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PARK PARADE, LONDON, NW10 4HT. MANUFACTURED BY HANGZHOU ZT MODEL COMPANY LIMITED. ADDRESS: NO 6
MINGDE RD., PUYAN, BINJIANG, HANGZHOU, CHINA.

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PATENT NO: PCT/CN2019/075169

THE LEARNING BOOKLET

— FOR THE 3D GALAXY PROJECTOR —

No 3D glasses required








WARNING:
CHOKING HAZARD - Small parts,
Not for children under 3 years.

AGES **8+**





TABLE OF CONTENTS

 Warning Message	01
 Package Contents	05
 Installation Instructions	08
 Activities	15
 Fun Facts	23

WARNING MESSAGE

GENERAL WARNING

Before you begin, please read through the instructions together with your children. Make sure you understand the safety messages. Please keep the packaging and instructions, as they contain important information.

This kit is designed for children over 8 years of age. This product contains small parts which may pose a choking hazard. It is not suitable for children under 3 years old. Please keep individual parts and the fully-assembled product away from children under 3 years of age.

Screws and other metal parts may have sharp edges. Children should have adult supervision when assembling the product. Children should have adult supervision when using cutting tools.

This kit is intended for indoor use. Water and rain will damage the electronic components.

Last but not least, please clean the parts and finished product with a damp cloth. Make sure to remove the batteries from the battery compartment before cleaning. Do not use any soap or cleaning solutions.

OTHER WARNINGS

Using a screwdriver

- 1. Please ask parents or another adult permission to use the screwdriver.*
- 2. You must always be supervised by an adult when using the screwdriver. The metal may have sharp edges that can cause injury.*
- 3. Do not throw the screwdriver at other people or animals.*
- 4. Put the screwdriver back in its proper storage place after use.*
- 5. Do not use a screwdriver near children under 3 years of age.*

Using batteries

- Do not charge non-rechargeable batteries.*
- Do not mix different types of batteries or new and used batteries.*
- Insert batteries with correct polarities.*
- Remove exhausted batteries from the toy.*
- Do not short-circuit supply terminals.*
- Remove rechargeable batteries from the toy before charging.*
- Charge rechargeable batteries under adult supervision only.*
- Do not use rechargeable batteries.*

1 | WARNING MESSAGE





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2 | PACKAGE CONTENTS



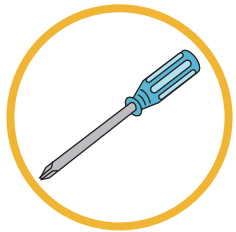
Package Contents



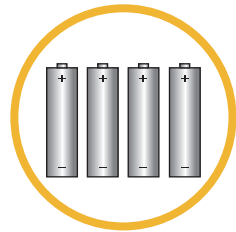
Conforms to ASTM D-4236

Serial	Name	Quantity	Serial	Name	Quantity
1	Left lens frame	1	5	Slides	5 + 1(spare)
2	Lens	1	6	Screw	2 + 1(spare)
3	Lens tube	1	7	Marker pen	1
4	Right lens frame	1	8	Power module	1

Required tools

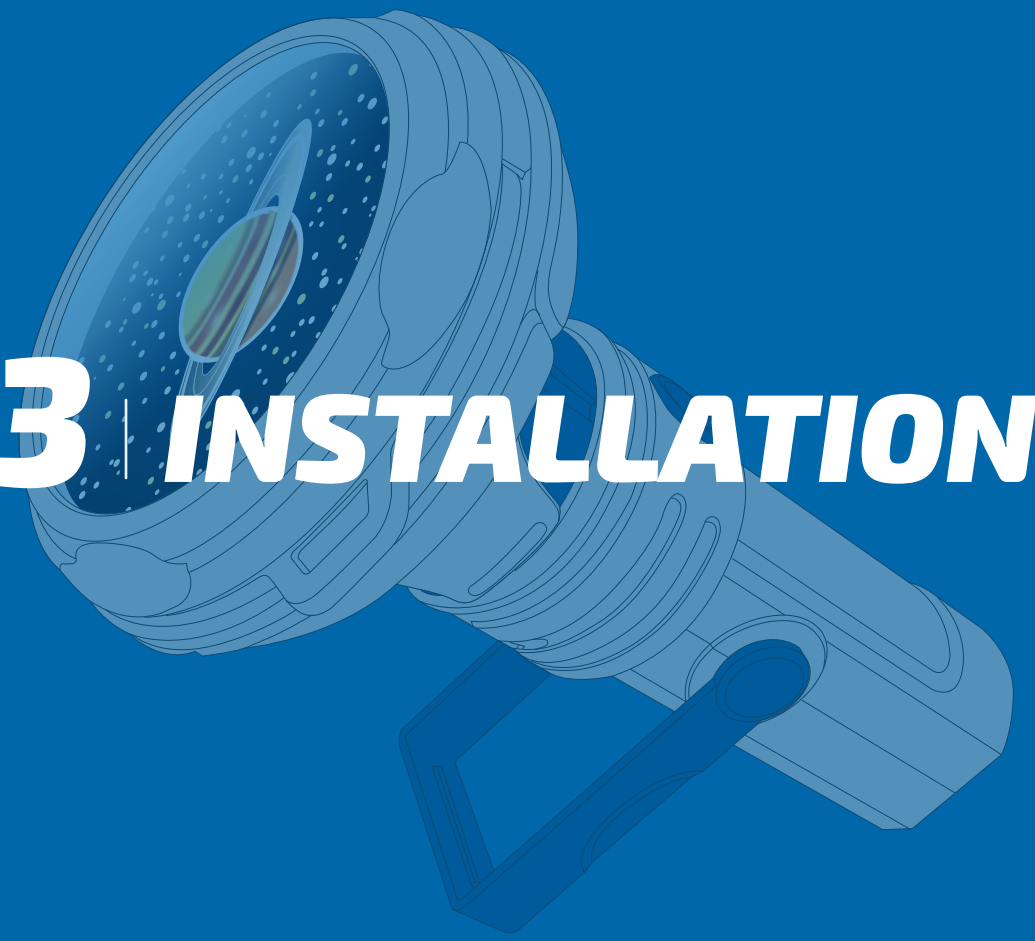


Cross-head screwdriver



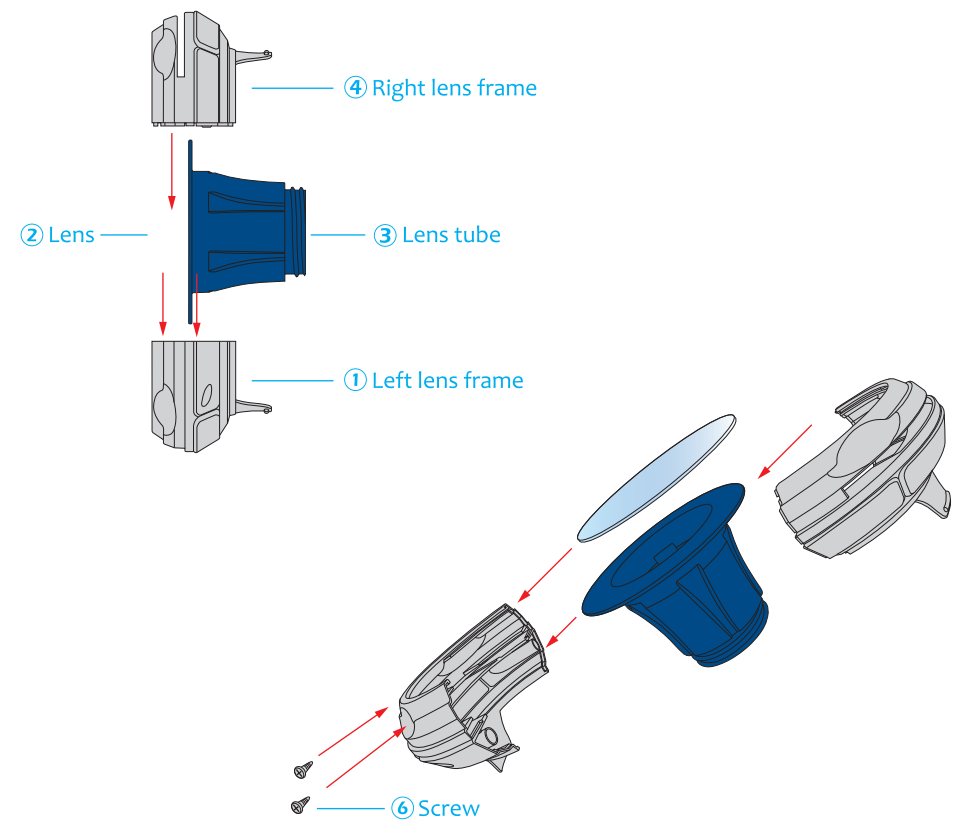
Batteries
4 x AAA (1.5V)

3 | INSTALLATION

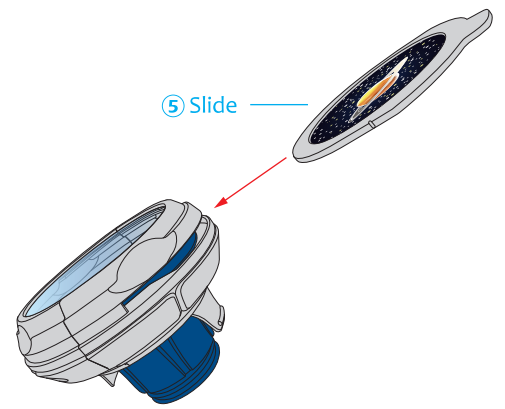


Installation

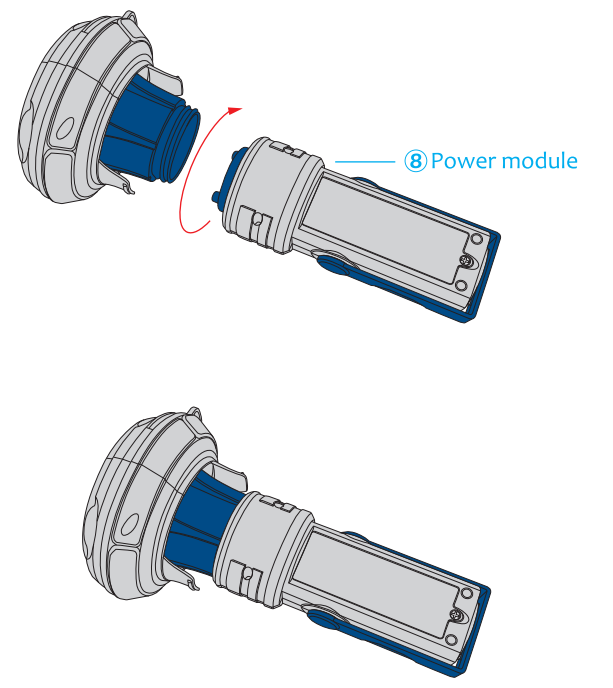
1 Insert the lenses and the lens tube between the lens frames and screw them tightly together.



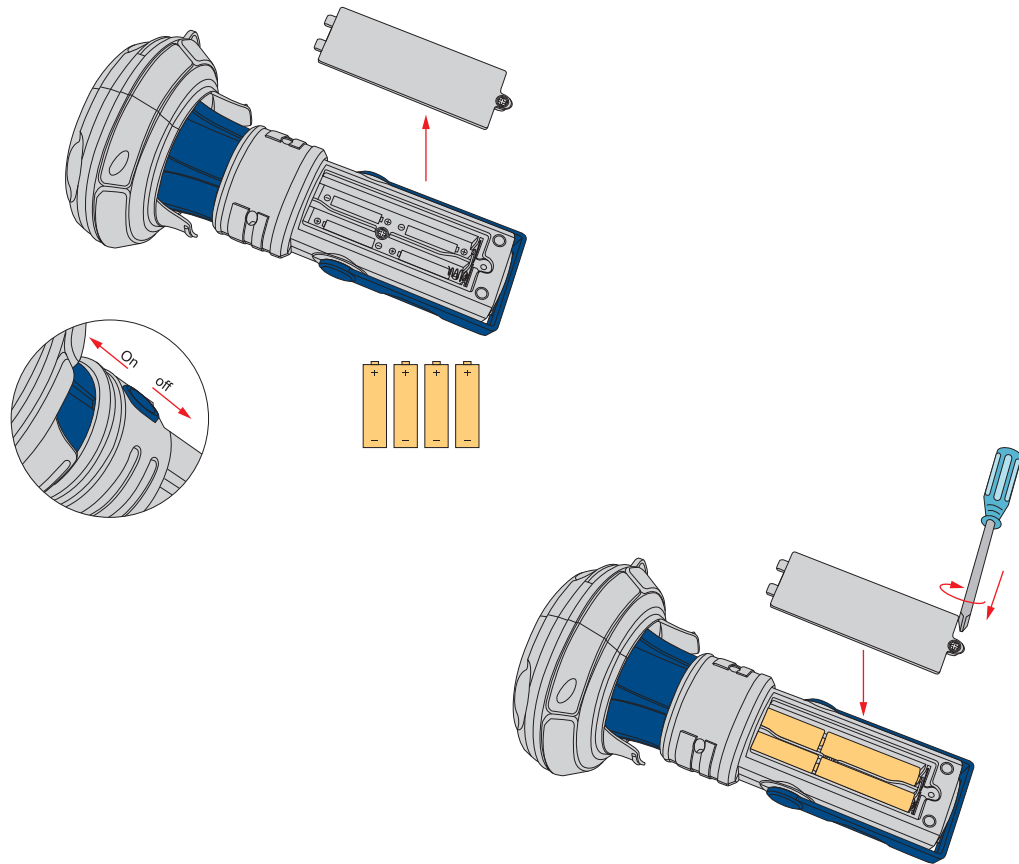
2 Select a slide and insert it as shown on the figure.



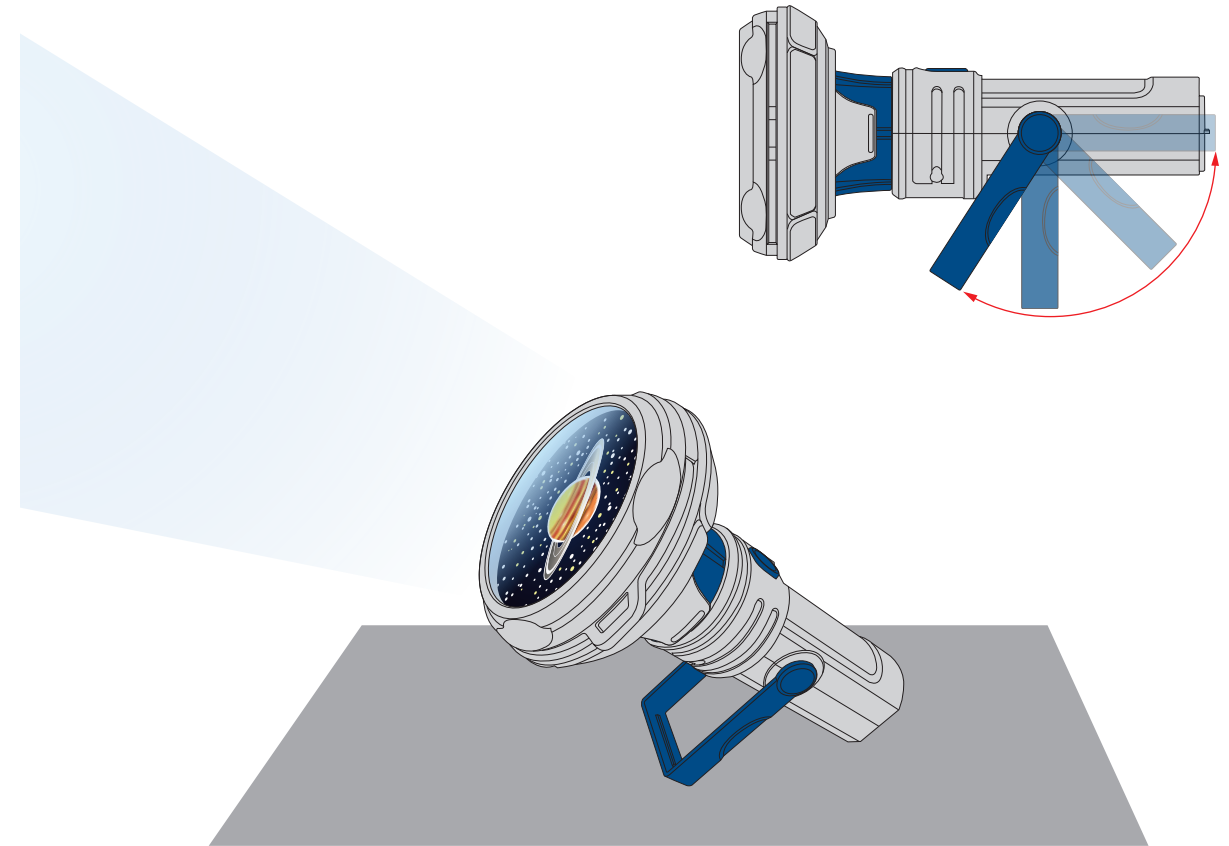
3 Screw the assembled part onto the power module as shown.



- 4 Open the battery compartment cover and install the batteries correctly according to the battery polarity marks. Test the normal functioning of the flashlight by pushing the power switch (up to turn it "on" and down to turn it "off"). Then, put the battery compartment cover back and tighten the screw.

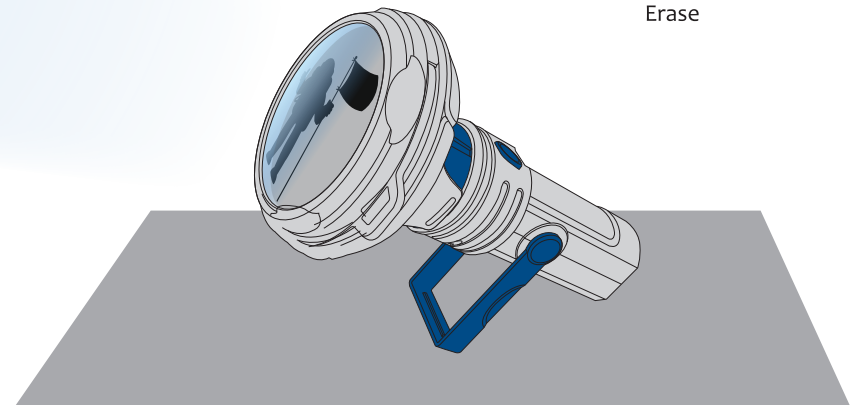
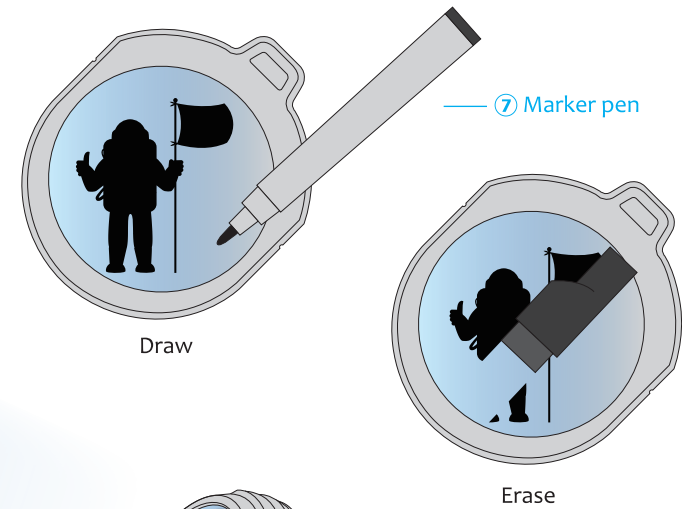


- 5 You can adjust the projection angle as shown on the figure.





- 6 Draw your own picture on the transparent slide using the marker pen and project it onto the wall. Use the brush to erase your drawing.



4 | *ACTIVITIES*



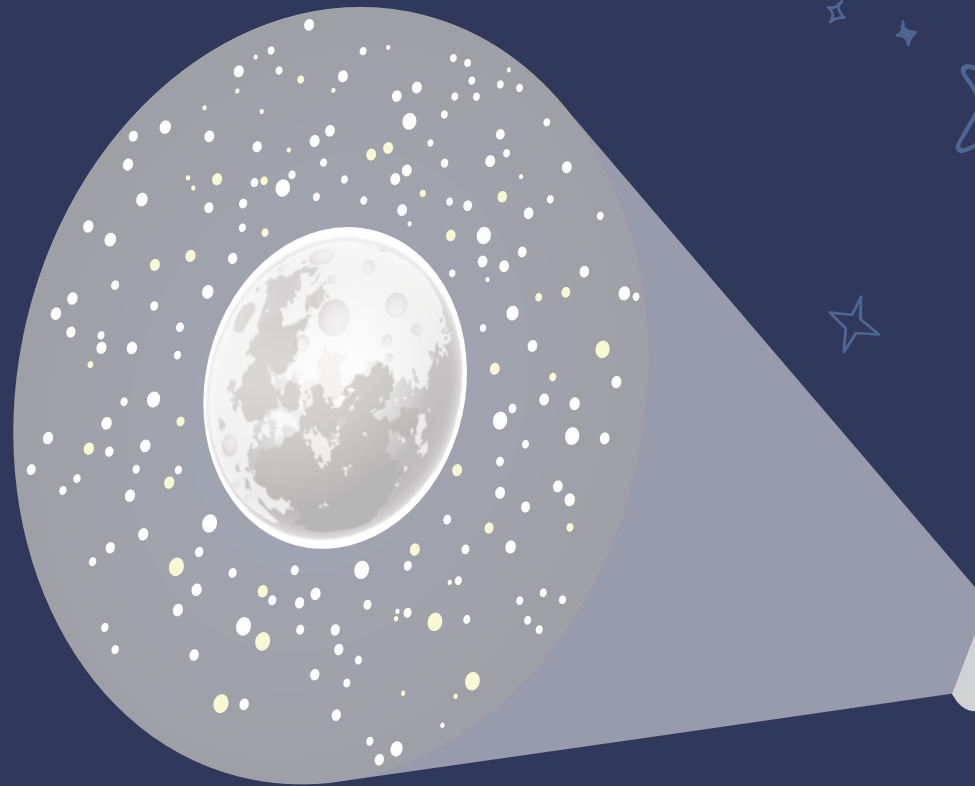
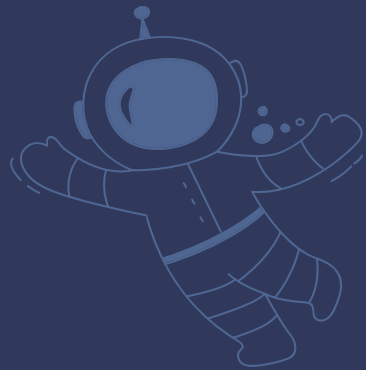
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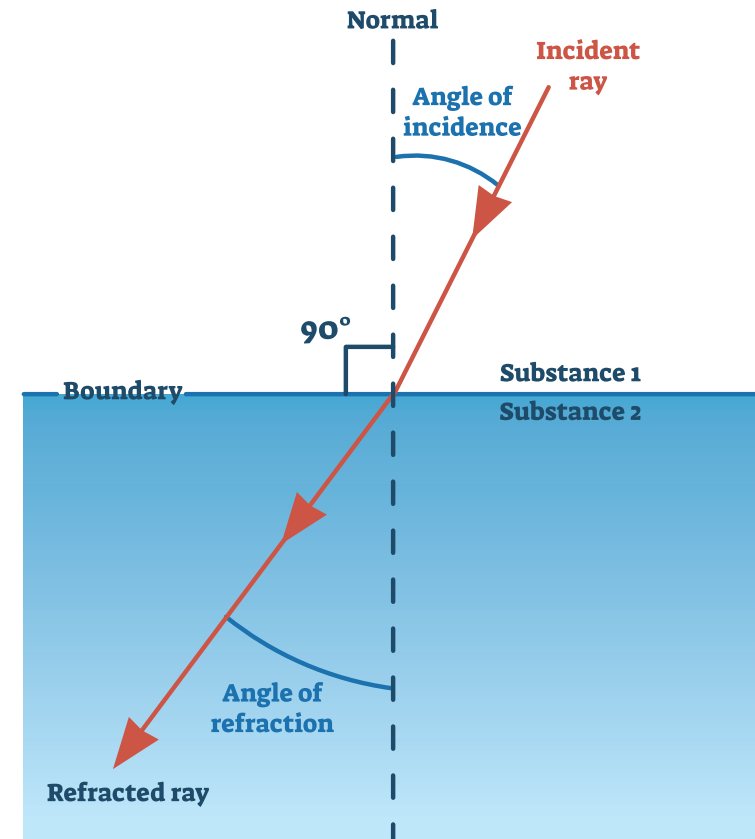
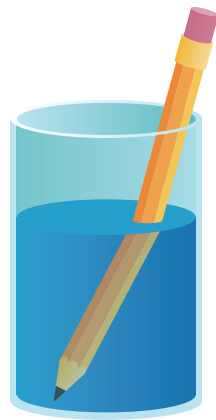
What does it do?

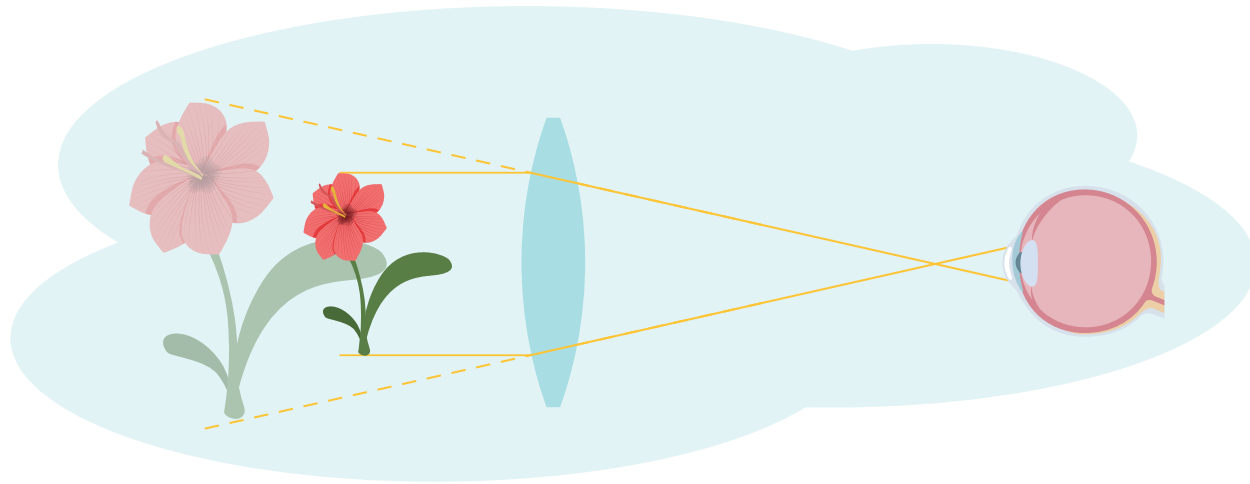
The flashlight is equipped with projection slides of the Earth, the Moon, Jupiter and a few other planets.

Project the image onto the wall, then twist and rotate the head of the flashlight to create a 3D illusion of the planet.



If you read the previous pages carefully, you now know the direction of that light change when it crosses the boundary of two media (like air and water). This is called "refraction". Here is a little activity to illustrate this phenomenon: Fill a bowl with water. Grab a pencil and immerse it halfway into the water. Then look at it from the edge of the bowl. You will see that the pencil seems to make an angle as if it was broken. This shows how the light beams coming from the pencil changed direction when crossing the boundary water/air.





How does a magnifying glass work?

The main component of a magnifying glass is the lens. Because of refraction, when we look through a magnifying glass, objects seem bigger than they really are.

Look closer to your projector. You can notice that the rotating part is equipped with plenty of small lenses. These are oriented such as to provide a 3D vision of the image.



Read to be inspired!

Do you know what the Earth's place in the universe is?

Firstly, the Earth is part of what we call the "Solar System." It is a system of 8 planets orbiting the Sun, and many other things that are gravitationally bound like "dwarf planets" and "asteroids". You have probably already heard about these 8 planets, they are called: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.





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The solar system is itself part of a "Galaxy" called "The Milky Way". A galaxy is a huge system of stars (like the Sun) and other planets. All of the galaxies scattered all around form what we call "The Universe".



Read to be inspired!

So to sum up, the universe contains many galaxies. These include the "Milky Way" which contains the "Solar System." The Solar System, is where we find the Sun, the Moon, and the Earth on which we live.





Read to be inspired!



Do you know how the universe was born? A very long time ago, all the galaxies of the universe, with all the stars and the planets, were gathered in a small and extremely heavy ball.

Then this extremely heavy ball exploded and expanded, spreading all the galaxies around. This big explosion is known as "The Big Bang".

