight on a piece of paper on a table.
4. Hold mirror upright about 20cm away from light, also on the paper.
5. Draw two points between between the flashlight and mirror. Label one P and one O.
6. Shine flashlight through slit, so the beam runs through point P and hits the mirrow at an angle.
7. Using a ruler, trace the path of the beam of light coming towards the mirrow and also trace the reflected ray. These two rays should meet at a single point at the mirror.
8. Using a different colour, do the same for point O.
9. Using your protractor, measure the incoming angle from Point P and the reflected angle. Note these on your paper.
10. Do the same for Point O

Questions:

1. What do you notice about the angle the incoming ray and reflected ray of Point P?
2. Are your results for point O similar?
3. Make a prediction of what would happen if you did the same with a third point, Q?
4. The incoming ray is called the **incident** ray and the angle it makes is called the incident angle or **angle of incidence**. Looking at your results, what general rule can you come up with regarding angles of incidence and their cooresponding angles of reflection?