

# INHOUSE WORKSHOP ON CONCEPTUAL LEARNING FOR DEEP UNDERSTANDING

- Unlock Full Potential
- Enhance Critical Thinking
- Build Strong Foundations
- Practical Application & Strategies



FOSTERING KNOWLEDGE & INNOVATION

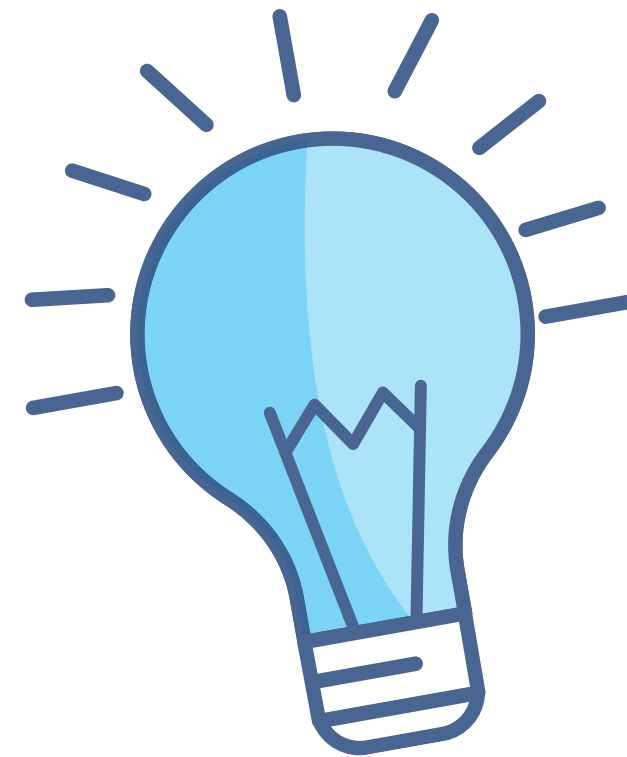


INDIAN SCHOOL  
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# CONCEPTUAL LEARNING FOR DEEP UNDERSTANDING

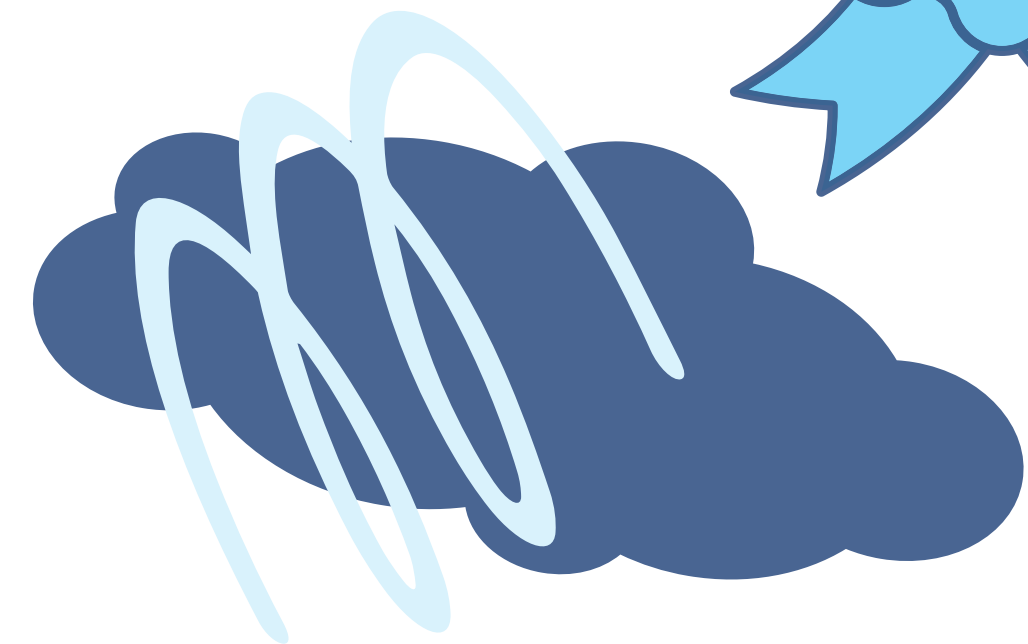
Conceptual Understanding with clarity and depth



# \*CONCEPTUAL LEARNING FOCUSES ON-



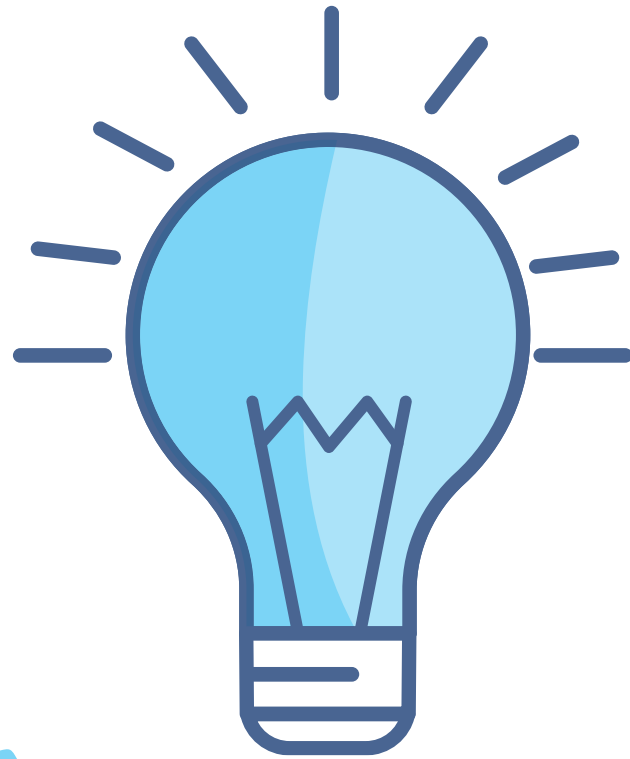
- Enabling learners to connect ideas, Visualize processes,
- Apply knowledge in new situations rather than simply recalling information

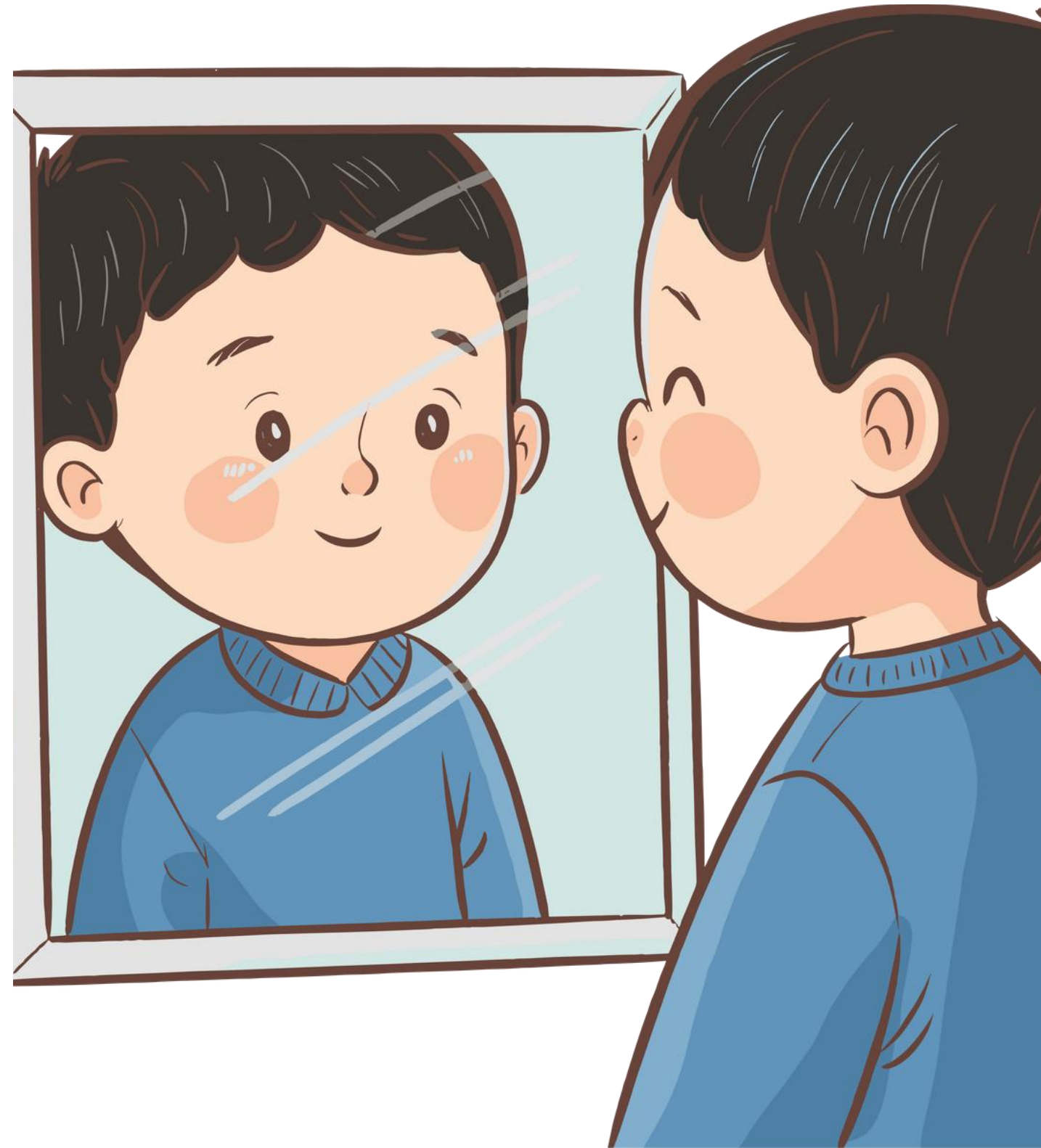
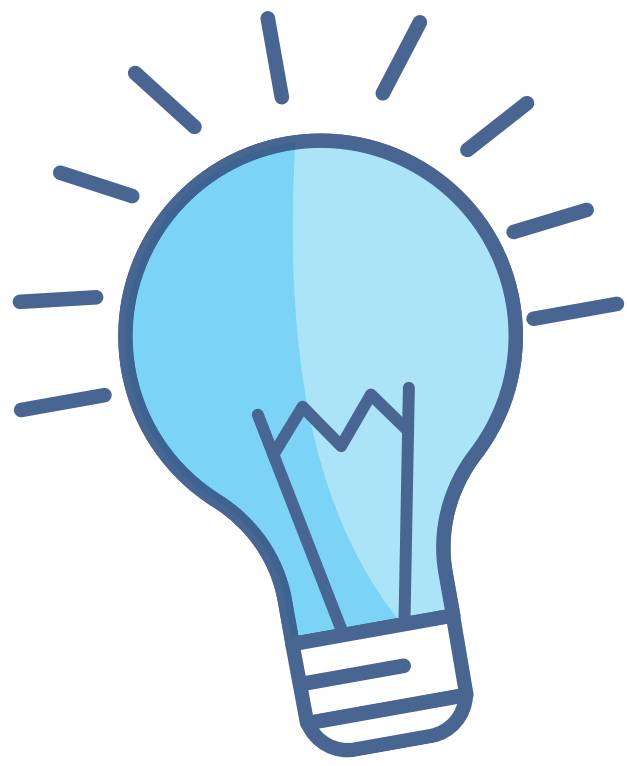


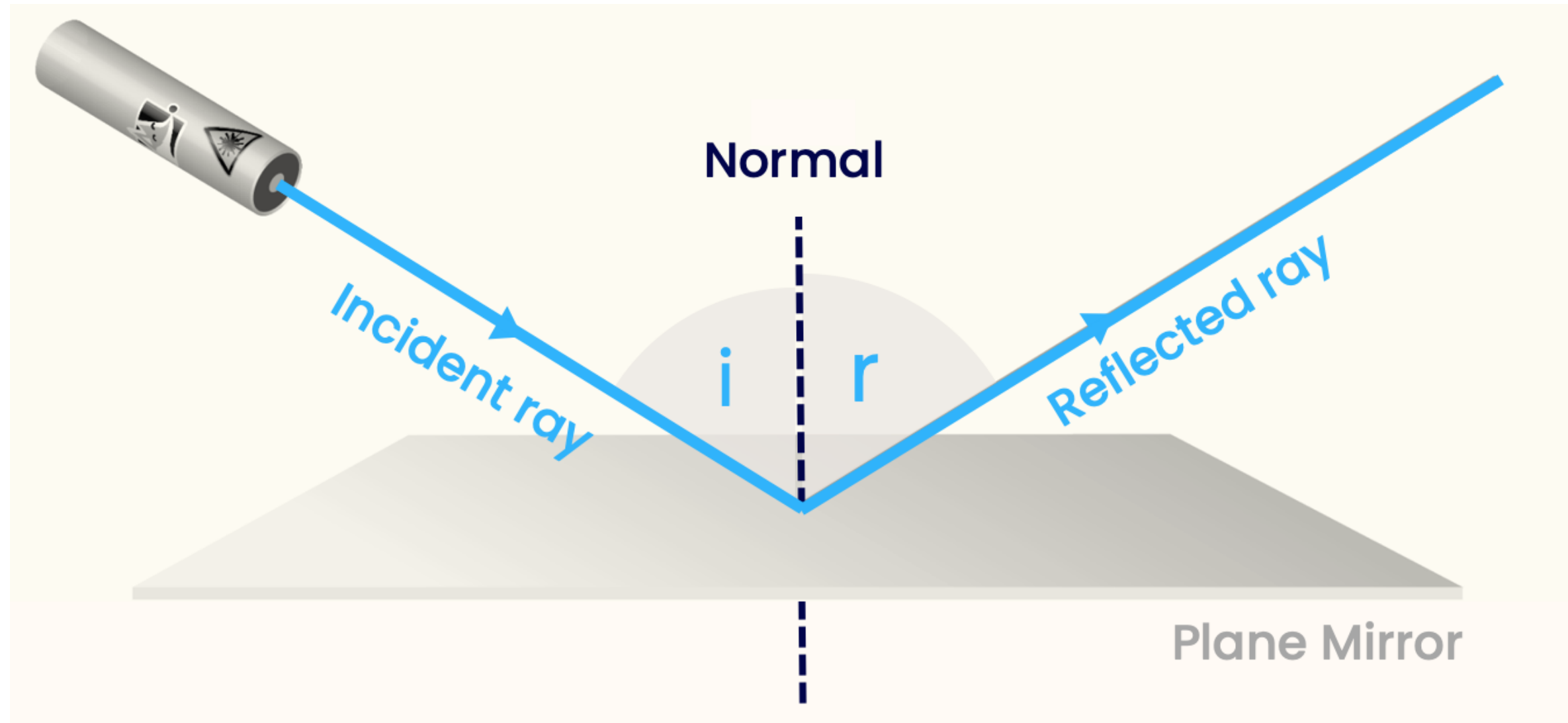
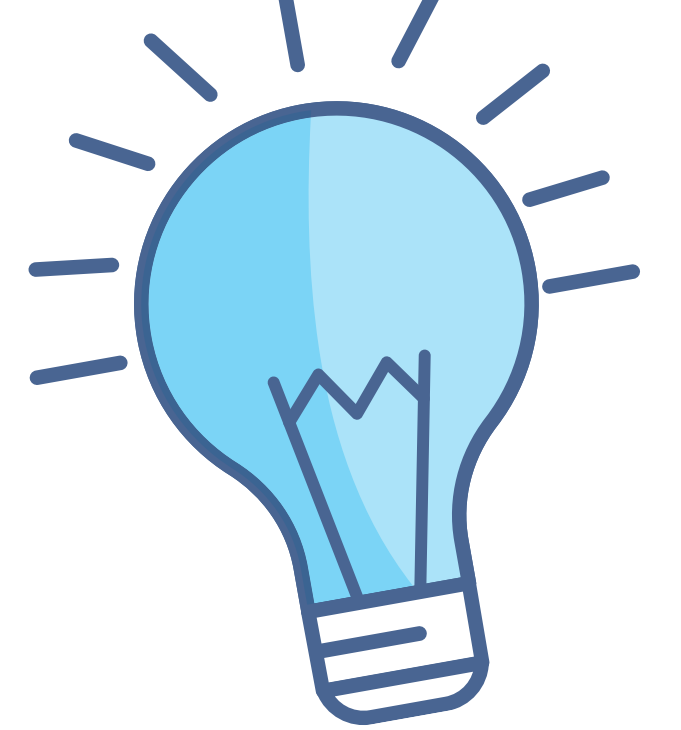
# OBJECTIVE

Shift our teaching approach from rote learning to meaningful learning by exploring strategies that help students think, question, and reason scientifically.

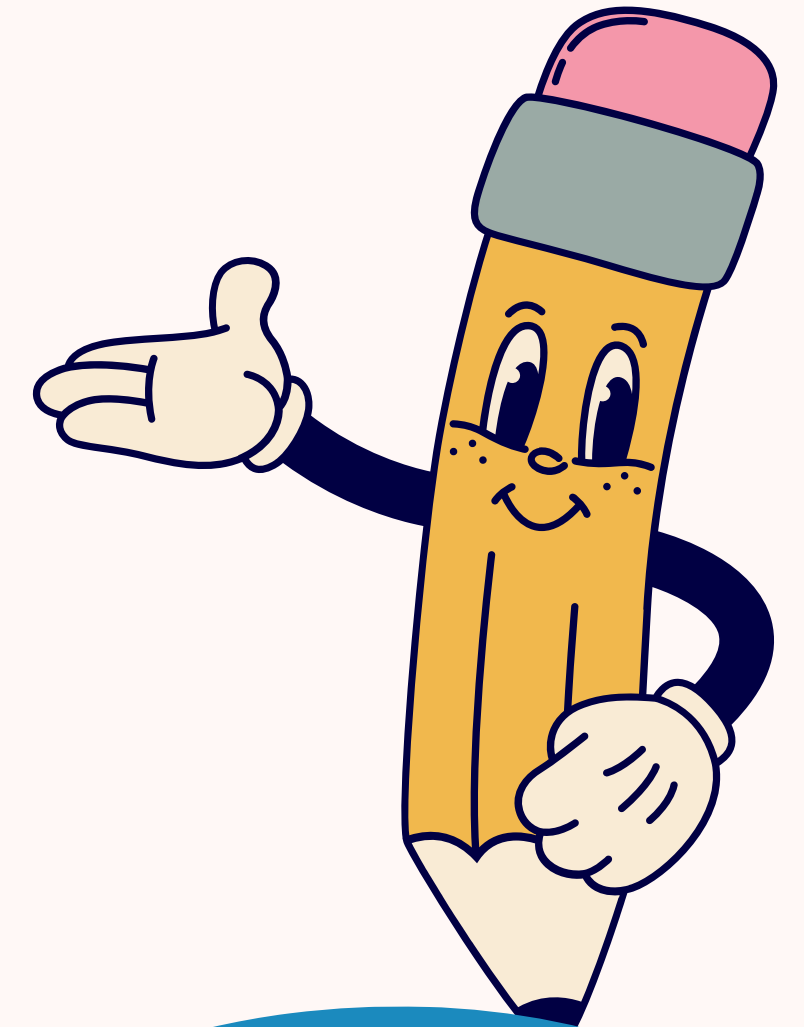
**Through the lens of conceptual learning, we will focus on how teachers can design experiences that promote deep understanding, strengthen conceptual clarity, and make learning more lasting and transferable in the classroom.**







- Today's workshop is focused on bridging that gap. We will explore how to teach the concept of reflection in a way that helps students visualize, question, and truly understand rather than just remember.





**Where is the image formed in a plane mirror?**

**a) On the mirror surface**

**b) Behind the mirror**

**c) In front of the mirror**

**d) Inside the mirror**

**👉 Correct Answer: b**

**👉 Common misconception: Students say “on the mirror”**



**If you raise your right hand in front of a mirror, which hand does your image raise?**

**a) Right hand**

**b) Left hand**

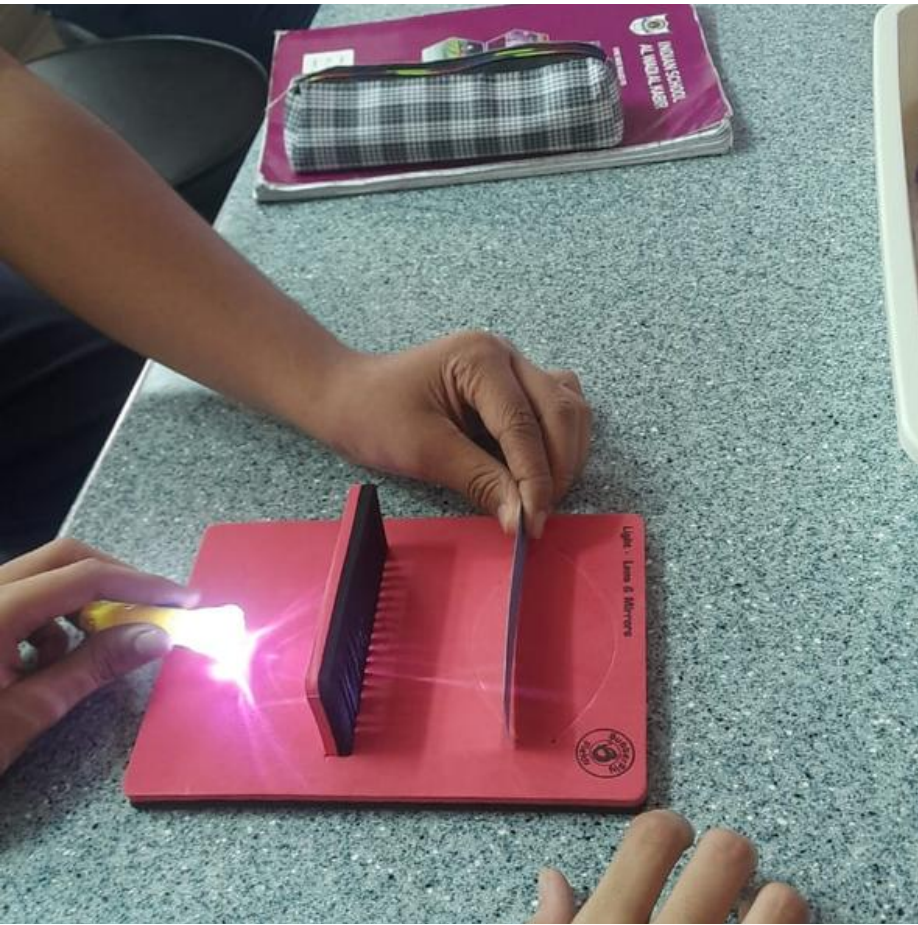
**c) Both hands**

**d) No hand**

**👉 Correct Answer: b**

**👉 Misconception: Confusion about left-right reversal**

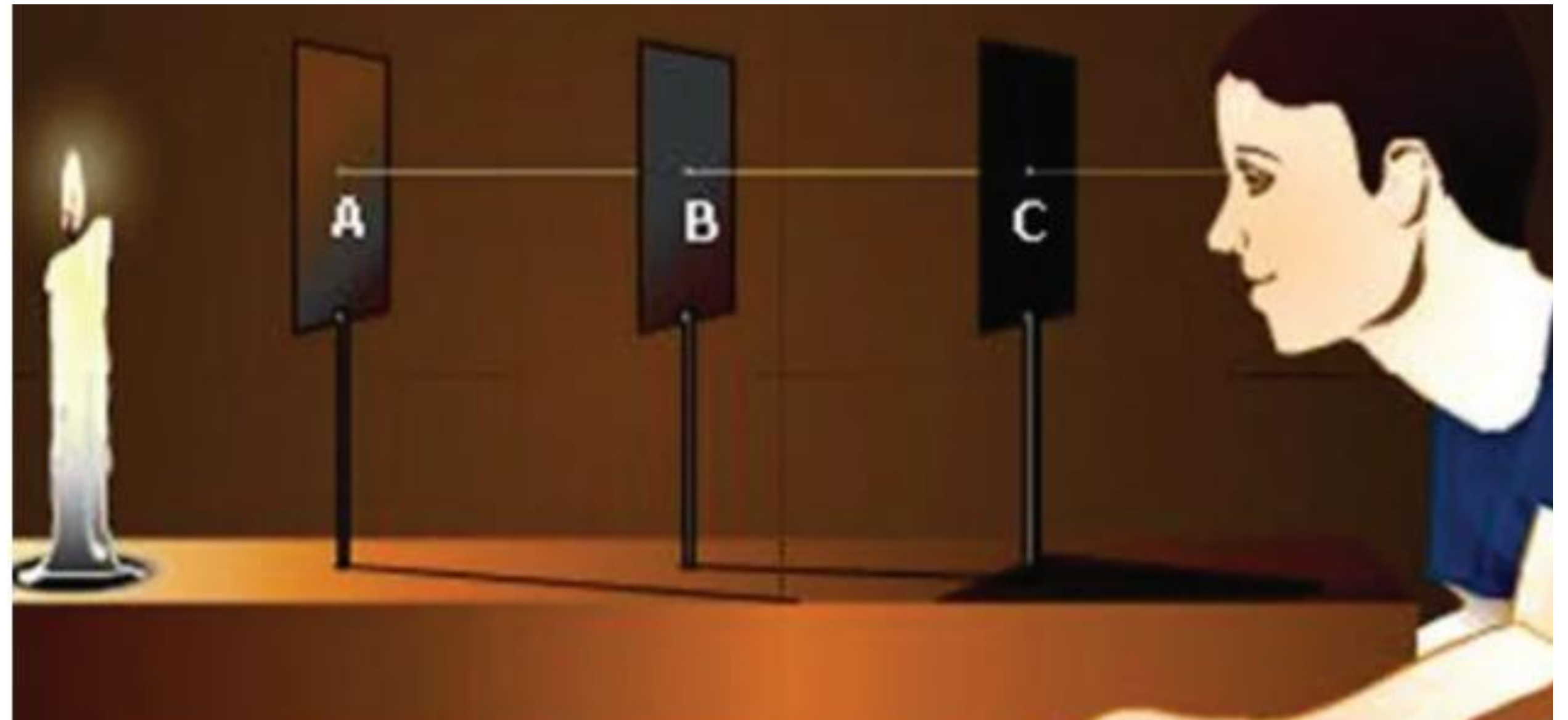
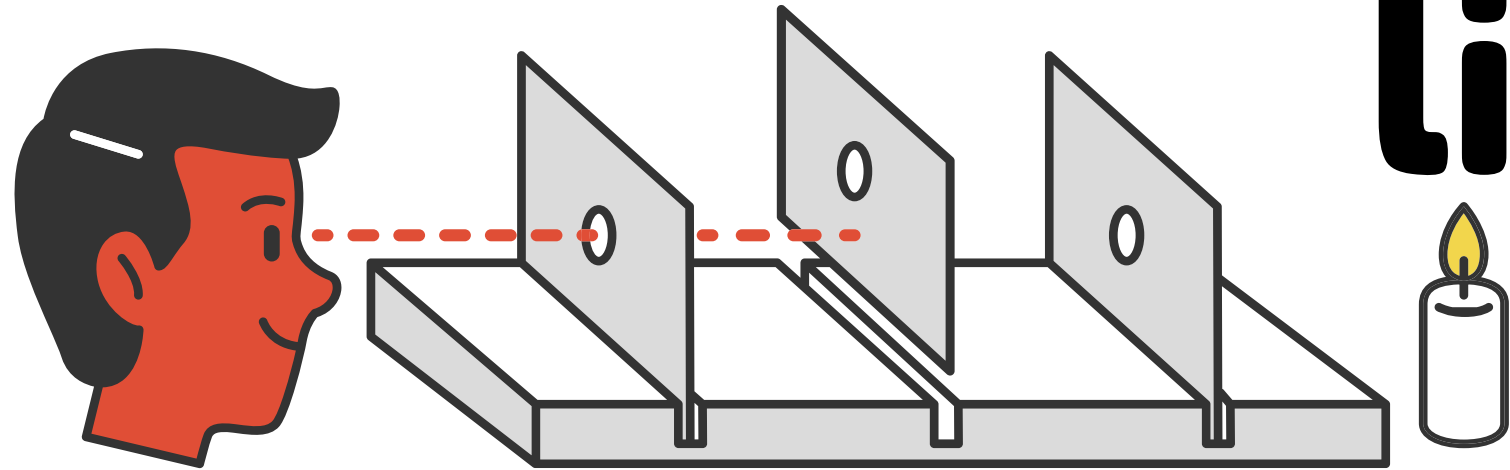
# BUTTERFLY STEAM KIT

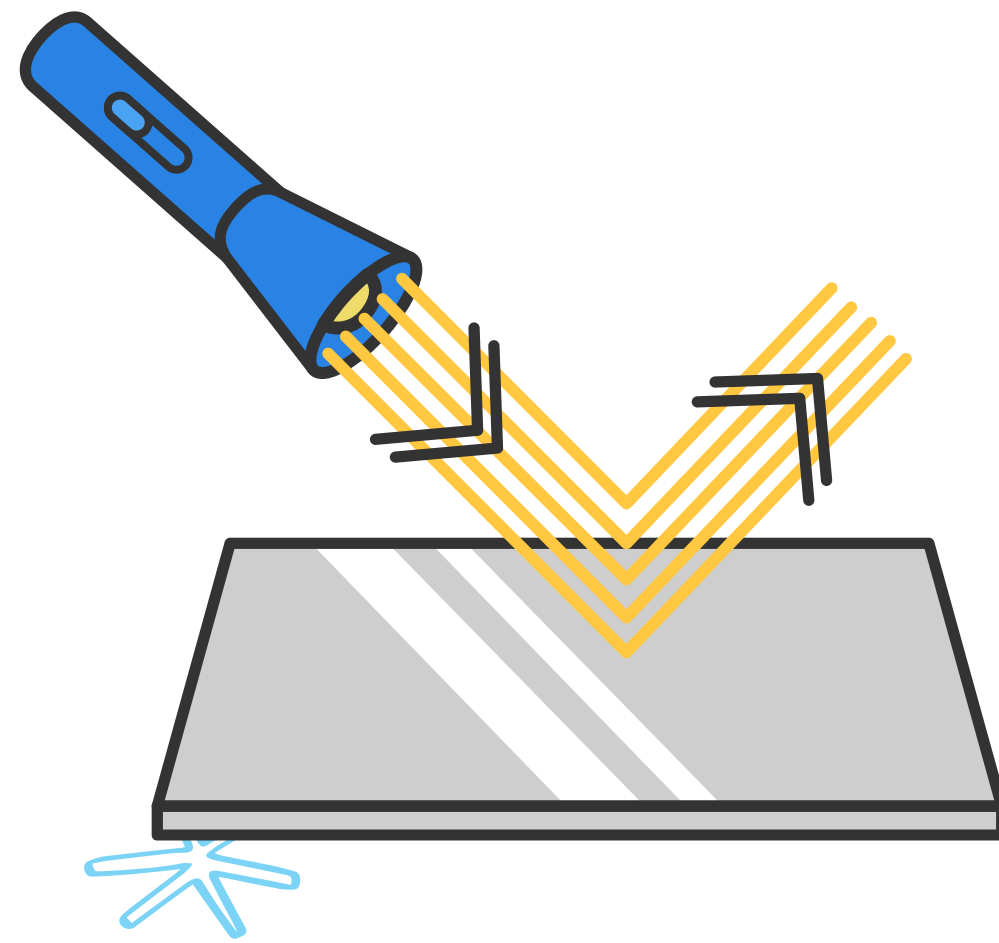


**Students actively explore the concepts of light and reflection. They are able to visualise how light travels, reflects and form images.**

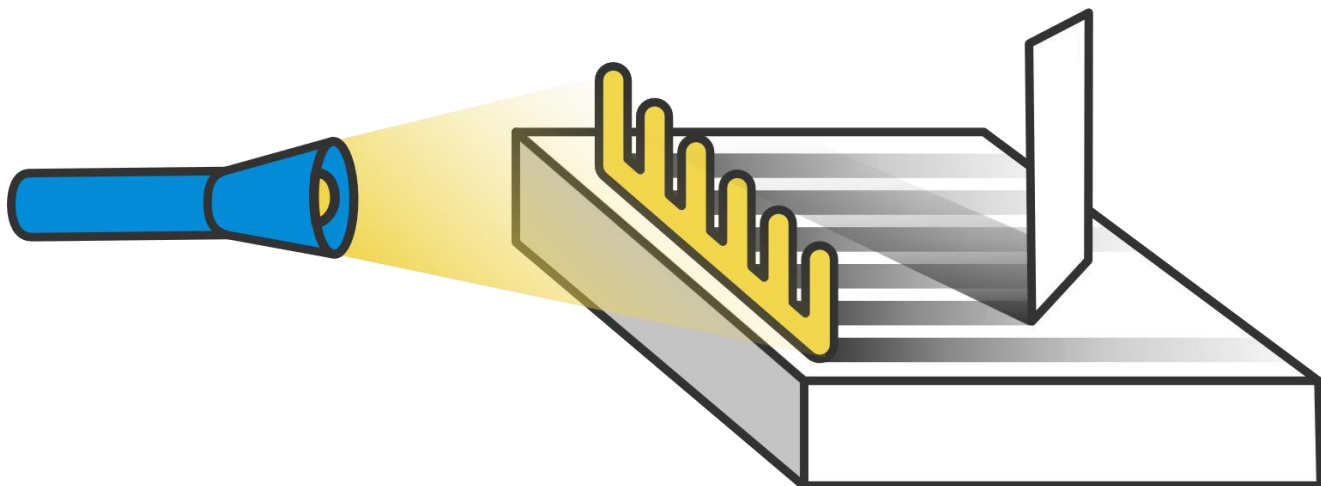
# Rectilinear propagation of

# light

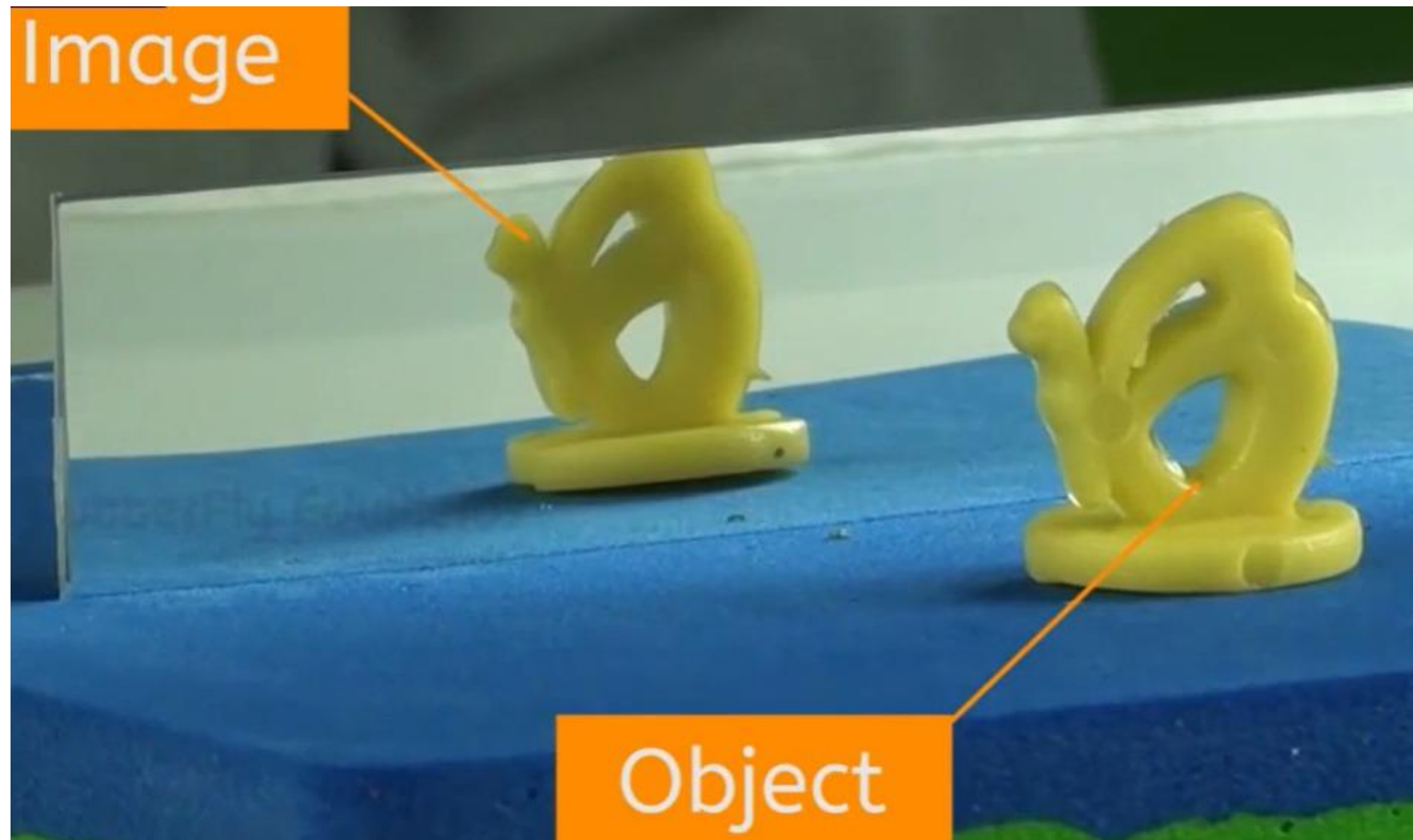




# IMAGES FORMED IN A PLANE MIRROR

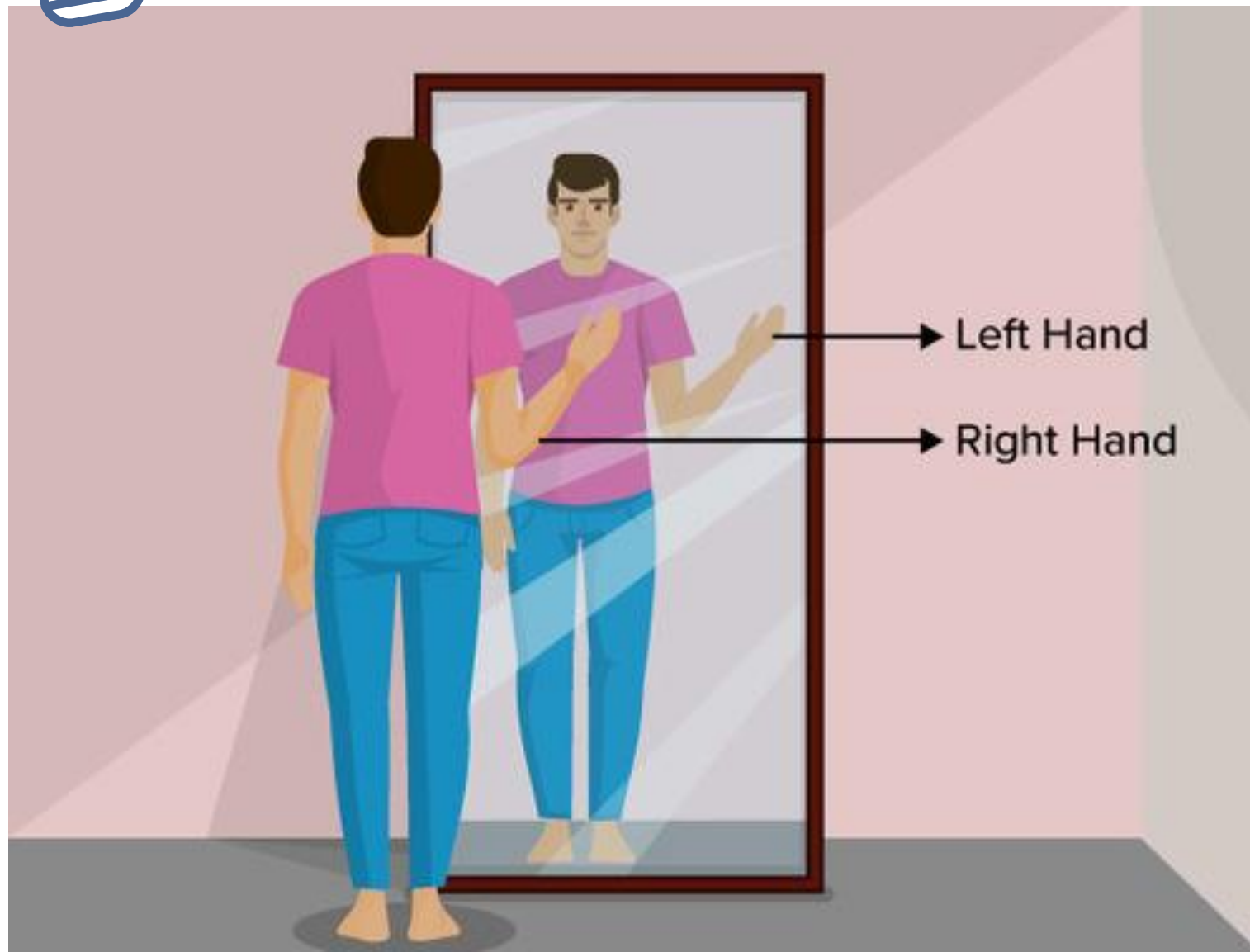


**Image distance = object distance**





# Lateral Inversion



letter on paper

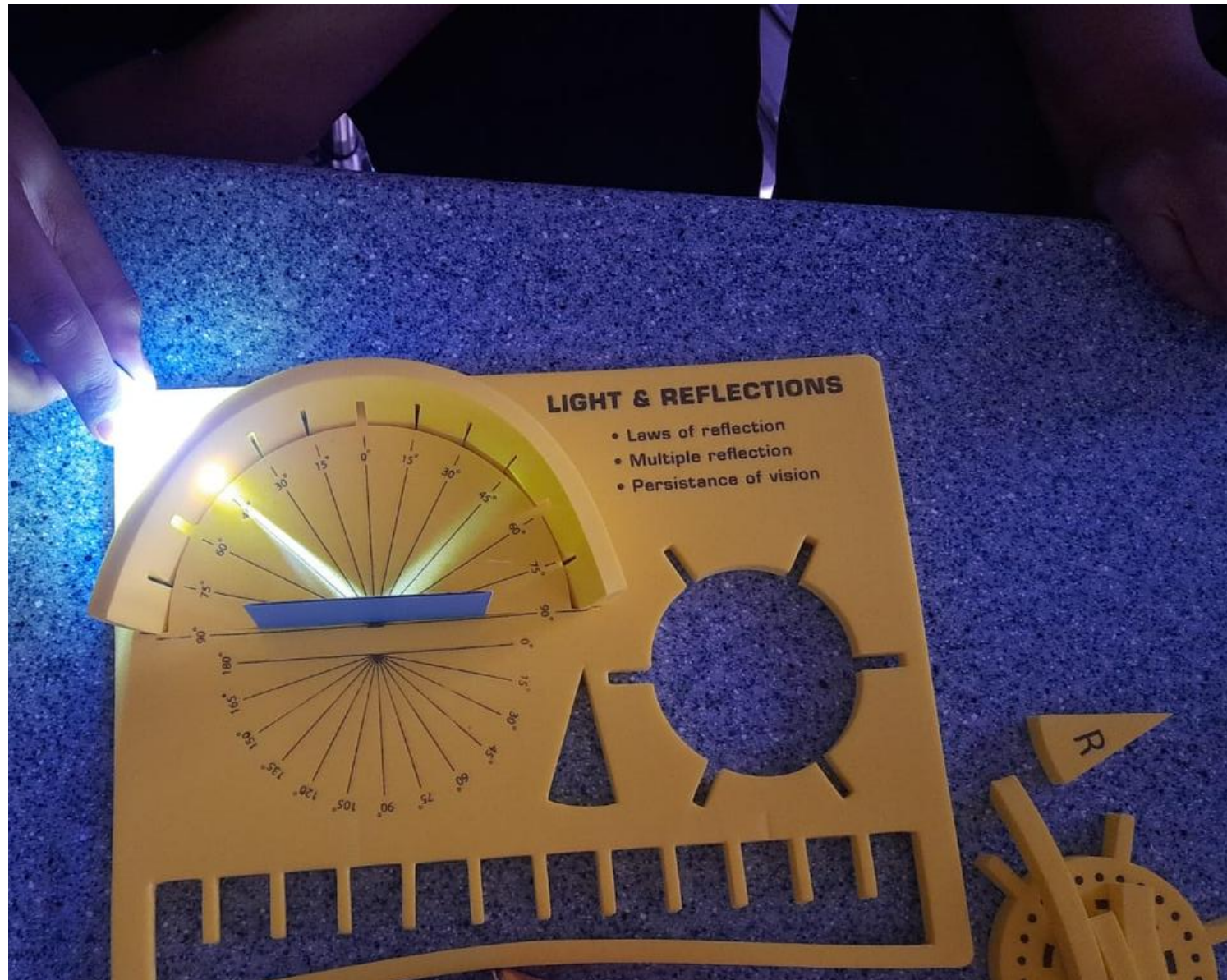
AMBULANCE

mirror

AMBULANCE

# Laws of reflection

$$i=r$$



# CBSE INITIATIVES

## Key CBSE Initiatives for Conceptual Learning

**CBSE has made experiential learning a mandatory approach in classrooms**

**Focus on:**

**Hands-on activities  
Experiments and models  
Field visits and real-life connections**

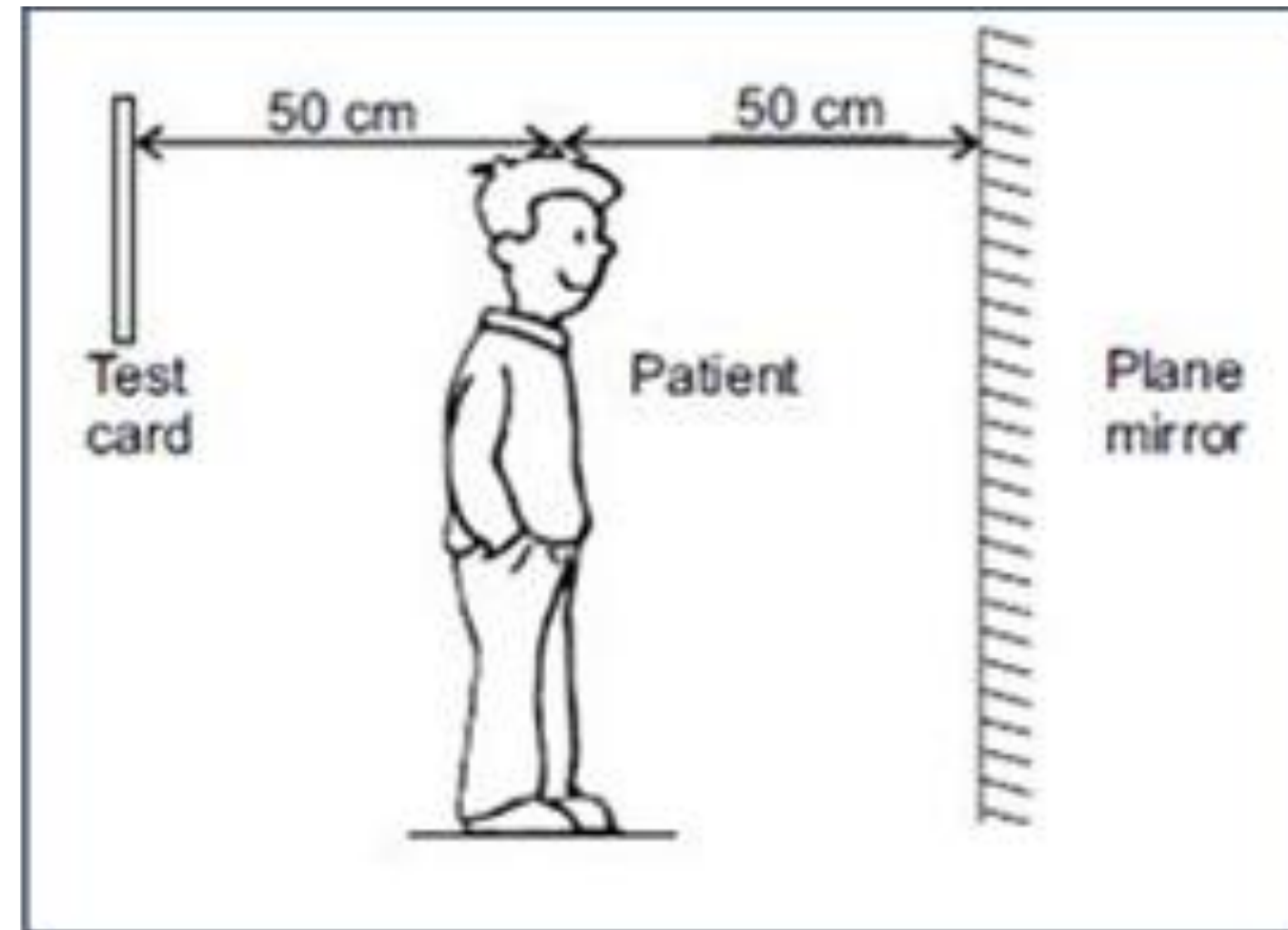
**Shift from rote-based exams to competency-based learning and assessment**

**Focus on:**

**Critical thinking  
Application of knowledge  
Problem-solving skills**

# Competency based assessment

3. An optician holds a test card 50 cm behind a patient. The patient looks at the image of the card in a plane mirror kept 50 cm in front of him. What is the distance of the image of the test card from the patient's eyes?



# CONCLUSION



**Conceptual learning is not about memorising laws, but about helping students see, think, and understand how concepts actually work. We explored how identifying misconceptions, using hands-on activities, and asking purposeful questions can transform the way students learn topics like light and reflection. When students are given opportunities to observe, experiment, and explain in their own words, their understanding becomes deeper and more meaningful.**



**THANKYOU**