

APPENDIX - I
PERSONAL DATASHEET

Name :
Sex : Male / Female
Type of Disability :
a. Visual Impairment
b. Hearing Impairment
c. Movement Impairment
d. Cognitive Impairment

APPENDIX - II a

PRETESTING

Science Test

Name :

Grade : VIII

Group No :

School :

I. Fill in the Blanks:

10x1=10

1. The object to be electroplated is made as
a) Cathode b) Anode c) Cathode or Anode

The electricity that we use in our daily life is obtained

- a) Power station b) Telephone wires c) Lightning arrester

2. The degree of hotness or coldness of a body is

- a) Temperature b) Thermometer c) Heat

3. A body with excess of electrons is

- a) Positively charged b) Negatively charged c) Neutral

4. The flow of current requires a _____

5. Most liquids that conduct electricity are solutions of _____

6. The electrical appliances of our houses are all connected in a _____

7. The device used to detect and measure electric charges is _____

8. A substance which conducts current as solution or in the fused state is called _____

9. If the brightness of the LED glow, then liquid is a _____

II. Match the following

5x1=5

- | | | |
|------------------------|---|-----------------------|
| 1. Transfer of charges | - | conductor |
| 2. Sodium | - | squat down |
| 3. Unlike charges | - | induction |
| 4. LED | - | attract each other |
| 5. Lightning occurs | - | weak electric current |

III. Explore and Answer

5x2=10

1. Explain Series circuit and Parallel circuit?
2. What is an Atom in an object?
3. Define Electrolysis?
4. What are Conductors and Insulators?
5. Explore Radiation?

APPENDIX - IIb
POSTTESTING & RETENTION
Science Test

Name :

Grade: VIII

Group No :

School:

I Fill in the Blanks:

10x1=10

1. light travels in a _____ line
a) Parallel b) curved c) straight
2. If the rays meet at a point, then the beam is called _____
a) Convergent b) divergent c) normal
3. Reflection from a polished surface is called _____
a) Reflection b) irregular reflection c) multiple reflection
4. The number of oscillations per second is called _____
5. Mirrors arranged to form number of images of an object called _____
6. The human eye has _____ lens
7. vibrating objects produces _____
8. to and fro motion of an object is called _____
9. human ear can hear range of audible frequencies _____
10. _____ used to transmit communication signals

II. Match the following

5x1=5

- | | | |
|-----------------------|---|-------------------------------|
| 1. Kaleidoscope | - | read about 25 cm |
| 2. angle of incidence | - | multiple reflection principle |
| 3. normal eye | - | unpleasant sound |
| 4. noise | - | total internal reflection |
| 5. Optical Fibre | - | angle of reflection |

III. Explore and Answer

5x2=10

1. What is reflection? Explain the laws of reflection.
2. Explain multiple reflections and images?
3. What is refraction?
4. Write the two conditions for total internal reflection?
5. Explain the relation of amplitude, Time period and frequency of a vibration?

APPENDIX III a
PRETESTING
Science Test

Name : **Grade : VI**
Group No : **School :**

I. Fill in the Blanks: **10x1=10**

1. The capacity or ability to do work
a) exercises b) heat c) energy
2. Which energy is helpful in generating electricity through windmill?
a) heat energy b) mechanical energy c) wind energy
3. "Heat is a form of energy". This was discovered by _
a) James Joule b) Galileo c) Thomas Alva Edison
4. When heating, liquid changes to vapour
a) vapourisation b) condensation c) Evaporation
5. The electrical energy is used to run
a) ship b) electric train c) aeroplane
6. The unit of energy is
7. The loudspeaker converts -----energy into sound energy
8. Stored water in a dam has ----- energy
9. Artificial satellite and calculator are used using -----cells

II. Choose odd ones out **5x1=5**

1. Charcoal, wood, diesel, solar cells, petrol
2. Moving bus, running dog, water stored in dam, flowing water, galloping horse
3. Electric bells, turbines, horn of automobiles, loudspeaker, xylophone
4. Joule, Metre, centimeter, millimeter, kilogram

5. Conservation of energy, Electric energy, Kinetic energy, Sound energy, Heat energy

III. Explore and Answer

5x2=10

1. What are the different types of Energy?
2. Distinguish potential energy from kinetic energy.
3. What is the use of Heat energy?
4. List the conversion of energy in the hydro electric power stations?
5. Explain law of conservation of energy?

APPENDIX III b
POSTTESTING & RETENTION
Science Test

Name : _____ **Grade : VI**
Group No : _____ **School:** _____

I. Fill in the Blanks: **10x1=10**

1. The method used to separate the mixture of solids
a) Winnowing b) Filtration c) condensation
2. The method separate lighter particles from heavier particles is obtained
a) sieving b) magnetic separation c)

Winnowing

3. The method used to separate the seeds from the fruit juice is
a) Filtration b) crystallization c) decantation
4. When heating, liquid changes to vapour
a) vapourisation b) condensation c) Evaporation
5. The method used to separate smaller quantity of solids
a) Sieving b) Handpicking c) winnowing
6. The method used to separate using colour and size is _____
7. Suitable method to separate flour _____
8. _____ can be used to separate sand and stone mixture to build buildings _____
9. when vapour of the substances get cooled, condense into liquid _____
10. The device used to detect and measure electric charges is _____

II. Choose odd ones out**5x1=5**

1. Magnetic Separation, Winnowing, handpicking, Evaporation, Sieving
2. Decantation, Filtration, Sieving, Condensation, Evaporation
3. Magnetic Separation, Sedimentation, Condensation, Filtration, Evaporation
4. Filter paper, Sieve, Funnel, Glass rod, Plate
5. Filtration, Sedimentation, Decantation, Condensation, Crystallization

III. Explore and Answer**5x2=10**

1. Why is separation of substances necessary in our daily life?
2. What are the methods to separate mixture of solids?
3. Explain the use of sieving?
4. How will you separate dissolved mixtures of salt and solution?
5. Explain the need for applying more than one method of separation.

APPENDIX - IV
SOCIAL SKILL RATING

Name:

Grade:

School Name:

Type of Disability, if any:

1. Which three people in your class do you most like?

I Choice - _____

II Choice - _____

III Choice - _____

2. Which three people do you like the least?

I Choice - _____

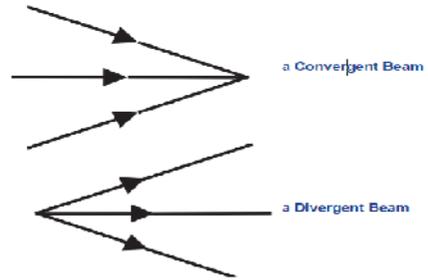
II Choice - _____

III Choice - _____

APPENDIX - V
SUMMARY OF THE LESSON-(GRADE VIII)
Light and Sound

I. Introduction

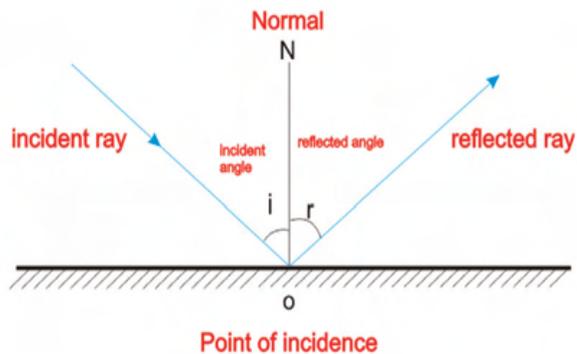
The bouncing of light from the surface of a body is known as **reflection**. Light travels along a straight line. The path taken by the light is known as a ray. Two or more rays form a beam.



When the rays are parallel. It is known as parallel beam. If the rays meet at a point (converge), they form a convergent beam. If the rays move away from a point it is called as divergent beam.

II. Reflection

A light ray which strikes the surface is called an **incident ray**. The reflecting surface after reflection is called a **reflected ray**. The perpendicular line drawn to the surface at the



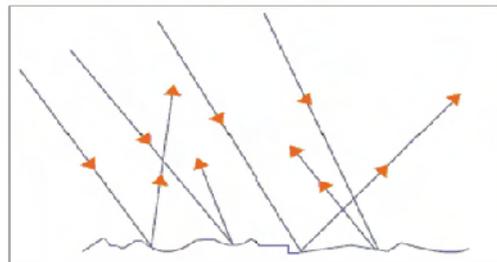
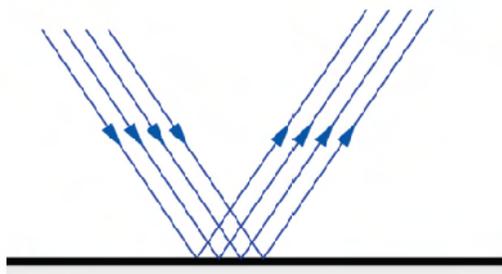
perpendicular line drawn to the surface at the point of incidence is called a **normal**. The angle between the incident ray and the normal at the point of incidence is called the **angle of incidence (i)**. The angle between the reflected ray and the normal drawn from the point of incidence is called the **angle of reflection (r)**.

Laws of Reflection

1. The incident ray, the reflected ray and the normal to the surface at the point of incidence lie in the same plane.
2. The angle of incidence is equal to the angle of reflection.

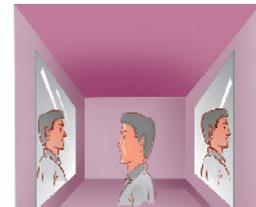
i) Regular and Irregular Reflections

Reflection from a polished surface is called **Regular reflection**. Reflection from a rough (unpolished) surface is called **irregular or diffused reflection**.



ii) Multiple reflection

The mirrors are arranged at a particular angle so as to get the maximum number of images.



iii) Multiple Images

But two or more mirrors are arranged to form number of images of an object. These are called Multiple Images.

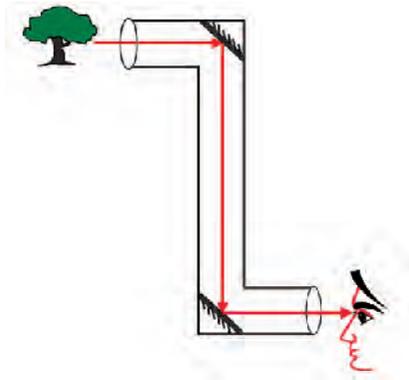
A relation between the number of images and the angle between the mirrors.

$$\text{Number of images} = 360/\text{angle} - 1$$

When the mirrors are placed parallel to each other, the maximum number of images will be formed. Multiple reflection principle is applied in the kaleidoscope and periscope.

Mirror Periscope

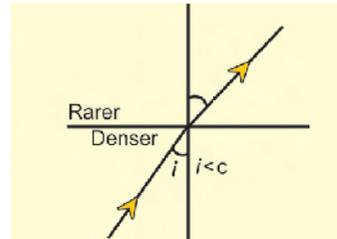
The working of a periscope is based on the principle of successive reflections from two plane mirrors. It consists of two plane mirrors facing each other fixed at 45° to the frame work of a tube.



III. Refraction

This bending of ray of light when it passes from one medium to another is called refraction.

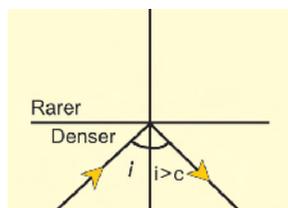
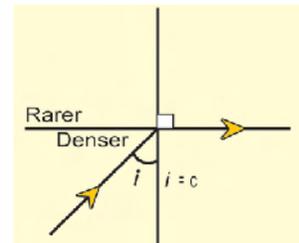
1. When light travels from a rarer medium and enters a denser medium, it will be deviated towards the normal.
2. The light will be deviated away from the normal when it passes from a denser into a rarer medium.



Eg: From Glass to Air

Total Internal Reflection

When a ray of light passes from a denser medium to a rarer medium, the refracted ray is bent away from the normal. As the angle of incidence increases, the angle of refraction also increases. At a certain angle of incidence, the angle of refraction becomes 90° . The angle of incidence for which the angle of refraction becomes 90° is called the critical angle C .



If the angle of incidence is more than the critical angle, the ray bends inside the denser medium itself. This phenomenon is total internal reflection.

Necessary conditions for total internal reflection

1. The light must proceed from a denser medium to a rarer medium.
2. The angle of incidence in the denser medium must be greater than the critical angle.

IV. Human Eye

The human eye has a convex lens. The human eye focuses the image for different objects at different distances by changing the focal length of the lens. This is done by the ciliary muscles, which stretch and relax to change the focal length of the lens. This action of the eye is called the power of accommodation of the eye. The most comfortable distance the normal eye can read is about 25 cm. This distance is called the least distance of the eye. The minimum distance at which the eye can see objects distinctly varies with age.

V. Sound

We hear many types of sounds around us everyday. Each sound is characteristic of the object producing it. Vibrating object produces sound.

Sound can travel through liquids. Sound needs a medium for propagation. Sound can travel through solid, liquid and gases. It cannot travel through vacuum.

i) Sound produced by humans

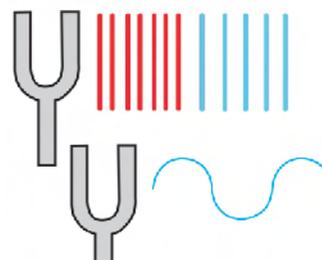
The sound is produced by the “voice box” or the larynx. The voice box has two “vocal cords”. They are stretched across the voice box in such a way that there is Vocal Cords. a narrow slit between them for the passage of air. When we speak, the lungs force air through the slit and the vocal cords vibrate, producing sound.

Human ear and hearing

The Vibrating objects produce sound which is carried in all directions through a medium. Our ears help us to hear sounds through Vibration in the inner ear.

ii) Amplitude, Time period and frequency of a vibration

To and fro motion of an object is called frequency. A tuning fork is made of steel. The two upper ends of the tuning fork are called the 'prongs', while the lower end is called the 'stem'. Strike the prongs against a hard rubber pad and observe the vibrations. A vibrating tuning fork produces sound.



Frequency (n): The number of oscillations per second is called the frequency. Frequency is expressed by hertz - Hz

Time period (T): The time taken by the vibrating body to complete one vibration or oscillation is called the time period. The unit of period is second(s).

Amplitude (a): The maximum displacement of a vibrating body from its mean position is called amplitude. The unit of amplitude is metre (m)

The relation between frequency (n) and time period (T) The period of oscillation is the reciprocal of the frequency.

$$\text{Time period (T)} = 1/\text{Frequency}$$

iii) Audible and Inaudible Sounds

The human ear can hear the range of audible frequencies between 20 Hz and 20000 Hz. They are called audible sounds.

Sounds of frequencies lesser than 20 Hz and greater than 20000 Hz can not be heard by the human ear. They are called inaudible sounds.

VI Noise

Any unpleasant sound is called noise.

i) Noise pollution

Unwanted sound from any source that causes discomfort of any kind is called noise pollution.

Harmful effects of noise pollution

- Exposure to sudden high noise level can damage to the eardrum.
- High levels of noise can also lead to nervous tension and increase in blood pressure.
- Noise also disturbs sleep, increases stress and causes headache.

Sound waves of frequencies above 20,000 Hz are called ultrasonic waves. Bats use ultrasonic waves for their flight. Some animals can hear sounds of frequencies higher than 20000Hz. Dogs have this ability.

ii) Steps to control noise pollution

1. The use of loudspeaker in functions should be stopped.
2. Cars and other vehicles should not produce loud sounds.
3. T.V and Musical systems should be listened at low volumes.

V. Optical fibres

An optical fibre is a device based on the principle of total internal reflection. The method of using optical fibres to carry images and messages is called fibre optics.

Uses of optical fibres

1. Optical fibres are used to transmit communication signals.
2. In medicine, optical fibres are used in endoscope and laparoscopes.

APPENDIX - VI
SUMMARY OF THE LESSON - (GRADE VI)
Separation of Substances

In our daily life, we clean, purify and separate the substances using filtration, winnowing or some other methods.

We need to use different methods of separation

1. to remove the unwanted substances
2. to remove substances which are harmful to our body
3. to obtain the substances which are useful to us in a pure state.

I. Methods used to separate mixture of solids:

Solid mixtures can be separated using methods like hand-picking, winnowing, sieving and magnetic separation.

i) Hand picking

The method of separating the substances based on size, colour and shape using hands is called handpicking. Hand picking method can be applied when the quantity is small and of reasonable size.



ii) Winnowing

The method of separating lighter particles from heavier particles with the help of wind is called winnowing.



iii) Sieving:

We can separate the impurities like bran, husk, stone, worms, stalk and tiny insects from flour by sieving. It allows the fine particles to pass through the pores while the coarser particles remain on the sieve. Components



of a mixture can be separated by the method of sieving only when they differ in their size.

iv) Magnetic separation:

Magnetic separation is used to separate mixtures containing components which are attracted by magnet.

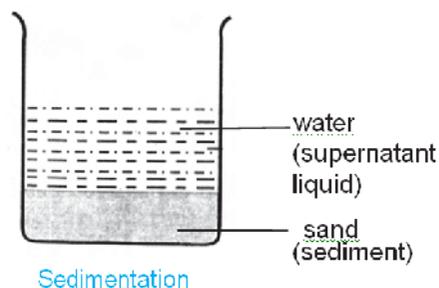


II. Methods of separation of insoluble solids from liquids

The method of separation depends on the nature of the substances to be separated. Hence we can separate insoluble solids from liquids by using the method of decantation, sedimentation and filtration.

i) Sedimentation

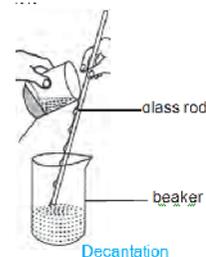
The mixture of insoluble solids and liquid is taken in a beaker and the solid substances are allowed to settle down as sediments. This is known as sedimentation. The clear liquid above the sediment is called supernatant liquid.



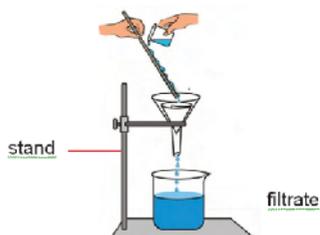
e.g. a mixture of sand and water

ii) Decantation

Transferring the clear liquid (supernatant liquid) into another container using a glass rod is called decantation.



ii) Filtration



Observe the liquid obtained by decantation and see whether it contains suspended impurities. Try to filter the impurities using a clean cotton cloth. As there are tiny pores in the cloth (like the pores in a sieve), the clear water passes through the pores and the suspended impurities like sand remain on the cloth.

III. Methods of separation of solid substances dissolved in liquids

Evaporation and condensation processes are used to separate solid substances dissolved in liquids.

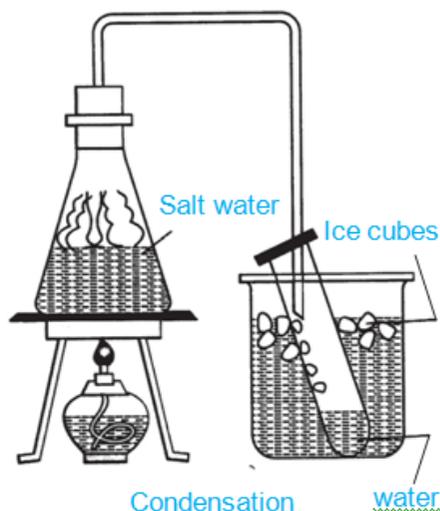
I) Evaporation

Evaporation is a process in which a liquid changes into its vapour on heating. Evaporation method is used to separate the dissolved solids from the liquids.

ii) Condensation

Take a mixture of sand and salt in a beaker. Add water to this mixture and stir. Salt gets dissolved. Take the salt solution in a conical flask and heat it strongly.

The water vapours pass through the delivery tube and get collected in a test tube. The test tube is placed inside a pack of ice cubes. The water vapours get cooled and condense into water. Salt remains as residue in the conical flask, once the whole water gets evaporated. When the vapours of a substance get cooled, they condense into liquid. This process is known as condensation.



V. Need for applying more than one method of separation

The various substances which we use in our life, reach our hand only after undergoing different methods of separation and purification. For example, in the preparation of sugar from sugarcane juice, the methods of separation like filtration, evaporation and crystallization are used. More than one method of separation are used to extract metals like iron, gold, aluminum and copper in pure state from their ores.

APPENDIX - VII

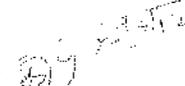
PERMISSION LETTER

கடுதல் முதுகன்மைக் கல்வி அலுவலர், அனைவருக்கும் கல்வி இயக்கம்,
கோயம்புத்தூர் அவர்களின் செயல்முறைகள்
முன்னிலை - திருமதி.R.திருவளர்ச்செல்வி, M.A.,B.Ed.,M.Phil.,
ந.க.எண். 407/VED/அ3/அகஇ/2012 நாள் 25.09.2012.

பொருள் : அனைவருக்கும் கல்வி இயக்கம் - மாற்றுத் திறன் கொண்ட குழந்தைகளுக்கு பயிற்சி அளித்தல் மற்றும் குழந்தைகளின் முன்னேற்றத்திற்கான ஆராய்ச்சிகள் மேற்கொள்ளுதல் - செல்வி. D.நேவதி என்பாருக்கு - அனுமதி அளித்தல் - சர்ப்பாக.

பார்வை : அவ்நாள்நிகழ்வு செய்து கொண்டு நிலுவைத்தின் விண்ணப்பம் நாள் 24.09.2012.

பார்வையில் குறிப்பிடப்பட்டுள்ள கடிதத்தின்படி அனைவருக்கும் கல்வி இயக்கம், கோயம்புத்தூர் மாவட்ட திற்கு உட்பட்ட, இணைப்பில் கண்டுள்ள பள்ளிகளில் மாற்றுத் திறன் கொண்ட குழந்தைகளுக்கு பயிற்சி அளித்தல் மற்றும் குழந்தைகளின் முன்னேற்றத்திற்கான ஆராய்ச்சிகள் மேற்கொள்ள செல்வி. D.நேவதி என்பாருக்கு அனுமதி அளிக்கப்பட்டு ஆணை வழங்கப்படுகிறது.


 கடுதல் முதுகன்மைக் கல்வி அலுவலர்,
 அனைவருக்கும் கல்வி இயக்கம்,
 கோயம்புத்தூர்.

இணைப்பு

பள்ளிகளின் தொடர் பட்டியல்.

பொருள்

1. மாவட்டத் தொடக்கக் கல்வி அலுவலர், கோயம்புத்தூர் மாவட்டம்.
2. மாற்றுப்பட்ட முன்றிய உதவித் தொடக்கக் கல்வி அலுவலர்கள்.
3. கல்வித் தொட்ட மட்டார வளமுடிய மேற்பார்வைபாளர்கள்.
4. கல்வித் தொட்ட பள்ளித் துலமுடியபாளர்கள்.
5. செல்வி. D.நேவதி, ஆராய்ச்சித் துலமுடியபாளர், அவ்நாள்நிகழ்வு செய்து கொண்டு.

List of Selected Schools:

1. Sri Avinashilingam Girls Higher Secondary School, Coimbatore
2. T.E.L.C Town Middle School, Raja Street, Coimbatore
3. Athar Jamath Middle School. Ukkadam, Coimbatore
4. TAT Kalanilaiyam School, SRMV (Po), Periyanaickenpalayam
5. C.S.I Middle School, Town Hall, Coimbatore
6. C.S.I Middle School, Mettupalayam