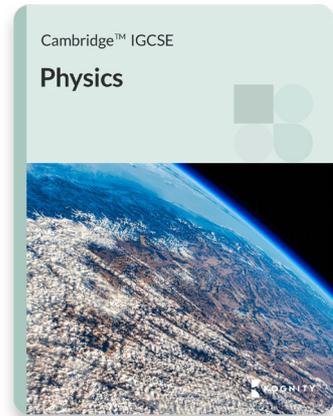


IGCSE Physics

Our IGCSE Physics subject supports the full Cambridge IGCSE™ Physics (0625) syllabus for the first examination from 2016.



Key Features

With Kognity's Physics, you have everything you need in one place. The Core and Extended syllabus content are both comprehensively covered, and are supplemented by a deep question bank for issuing questions to students of all levels to prepare them for exams and to consolidate learning.

1. General physics				
176 questions Add question				
<input type="checkbox"/>	Sent	Question	Topic	Type
<input type="checkbox"/>		A student is determining the density of an irregularly shaped rock. To find its volume, she places the rock in a measuring cylinder ...	1.4	
<input type="checkbox"/>		The density of air is 1.3 kg/m ³ . Calculate the mass of air in a room measuring 4.0 m wide, 5.0 m long and 2.5 m high.	1.4	
<input type="checkbox"/>		A metal cube has density 4 400 kg/m ³ and mass 0.960 kg. Calculate the length of the sides of the cube. Give your answer in centi...	1.4	
<input type="checkbox"/>		A chair is made of metal and wood. The metal has a density of 5 500 kg/m ³ and a volume of 6.0 × 10 ⁻⁴ m ³ . The wood has a densiti...	1.4	

Practical

Aim

To demonstrate refraction.

Safety

A full risk assessment must be carried out before starting this practical activity (see section 0.0.0 for more information).

Summary of method

1. Place a rectangular glass block on a sheet of paper (**Figure 2**).
2. Use a ray box to shine a beam of light into the glass block at an angle to the normal.
3. Observe the path of the light beam as it enters or leaves the block.
4. Repeat the process with different angles of incidence, including a beam that enters the glass block along the normal.

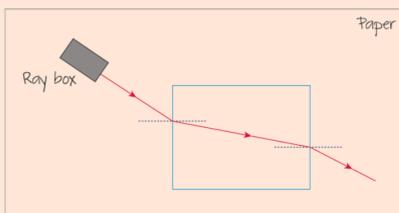


Figure 2. Demonstrating refraction.

Results

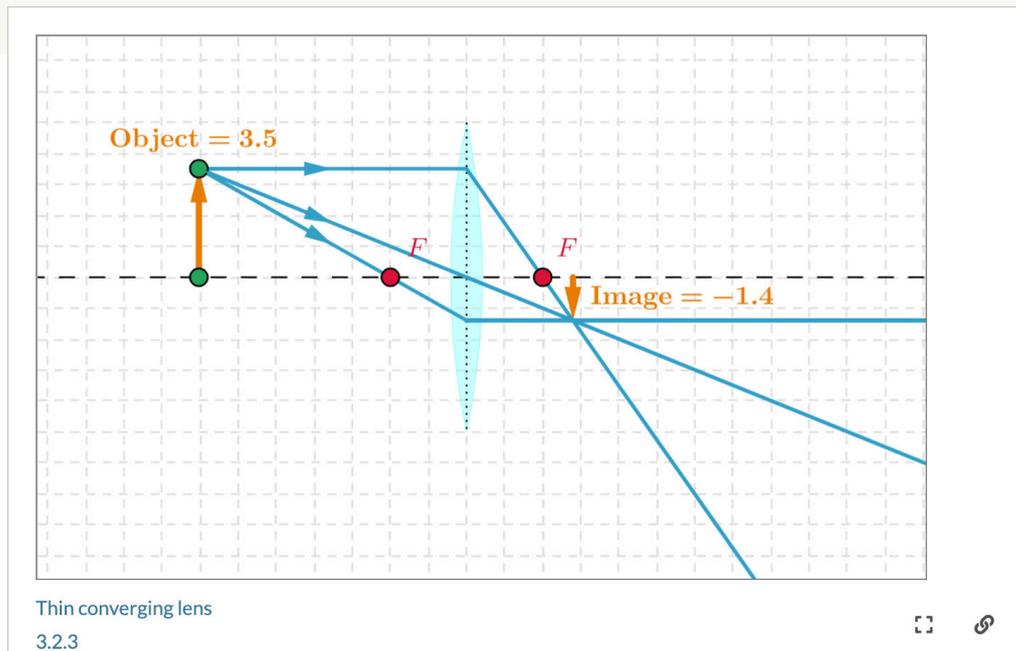
The ray of light changes direction as it enters the glass block. This change in direction is towards the normal – the angle of refraction is smaller than the angle of incidence. The ray of light refracts away from the normal when it leaves the glass block and enters the air. If the ray enters the block along the normal, then the ray does not change direction.

The inclusion study skill boxes promote reflection and self-management, while practical boxes help develop key skills for examinations.

Study skills

Remember: angles of incidence and angles of reflection (and refraction) are always measured between the rays and the normal, not to the surface of the material itself.

Diagrams, illustrations, photos and videos add a visual perspective to key concepts of the syllabus. Kognity Physics also contains 3D models and GeoGebra applets that are embedded directly into the text so that students can access them while they read. These clickable, interactive resources make learning fun and engaging.



Kognity's Physics is written in clear language for international learners. Furthermore, it comes complete with a glossary, which allows students to explore key terms via a designated section of the book.

a.c.

Alternating current, electrons continuously change direction.

absorption

The taking in of something. Absorption of infra-red radiation causes an increase in internal energy and temperature.

acceleration

The rate of change of velocity of a body, measured in m/s^2 .

