شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية

مراجعة هامة للأسئلة الكتابية وفق الهيكل الوزاري انسباير

تاريخ نشر الملف على موقع المناهج: 2024-03-07 15:42:48

التواصل الاجتماعي بحسب الصف الثامن

روابط مواد الصف الثامن على تلغرام

التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

المزيد من الملفات بحسب الصف الثامن والمادة علوم في الفصل الثاني

1	حل الأسئلة الكتابية وفق الهيكل الوزاري انسباير
2	مراجعة نهاية الفصل وفق الهيكل الوزاري
3	الهيكل الوزاري انسباير المسار العام
4	الهيكل الوزاري بريدج المسار العام
5	بوربوينت شرح وأوراق عمل درس العدسات

Hessa Bint Mohammed School

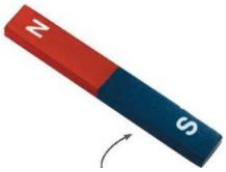
End of Term- 2 Writing Part

1. Assign magnetic poles according to repulsion and attraction forces and explain why any piece of a magnet will be a smaller magnet with two poles 2. Assign magnetic strength and label it on magnetic fields 3. using a compass needle assign the direction of magnetic field

Textbook, figures, 3D	177, 178, 180, 181, 184

- A magnet is an object that attracts iron and other materials that have magnetic qualities like iron.
- Any material that is strongly attracted to the magnet is a magnetic material.
- Magnetic materials contain ferromagnetic elements like nickel cobalt, and iron.
- A force of attraction or repulsion is created by a magnet called magnetic force.
- Magnetic force is called a non-contact force.

Where is the force of a magnet the strongest?



The Magnetic poles (north pole and south pole)

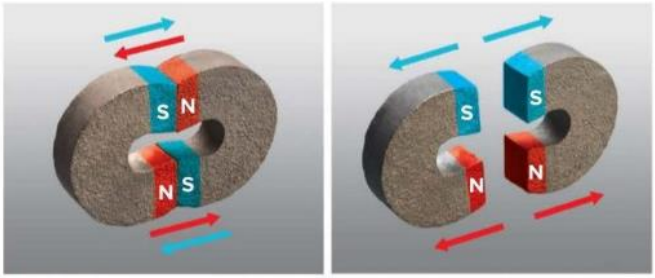
(The two ends of magnets are equally strongest. The middle is weaker.)

- **The magnetic pole is the place where the force a magnet applies is the strongest.**

What happens if you break a magnet into pieces?

Each piece will have a north pole and a south pole.

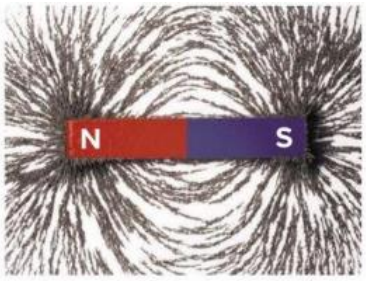
The force between magnetic poles



Similar poles repel.

Opposite poles attract.

Iron fillings are used to model a <u>magnetic field</u> around a bar magnet. The iron fillings form a pattern of <u>curved lines</u> called <u>magnetic field lines</u>.



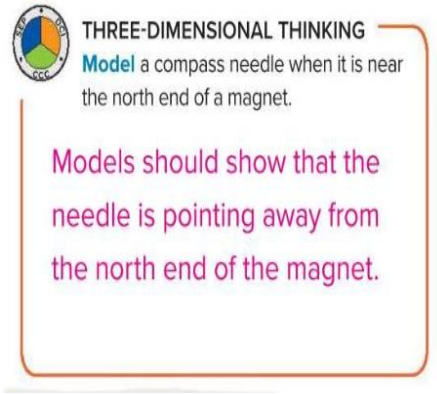
An invisible <u>magnetic field</u> surrounds a magnet.

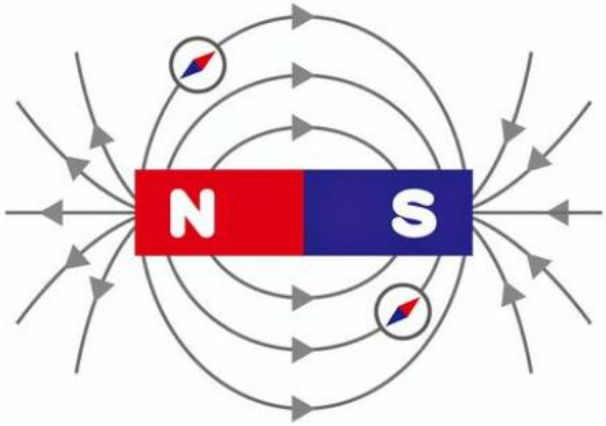
<u>Compasses</u>

The needle of a compass is a small magnet.

Like a magnet compass needle has a north pole and a south pole. If a compass needle is within any magnetic field, it lines up with magnetic field lines.

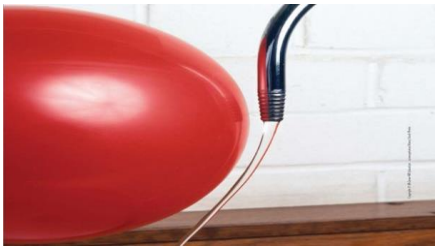
Model a compass needle when it is near the north end of a magnet





Textbook, figures, encounter the phenomena, 3D, lab	199, 200, 203, &, 226, 227, 228
2	1. Explain how matter and charged particles interact, and define repulsion, attraction, electrical forces, and electric field 2. explain what factors affect an electric current and draw a simple electrical circuit

Why does the balloon attract the water?

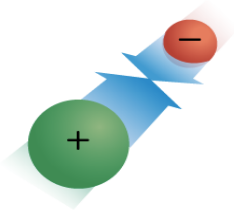


Because balloon has a charge and applies an attractive force on the water.

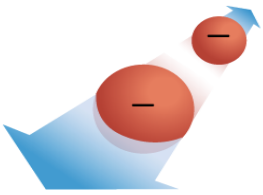
There are two types of charges, positive charge and negative charge.

Opposite charges attract.

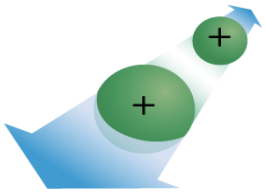
Similar charges repel.



Positively and negatively charged objects attract each other.



Two negatively charged objects repel each other.

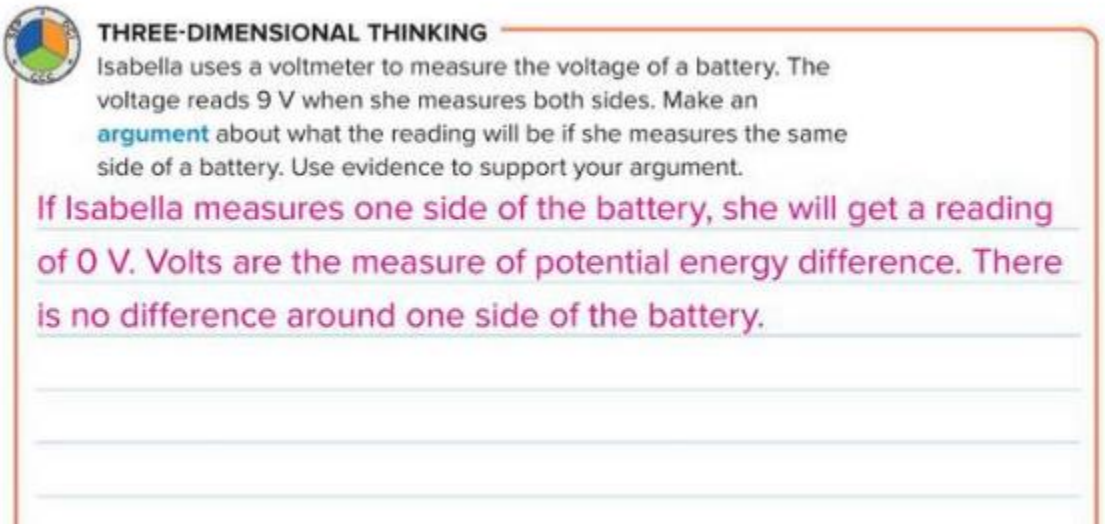


Two positively charged objects repel each other.

<u>Relationship between voltage and current</u>

- **Voltage and current have a proportional relationship.**

<u>Voltage</u> is the electrical potential energy difference between two places in a circuit.



THREE-DIMENSIONAL THINKING

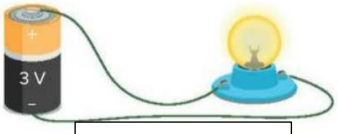
Isabella uses a voltmeter to measure the voltage of a battery. The voltage reads 9 V when she measures both sides. Make an argument about what the reading will be if she measures the same side of a battery. Use evidence to support your argument.

If Isabella measures one side of the battery, she will get a reading of 0 V. Volts are the measure of potential energy difference. There is no difference around one side of the battery.

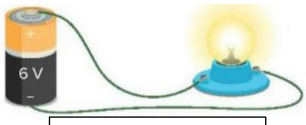
An electric wire connected to a 9v battery produces about how many times more light and thermal energy than the same light bulb connected to a 1.5 V battery.

About 6 times more light and thermal energy.

How does the light bulb indicate a difference in voltage between the two circuits?

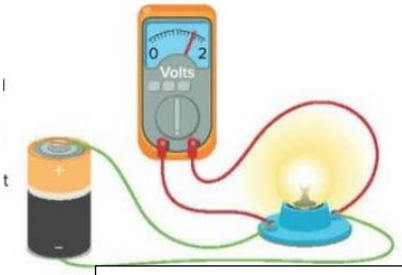


Low voltage

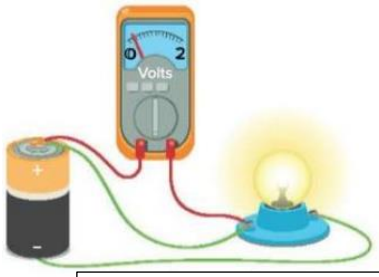


High voltage

11. Voltage measured across the portion of the circuit shows how much energy is transferred in that portion.



High voltage across the bulb.



Low voltage across the bulb.

Why is copper used in wires and what effect do you think it has on the transfer of electric energy?

Copper is one of the best conductors.

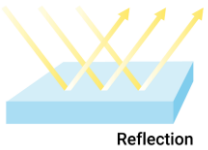
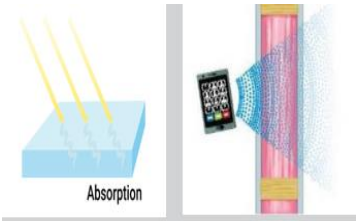
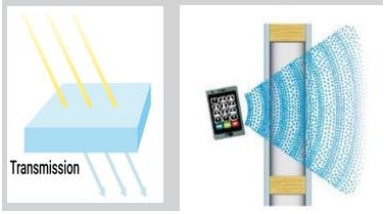
4	1. Describe how waves interact with matter (Reflection, Absorption, Transmission, Diffraction) and draw a model to represent the interaction 2. Explain how the human eye sees the colors of objects and how color filters change the color of objects

textbook, figures, tables, review, 3D	42, 43, 50, 52,77 &, 136, 137

Interaction of Mechanical wave with matter

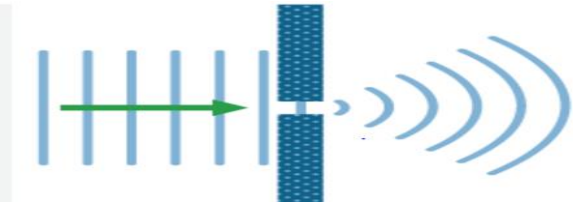
Waves interact with matter in different ways.

Reflection, Absorption, Transmission

Reflection	Absorption	Transmission
Reflection occurs when a wave bounces off an object. Echo is an example. During reflection, wave direction changes, and the angle of reflection is equal to the wave's angle of incidence. 	**Absorption is the transfer of energy by a wave to the medium through which it travels.** 	**Transmission is the passage of waves through a medium.** 

Diffraction

The change in direction of the wave when it travels by the edge of an object or through an opening is called diffraction



Interaction	Description	Model
Reflection	Wave energy bounces back off matter.	Model should show a wave bouncing off an object.
Absorption	Wave energy changes to thermal energy and remains in matter.	Model should show a wave stopping at an object and the object gaining energy.
Transmission	Wave energy is carried all the way through the matter.	Model should show a wave moving through an object.
Diffraction	The change in direction of a wave when it travels past the edge of an object or through an opening.	Model should show a wave moving around an object or through an opening. The wave should bend.

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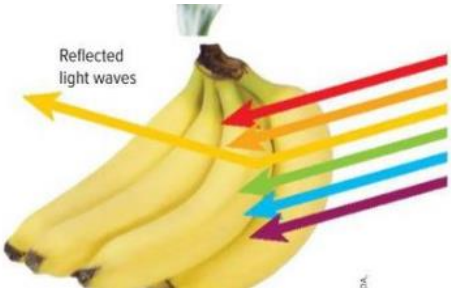
How does light interact with matter?

Like mechanical waves, light can be transmitted, absorbed, or reflected.

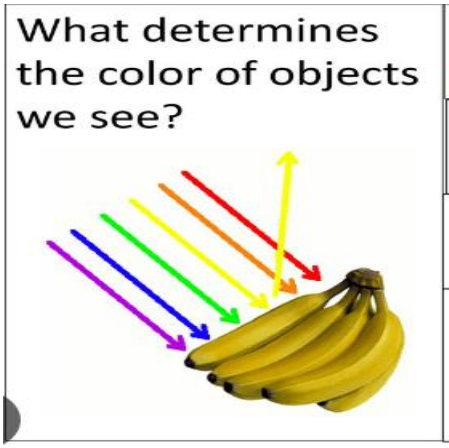
Why is rose red?

Because it reflects red color and absorbs the rest.



Because it reflects yellow color and absorbs the rest.

White light is a combination of all the wavelengths of light.



Color is determined by the wavelength the object absorbs or reflects
If an object reflects all wavelengths of light it will appear white.
If an object absorbs all wavelengths of light it will appear black.
If an object absorbs most wavelengths of light but reflects one color, the object will appear that color (like a yellow banana).

Why sky is blue?

Blue light is scattered in all directions by the tiny molecules of air in Earth's atmosphere. Blue is scattered more than other colors because it travels as shorter, smaller waves.

Color filters

Under white light shirt appears blue because it reflects blue light.

Under the blue color filter shirt appears blue because it reflects blue light.

Under red color filters shirt appears black because it absorbs red light and no light is reflected.

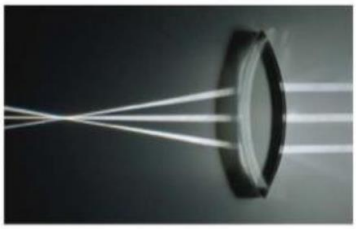
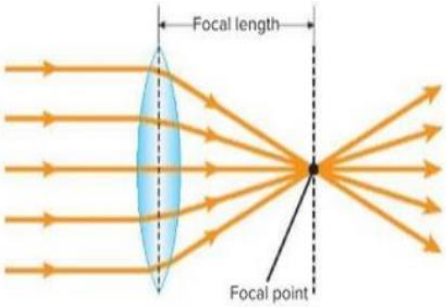
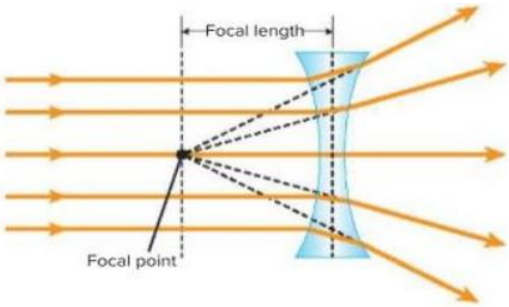
5	Compare between concave and convex lense and draw the pathway of the light rays passing through a lens

textbook, figures, tables, review	116, 118, 120

Lenses

A lens is a transparent object with at least one curved side that causes light to change direction.

Light refracts as it passes through the lens.

Convex lens	**Concave lens**
	
Refract light inwards and it converges.	**Refract light outward or diverges.**
	

Types of images in convex lens and concave lens.

Convex lens	Concave lens

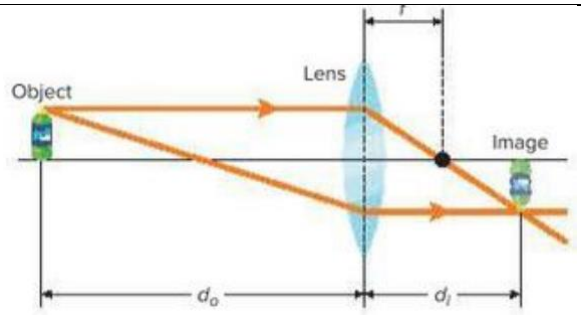
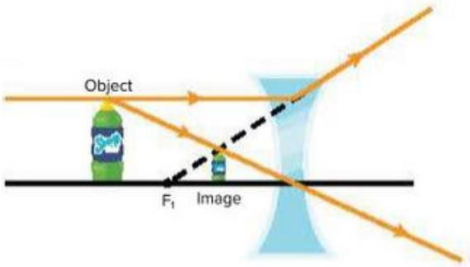
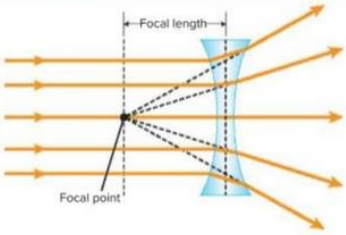

	

Image a convex lens form depends on the location of the object. **It can form both real and virtual images.** **If you look at an object with more than one focal length from the lens the image is inverted and small.** **If you look at an object with less than one focal length from the lens the image is upright and larger.**	**The image formed is virtual,upright and diminished.**

1. **Categorize** Complete the table by describing each type of lens.

Lens	Direction of Curvature	Direction of Refracted Light	System Model
Concave	curved inward	Light rays refracted and spread out in all directions.	
Convex	curved outward	Light rays are refracted, and they pass through a focal point.