

**The Primary Stage of Grades (4-5)**  
**School Year 2022- 2023**

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

Subject: Science

Unit 8: Movement of light

Worksheet 3: Refraction

Class: Grade 5 CP (All sections)

Date: / /

**Objective/s:**

- Classify objects into transparent, translucent or opaque materials.
- Know that light changes its direction and speed when moving through different media.

**Question1:**

**Materials that allow all light to pass through are called transparent.  
Materials that allow some light to pass through are called translucent  
and items that don't allow any light to pass through are called opaque.**

Classify the following objects into transparent, translucent or opaque materials (tick ✓ the correct column):

Object	Transparent	Translucent	Opaque
Glass	✓		
Cardboard			✓
Water	✓		
Book			✓
Wall			✓
Wood			✓
Oil		✓	
Diamond	✓		
Sunglasses		✓	
Metal			✓
Air	✓		
Frosted glass		✓	

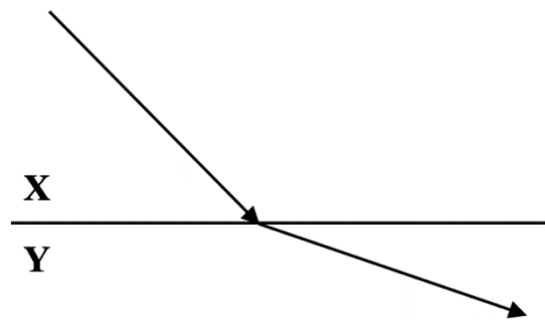
**Question two:**

a) Fill in the blanks:

1. A ray of light travels from **one medium to a different medium**. The ray of light will change in **speed and direction**.
2. The bending of light when it travels from one medium to another is called **refraction of light**.

b) Choose the correct answer by ticking the correct box:

1. The diagram shows a ray of light passing from medium **X** to medium **Y**.



Tick (✓) the box next to the correct statement.

- X and Y are different types of materials.**
- X is an opaque material.**
- Y is an opaque material.**

2. A spoon inside a glass of water looks bent. Why?

Tick (✓) the correct answer.

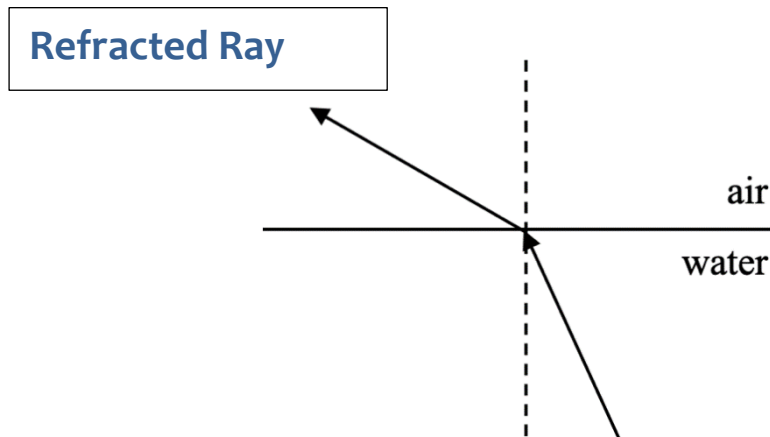
- The ray of light bends as it passes from the water, through the air, into our eyes. (**Refraction**)
- The ray of light reflects off the surface of the water into our eyes.

Question 3:

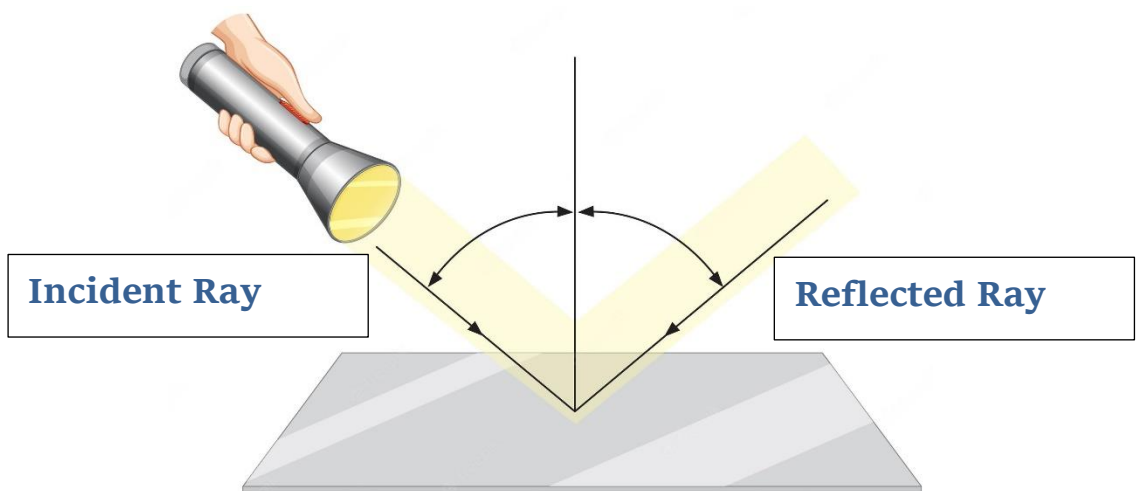
- a) The diagrams show two rays of light that travels from the air into a different surface.

Write the following terms next to correct diagram:

Reflection of light      Refraction of light      Reflected ray  
Incident ray      Refracted ray



A: Refraction of Light



B: Reflection of Light