ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಉಪನಿರ್ದೇಶಕರ ಕಛೇರಿ

ಸಾರ್ವಜನಿಕ ಶಿಕ್ಷಣ ಇಲಾಖೆ ಚಿತ್ರದುರ್ಗ

ಹಾಗೂ

ಜಿಲ್ಲಾ ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರ ಕ್ಲಬ್ ಚಿತ್ರದುರ್ಗ

ವತಿಯಿಂದ

8,9,10 ನೇ ತರಗತಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಕಲಿಕೆಗಾಗಿ

ತಯಾರಿಸಲಾದ

ಕನ್ನಡ ಮಾಧ್ಯಮ

ಇಂಗ್ಲೀಷ್ ಮಾಧ್ಯಮ

ವಿಜ್ಞಾನ ವಿಷಯದ ಅಭ್ಯಾಸ ಹಾಗೂ ಚಟುವಟಿಕೆಗಳ ಪುಸ್ತಕ

(ಡಿ. ಎಸ್. ಇ. ಆರ್. ಟಿ ಬಿಡುಗಡೆ ಗೊಳಿಸಿರುವ ಆಗಸ್ಟ್ ತಿಂಗಳ
ಪರ್ಯಾಯ ಶೈಕ್ಷಣಿಕ ಯೋಜನೆ : 2021 – 22 ಆಧಾರಿತ)

" ಶಿಕ್ಷಕರಿಂದ ಶಿಕ್ಷಕರಿಗಾಗಿ, ಶಿಕ್ಷಕರಿಂದ
ವಿದ್ಯಾರ್ಥಿಗಳೆಡೆಗೆ ಜ್ಞಾನದ ಪಯಣ "

ವಿಜ್ಞಾನ

ನಿಮ್ಮ ಶ್ರಮ ನಿಮ್ಮ ಫಲ

ಸೂಚನೆಗಳು :

ಆತ್ಮೀಯ ಶಿಕ್ಷಕ ಬಂಧುಗಳೇ

2021 – 22 ನೇ ಸಾಲಿನಲ್ಲಿ ಶಿಕ್ಷಣ ಇಲಾಖೆಯು ಈ ವರ್ಷದ ಮೌಲ್ಯಮಾಪನದ ಬಗ್ಗೆ ಹಾಗೂ ಆಗಸ್ಟ್ ತಿಂಗಳ ಪರ್ಯಾಯ ಶೈಕ್ಷಣಿಕ ಯೋಜನೆಯನ್ನು ಬಿಡುಗಡೆಗೊಳಿಸಿದೆ.ಇದಕ್ಕೆ ಸಂಬಂಧಿತವಾಗಿ 8,9,10 ನೇ ತರಗತಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಕಲಿಕೆಗಾಗಿ ಉಪನಿರ್ದೇಶಕರ ಕಛೇರಿ ಚಿತ್ರದುರ್ಗ ಇವರ ಮಾರ್ಗದರ್ಶನದ ನೇತೃತ್ವದಲ್ಲಿ ನಾವು ಈ ಪುಸ್ತಕವನ್ನು ರಚಿಸಿ ಬಿಡುಗಡೆಗೊಳಿಸಿದ್ದೇವೆ. ಶಿಕ್ಷಕರು ತಮಗೆ ಇಷ್ಟವಾದ ಪುಟದಲ್ಲಿನ ವಿಭಿನ್ನವಾದ ಚಟುವಟಿಕೆ/ ಅಭ್ಯಾಸದ ಹಾಳೆಗಳನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳ ರೂಪಣಾತ್ಮಕ ಕಲಿಕೆಗಾಗಿ ಬಳಸಿಕೊಳ್ಳುವಂತೆ ನಮ್ಮಗೊಳಿಸಲಾಗಿದೆ.

ಆಸಕ್ತ ಶಿಕ್ಷಕರು ಈ ಪುಸ್ತಕದ ಘಟಕಗಳ ಸಾಫ್ಟ್ ಕಾಪಿ(ವರ್ಡ್ ಫಾರ್ಮ್ಯಾಟ್)ಗಳು ಬೇಕೆಂದರೆ ಈ ಕೆಳಗಿನ ದೂರವಾಣಿ ಸಂಖ್ಯೆಗಳಿಗೆ ಕರೆಮಾಡಿ, ಖಂಡಿತ ನಿಮಗೆ ವಾಟ್ಸಾಪ್ ಮೂಲಕ ಕಳಿಸಿ ಕೊಡುತ್ತೇವೆ.

ಧನ್ಯವಾದಗಳೊಂದಿಗೆ

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರ

ಸಂಪನ್ಮೂಲ ತಂಡ

ಚಿತ್ರದುರ್ಗ

ಸಾಫ್ಟ್ ಪ್ರತಿಗಳಿಗಾಗಿ ಸಂಪರ್ಕಿಸಿ

ನಾಗಭೂಷಣ್ ಕೆ. ಟಿ. 9972247679

ಮೂರ್ತಾಚಾರ್ ವಿ. 9449272259

ಶ್ರೀನಿವಾಸ್ ಟಿ. 9480117371

ನೇತೃತ್ವ :

ಕೆ. ರವಿಶಂಕರ್ ರೆಡ್ಡಿ

ಮಾನ್ಯ ಉಪನಿರ್ದೇಶಕರು(ಆಡಳಿತ)

ಪ್ರೇರಣೆ:

ಶ್ರೀ ಎಸ್.ಕೆ.ಬಿ ಪ್ರಸಾದ್

ಮಾನ್ಯ ಉಪನಿರ್ದೇಶಕರು (ಅಭಿವೃದ್ಧಿ)

ಮಾರ್ಗದರ್ಶನ :

ಸಿ. ವಿಜಯಕುಮಾರ್

ವಿದ್ಯಾಧಿಕಾರಿಗಳು

ಮಾರ್ಗದರ್ಶನ :

ಡಿ. ನರಸಿಂಹಪ್ಪ

ವಿದ್ಯಾಧಿಕಾರಿಗಳು

ಸಹಕಾರ :

ಎಚ್. ಗೋವಿಂದಪ್ಪ

ವಿಜ್ಞಾನ ವಿಷಯ ಪರಿವೀಕ್ಷಕರು

ಸಂಪನ್ಮೂಲ ತಂಡ:

ಸಂಘಟನೆ ಮತ್ತು ಕಾರ್ಯಗಂಬಿಕೆ:

ಬಿ.ವಿ. ನಾಥ

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಬಾಲಕಿಯರ ಸರ್ಕಾರಿ ಪದವಿ ಪೂರ್ವ ಕಾಲೇಜು

(ಪ್ರೌಢಶಾಲ ವಿಭಾಗ) ಚಿತ್ರದುರ್ಗ

ಹಾಗೂ

ಚಿತ್ರದುರ್ಗ ಜಿಲ್ಲಾ ವಿಜ್ಞಾನ ಕ್ಲಬ್ ಅಧ್ಯಕ್ಷರು

ಸಂಯೋಜನೆ ಮತ್ತು ವಿನ್ಯಾಸ:

ನಾಗಭೂಷಣ್ ಕೆ.ಬಿ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಸರ್ಕಾರಿ ಪ್ರೌಢಶಾಲೆ

ರಂಜಿಲಗರ ಲಂಬಾಣಿ ಹಟ್ಟಿ ಚಿಕ್ಕಕೆರೆ ತಾಲ್ಲೂಕು

ಸುಂದರ್ ಬಿ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಸರ್ಕಾರಿ ಪದವಿ ಪೂರ್ವ ಕಾಲೇಜು (ಪ್ರೌಢಶಾಲ ವಿಭಾಗ)

ತಳಕು ಚಿಕ್ಕಕೆರೆ ತಾಲ್ಲೂಕು

ಶ್ರೀನಿವಾಸ್ ಟಿ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಜಿನ್ನುಲಾದ್ರಿ ರಾಷ್ಟ್ರೀಯ ಪ್ರೌಢಶಾಲೆ ಚಿತ್ರದುರ್ಗ

ಸಂಪನ್ಮೂಲ ತಂಡ:

ಕುಮಾರಸ್ವಾಮಿ ಎಮ್. ಬಿಜ್.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಸರ್ಕಾರಿ ಪ್ರೌಢಶಾಲೆ ತೇಕಲವಟ್ಟಿ ಹೊಳಲ್ಕೆರೆ ತಾಲ್ಲೂಕು

ಮುತ್ತುರಾಜ್. ಡಿ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಸರ್ಕಾರಿ ಪ್ರೌಢಶಾಲೆ ಆಲೂರು ಹಿರಿಯೂರು ತಾಲ್ಲೂಕು

ಮಹೇಶ್ ಕುಮಾರ್ ಕೆ. ಬಿಸ್.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಸರ್ಕಾರಿ ಪ್ರೌಢಶಾಲೆ ಅಬ್ಬೇನಹಳ್ಳಿ ಜಗಳೂರು ತಾಲ್ಲೂಕು

ಪ್ರಮೀಳ ಬಿ. ಕೆ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಸರ್ಕಾರಿ ಪದವಿ ಪೂರ್ವ ಕಾಲೇಜು (ಪ್ರೌಢಶಾಲೆ ವಿಭಾಗ)
ಉಪ್ಪರಿಗೇನಹಳ್ಳಿ ಹೊಳಲ್ಕೆರೆ ತಾಲ್ಲೂಕು

ಸಂಪನ್ಮೂಲ ತಂಡ:

ರುದ್ರೇಶ್. ಪಿ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಸರ್ಕಾರಿ ಪ್ರೌಢಶಾಲೆ ದಿಂಡಾವರ ಹಿರಿಯೂರು ತಾಲ್ಲೂಕು

ನವಿತ ವಿ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಆದರ್ಶ ವಿದ್ಯಾಲಯ ಚಳ್ಳಕೆರೆ

ರಂಗನಾಥ ಬಿ.ಜಿ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಸರ್ಕಾರಿ ಪ್ರೌಢಶಾಲೆ ನಾಗಸಮುದ್ರ ಮೊಳಕಾಲ್ಮುರು ತಾಲ್ಲೂಕು

ತಿಪ್ಪೇಸ್ವಾಮಿ. ಜಿ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಸರ್ಕಾರಿ ಪ್ರೌಢಶಾಲೆ ಜೆ. ಬಿ. ಹಳ್ಳಿ ಮೊಳಕಾಲ್ಮುರು ತಾಲ್ಲೂಕು

ಸಂಪನ್ಮೂಲ ವ್ಯಕ್ತಿಗಳು

ಉಷಾ. ವಿ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

ಸರ್ಕಾರಿ ಪದವಿ ಪೂರ್ವ ಕಾಲೇಜು (ಪ್ರೌಢಶಾಲೆ ವಿಭಾಗ)

ಹಿರಿಯೂರು

ವೀರಣ್ಣ ಸಿ.

ವಿಜ್ಞಾನ ಶಿಕ್ಷಕರು

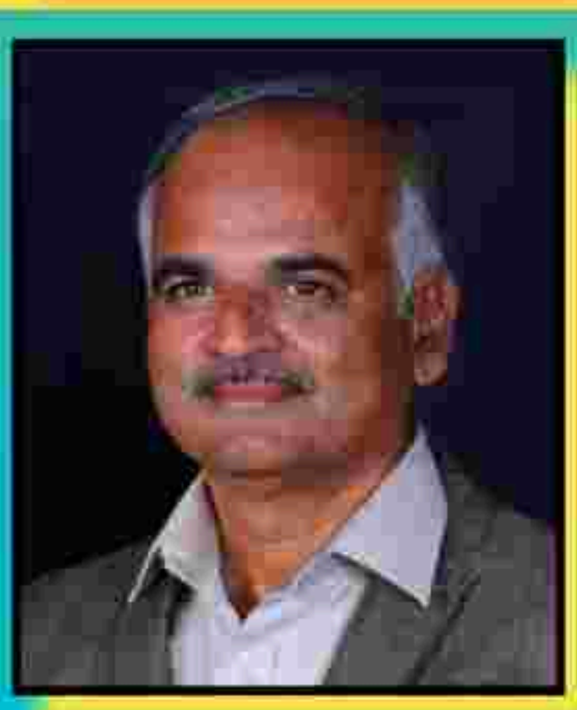
ಸರ್ಕಾರಿ ಪ್ರೌಢಶಾಲೆ ಕಲಮರಹಳ್ಳಿ ಜಳ್ಳಕೆರೆ ತಾಲ್ಲೂಕು

ಪರಿಶೀಲಕರು :

ಹೆಚ್. ಎಸ್. ಟಿ. ಸ್ವಾಮಿ

ನಿವೃತ್ತ ಮುಖ್ಯಶಿಕ್ಷಕರು ಹಾಗೂ ಕ.ರಾ.ವಿ.ಪ

ರಾಜ್ಯ ಕಾರ್ಯಕಾರಿ ಸಮಿತಿ ಸದಸ್ಯರು,ಬೆಂಗಳೂರು



ಕೆ. ವಿ. ನಾಗಲಿಂಗರೆಡ್ಡಿ

ನಿವೃತ್ತ ಮುಖ್ಯಶಿಕ್ಷಕರು

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Alternative Educational plan for August-2021-22

ACTIVITY SHEET: 1

Student Name: _____ **Unit:** CROP PRODUCTION AND MANAGEMENT.

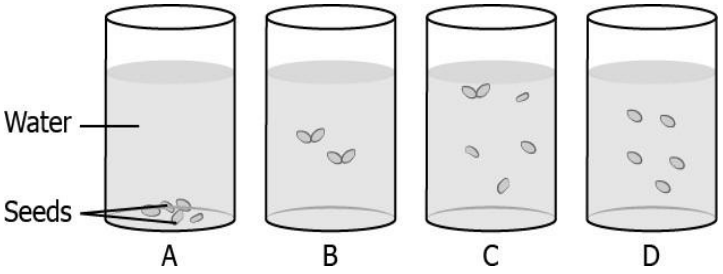
School Name: _____ **Subject:** Science **Class:** 8

Activity 1.1

Analyse the quality of seeds with respect to their germinability

Activity 1.1

Take a beaker and fill half of it with water. Put a handful of wheat seeds and stir well. Wait for some time.



I. A student does an experiment with wheat seeds. For the experiment, few seeds of wheat were kept in each of the four glasses that were filled with 200 ml of water and stirred well. After 10 minutes, the student measures the level at which seeds were found in all the glasses as shown.

❖ **What can be concluded from the experiment?**

a) Seeds that sink are healthy and clean.
b) Floating seeds are damaged with holes.
c) Bottom seeds are heavy as they absorbed more water.
d) Seeds at the middle have small air bubbles thus lighter in weight.

Answer: _____

II. A farmer bought some maize seeds from the market. Before sowing the seeds, the farmer added seeds in the water and stirred the water. After few minutes, the farmer only collected the seeds that settled down in the bottom for sowing.

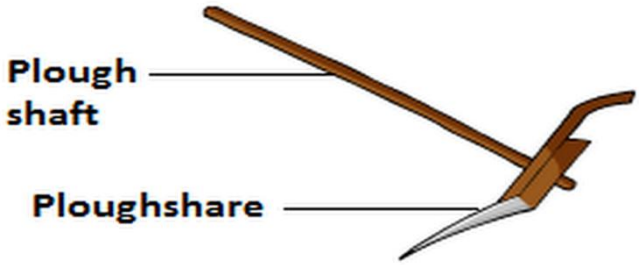
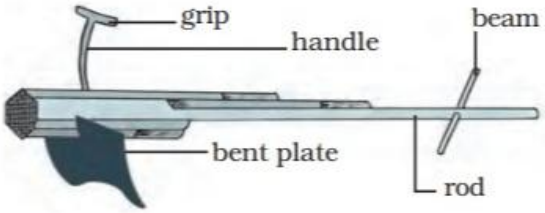
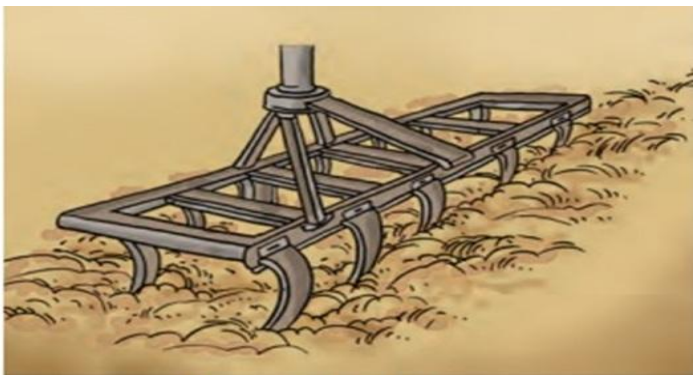
❖ **What is the likely reason choosing the drowned seeds for sowing?**

a) Seeds at the bottom are heavy which will result in plants with good growth
b) Seeds at the bottom are not damaged which will result in plants that are healthy.
c) Seeds at the bottom are light weight which will result in plants that grow taller.
d) Seeds at the bottom absorbed more water which will result in plants with high water absorption capacity.

Answer:_____

WORK SHEET-1

Match the column A to ColumnB.

	Column A		Column B
a		i	Cultivator
b		ii	Seed drill
c		iii	Plough
d		iv	Hoe

Answer:

Column-A	Column-B
a	
b	
c	
d	

Alternative Educational plan for August-2021-22

ACTIVITY SHEET: 2

Student Name: _____ **Unit:** CROP PRODUCTION AND MANAGEMENT.

School Name: _____ **Subject:** Science **Class:** 8

Activity 1.2

Growing seedlings with manure and fertilizer

Activity 1.2

Take *moong* or gram seeds and germinate them. Select three equal sized seedlings. Take three empty glasses or similar vessels. Mark them A, B and C. To glass A add little amount of soil mixed with a little cow dung manure. In glass B put the same amount of soil mixed with a little urea. Take the same amount of soil in glass C without adding anything [Fig. 1.3(a)]. Now pour the same amount of water in each glass and plant the seedlings in them. Keep them in a safe place and water them daily. After 7 to 10 days observe their growth [Fig. 1.3(b)].

Observe the growth of a seed in three different conditions.

A. When soil is mixed with cow dung manure.

B. When soil is mixed with some urea

C. When plain soil is used

- Growth of seed is **maximum in case of B** where soil contains some **urea.**
- In case of C - The least growth we see is with plain soil.

Growth pattern: B > A > C Urea > Cow dung manure > Plain soil

Reason: Urea is a fertilizer. Fertilizers are rich in nutrient needed by the plant. So, it gives the maximum growth to the plant. Dung manure also contains the nutrient. But, this is lesser in comparison to urea. As a result we see better growth than plain soil but lesser than what we get with urea.

Inference: Farmers use fertilizers to increase the crop production.

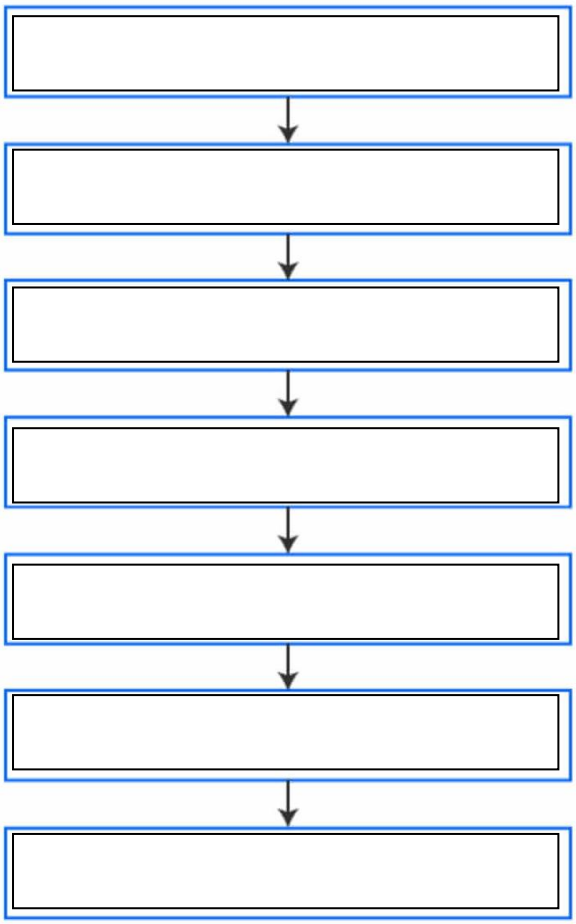
Write the difference between Fertilizer and Manure

	Fertilizer	Manure
1		
2		
3		
4		

WORK SHEET-2

I. Arrange the following boxes in proper order to make a flow chart of sugarcane crop production.

Sending crop to sugar factory, Irrigation, Harvesting, Sowing, Preparation of soil, Ploughing the field, Manuring.



FLOW CHART OF SUGARCANE CROP PRODUCTION

II. Fill in the blanks with suitable words: (Float, water, crop, nutrients, preparation)

1. Damaged seeds would _____ on top of water.
2. For growing a crop, sufficient sunlight, and _____ and _____ from the soil are essential.
3. The first step before growing crops is_____ of the plant.
4. The same kind of plants grown and cultivated on a large scale at a place is called_____

******

Alternative Educational plan for August-2021-22

WORK SHEET: 3

Student Name: _____ **Unit:** **CROP PRODUCTION AND MANAGEMENT.**

School Name: _____ **Subject:** **Science** **Class:** **8**

I. Make the following table and complete it.

Sl.No.	Food	Sources
1	Milk	Cow, Buffalo, Sheep, She-Goat, She-Camel…..
2	Meat	
3	Cereals grains	
4	Vegetables	

II. Choose the correct words from the following and answer it.

1) Weeds are the:_____

(a) Main crop plants (b) insects and pests

(c) Unwanted plants growing along the crop (d) chemical substances

2) Seed drill is used to:_____

(a) Sow the seeds (b) remove the weeds (c) remove the pest (d) mix manure in the soil.

3) Combines are used for:_____

(a) Sowing of seeds (b) harvesting the crops (c) threshing (d harvesting and threshing both.

4) 2-4 D is a:_____

(a) Pesticides (b) Insecticides (c) Fungicides (d) Weedicides.

III. Match the following:

A	B	Correct Answer
(i) Kharif crops	a) Food and Cattle	
(ii) Rabi crops	b) Urea and superphosphate.	
(iii) Chemical fertilisers	c) Animal excreta, cow dung urine and plant wastes.	
(iv) Organic manure	d) Wheat, gram, pea.	
	e) Paddy and maize.	

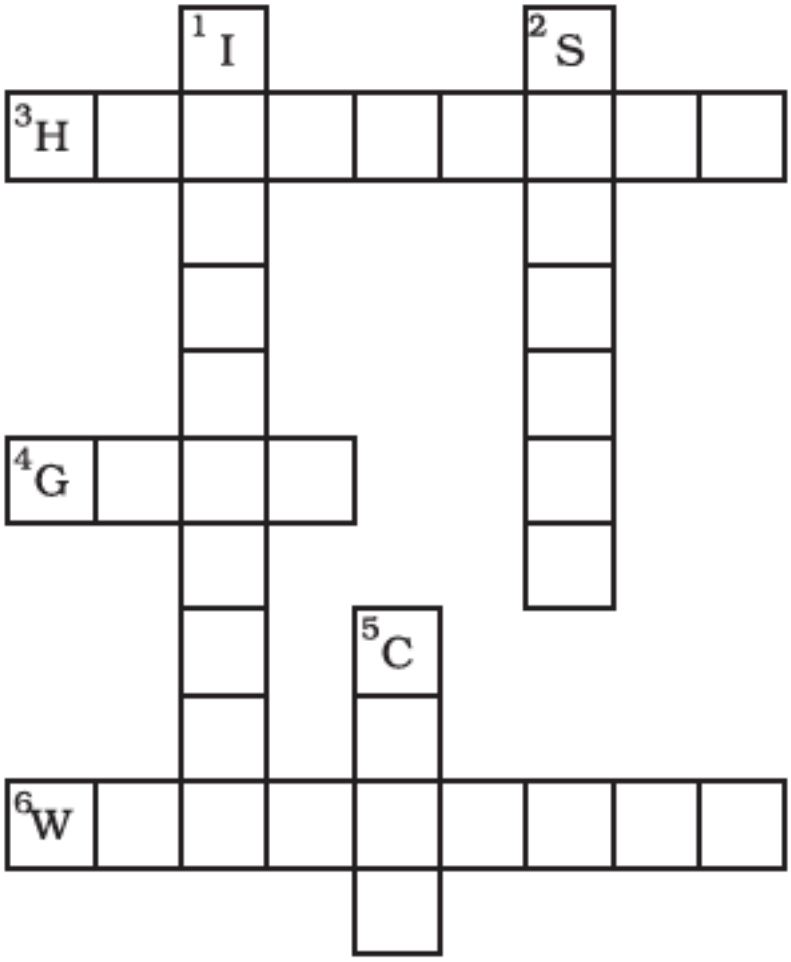
III. Complete the following word puzzle with the help of clues given below.

Down

1. Providing water to the crops.
2. Keeping crop grains for a long time under proper conditions.
5. Certain plants of the same kind grown on a large scale.

Across

3. A machine used for cutting the matured crop.
4. A rabi crop that is also one of the pulses.
6. A process of separating the grain from chaff.



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Alternative Educational plan for August-2021-22

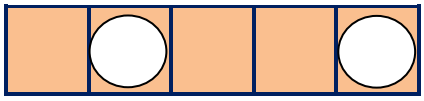
WORK SHEET: 4

Student Name: _____ **Unit:** CROP PRODUCTION AND MANAGEMENT.

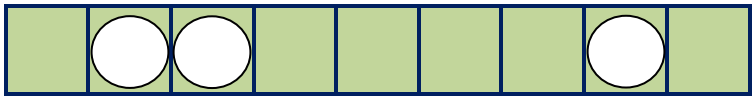
School Name: _____ **Subject:** Science **Class:** 8

I. Unscramble the words related to crop production and its management and write in the boxes given below:

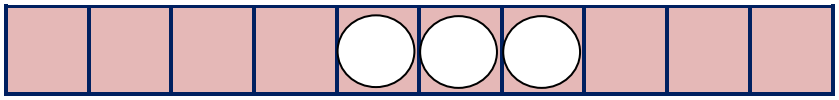
a) I L O S S



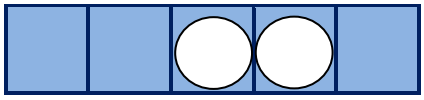
b) N G I R E H T S H



c) R I T I A G I R O N



d) V E R I R



Now, using the above circled letters, **form one word** which is an activity carried out in fields, after maturation of crops.

Answer:

*****

Alternative Educational plan for August-2021-22

WORK SHEET: 5

Student Name: _____ **Unit:** CROP PRODUCTION AND MANAGEMENT.

School Name: _____ **Subject:** Science **Class:** 8

1. Write the difference between Kharif crops and Rabi crops.

Kharif crops	Rabi crops

2. Classify the following crops into Kharif and Rabi crops and write in the tabular given below:

(Maize, Paddy, Mustard, Pea, Gram, Wheat, Groundnut, Cotton)

Kharif crops	Rabi crops

3. Make a list of agricultural practices:

1	
2	
3	
4	
5	
6	
7	

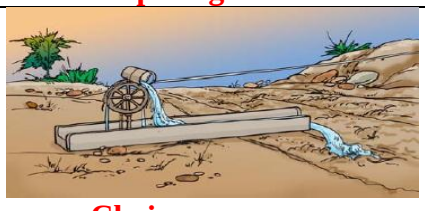
Alternative Educational plan for August-2021-22

WORK SHEET: 6

Student Name: _____ **Unit:** CROP PRODUCTION AND MANAGEMENT.

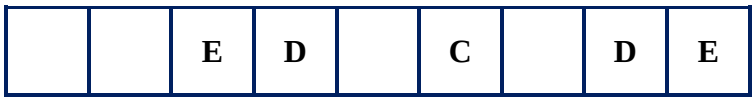
School Name: _____ **Subject:** Science **Class:** 8

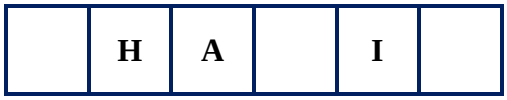
1. Classify the following into traditional and modern methods of irrigation:

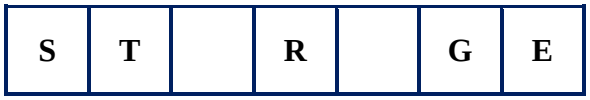
Sl. No.	Images of different irrigation methods	Traditional methods	Modern methods
1.	 Moat		
2.	 Sprinkler system		
3.	 Dhekli		
4.	 Rahat		
5.	 Drip irrigatiion		
6.	 Chain pump		

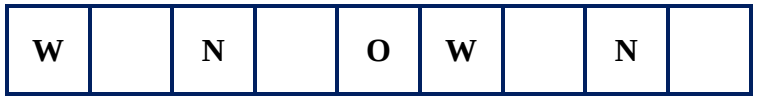
2. Complete the missing key words

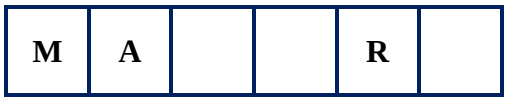
1) 

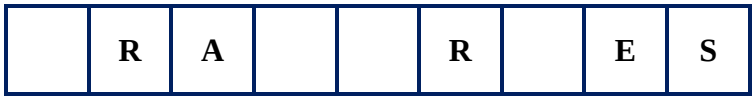
2) 

3) 

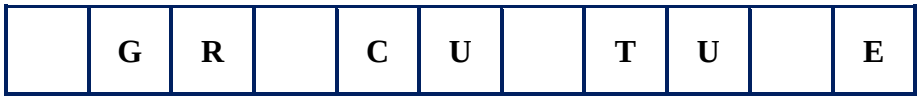
4) 

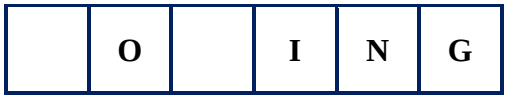
5) 

6) 

7) 

8) 

9) 

10) 

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Alternative Educational plan for August-2021-22

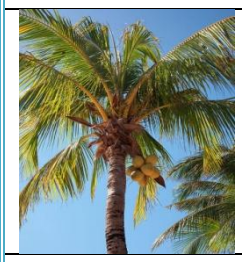
Subject: Science **Class:** 08 **Unit:** Synthetic fibre and plastic

School **Name:** _____ **Student Name:** _____

WORK SHEET

1. Give an example of natural fibres

2.Name the natural fibre produsedby following

3. **Natural fibres cannot be used continuously to accommodate the growing population So what can we use as an alternate to this?**

4. **what is synthetic fibre? Give an example .**

5. **why Rayon is called artificial silk?**

6. Which is **the first complete synthetic fibre? how it is made?**

7. Which fiber is used to make following items?

8. Why not wear synthetic clothes when working in the kitchen and laboratory?

_____

_____

_____

_____

9. Match the following.

1. Acrylic	A. Bedsheets	_____
2. Rayon	B. curtains	_____
3. Polyster	C. sweaters	_____
4.Nylon	D. Film	_____

10. Write the characterstic features of synthetic fibre.

_____

_____

_____

_____

_____

11. Differentiate the following

Thermoplastic	Thermosetting plastic

12. Classifying the following into Thermosetting and Thermoplastic

13. Bakelite and Melamine plastics are used to make electric switches and fire suppressors why?

_____

_____

14. Write the characteristic features of plastic to become more popular

15. Identify the type of pollution in the figure. Write the effects and solutions

16. Complete the following table

Type of waste	Time taken to decompose	Nature of substance
Peels of vegetables and fruits, left over food stuffs etc	1 to 2 weeks	
Paper		Bio degradable
Cotton cloths		Bio degradable
Tree	10to 15 years	
Tin, Aluminium sheets		Non bio degradable
Platic bags	Many years	

17. Usage of plastic is not at all " Eco friendly" discuss.

18.Write the appropriate word for the third word wit respect to the pair of the first two words.

1.Nylon : Ropes :: PET : _____

2. Polythene bag : Thermoplastic :: Cokker handle : _____

3. Plastic : Reuse :: Fossil fuel : _____

4. Paper envelope : Bio degradable :: Tooth brush : _____

19. Name the 5R ,s. how these helpfull to clean environment

20.Classify the following in to recycling and nonrecycling plastics

1. Water bottle **6. CD and DVD**
2. Cokker handle **7. Electric apparatus**
3. Electric switch **8. toys**
4. Shampoo bottle **9. Plastic chair**
5. Car cover **10. Volcanised rubber**

Recycling	Non recycling

21. We know that consuming of more plastic can cause environmental contamination. After learning this lesson suggest how to use waste plastic in our homes?

22. Give Scientific reasons.

1. Cotton clothes are mostly used in summer season.

2. Tericot, Polyester, Nylons clothes are called as Synthetic fabrics.

3. Silk clothes are costlier than other fabrics.

VI. Pick the odd one out

A. Sheep, Goat, Yak, Dog. _____

B. . Tasar, Mooga, Iri, Nali. _____

C. Camel, Goat, Alpaka, Yak. _____

D. . Shearing, Rearing, Sorting, Rolling. _____

E. Cotton, Silk, Nylon, Jute. _____

To know more

PLASTICS	*USES*
POLYSTYRENE	ELECTRICAL INSULATIONS,CDS DVDS
POLY VINYL CHLORIDE (PVC)	PIPES
ACRYLIC	ALTERNATIVE TO GLASS
NYLON	FABRICS,CARPETS,ROPES,MUSICAL STRINGS
ABS	MUSICAL INSTRUMENTS,WHITE WATER CANOES,SAFTEY HATS
POLYSTER	CLOTHES,BLANKET,ROPES
POLYPROPYLENE	USED IN PACKAGING AND LABELING IN TEXTILES SUCH AS CARPETS,STATIONARY,LABORATORY EQUIPMENTS
CELLULOSE ACETATE	PHOTOGRAPHY, ADHESIVES FOR EYEGLASS

TYPES OF THERMOSETTING PLASTICS

PLASTICS	USES
VULCANIZED RUBBER	SEAT BELTS,TOYS,SHOE HOSES
BAKELETE	ELECTRIC SWITCH,KITCHEN WARE
DUROPLAST	CAR PARTS,TOILET SEATS
MELAMINE	FLOOR TILES FLAME RESISITANT TEXTILE
UREA FORMALDEHYDE RESINS	FIBER GLASS MATS,LAMINATION DECORATIVE ITEMS
EPOXY RESINS	METAL COATINGS,ENCAPSULATIONS OF ELECTRICAL COMPONENTS
SILICO RESINS	PAINTS COATINGS,SILICON ITEMS
CYANATE ESTERS	ELECTRONIC CHIP ADHESIVES
POLYURETHANE	CAR BUMPERS,WIND SHIELDS,GASKETS
FURAN RESINS	WOOD ADHESIVES,EXPLOSIVE BINDERS

Additional links of this unit to know more

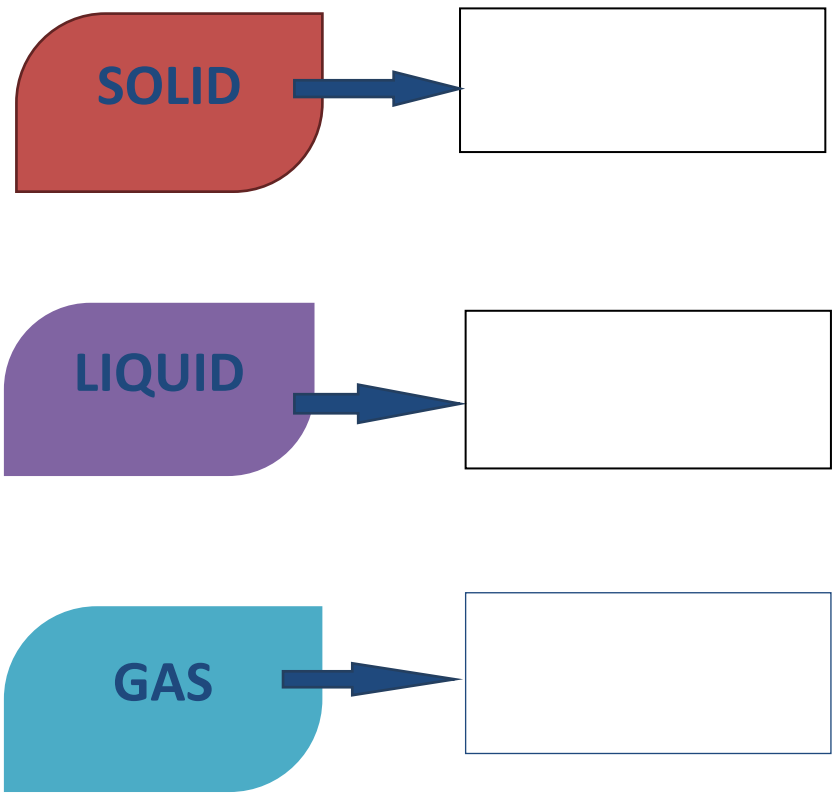
https://www.youtube.com/watch?v=XblEKn0iyBE
https://www.youtube.com/watch?v=2KgNHqksX0g
https://www.youtube.com/watch?v=NRtHDBHJA3k

Alternative Educational plan for August-2021-22

ACTIVITY/WORK SHEET

Student Name: _____ **Unit:** MATTER IN OUR SURROUNDINGS

School Name: _____ **Subject:** Science **Class:** 9

1. What is Matter?	
2. List the properties of matter	
3. Classify the following things according to their states of matter and write in the box given. **Stone, pen** **Water, agarbatthi,** **Smoke, milk**	

Alternative Educational plan for August-2021-22

ACTIVITY/WORK SHEET

Student Name: _____ **Unit:** MATTER IN OUR SURROUNDINGS

School Name: _____ **Subject:** Science **Class:** 9

4. Convert the following temperature to the Kelvin scale.

I) 25° C **II) 373° C** **III) 60° C**

_____

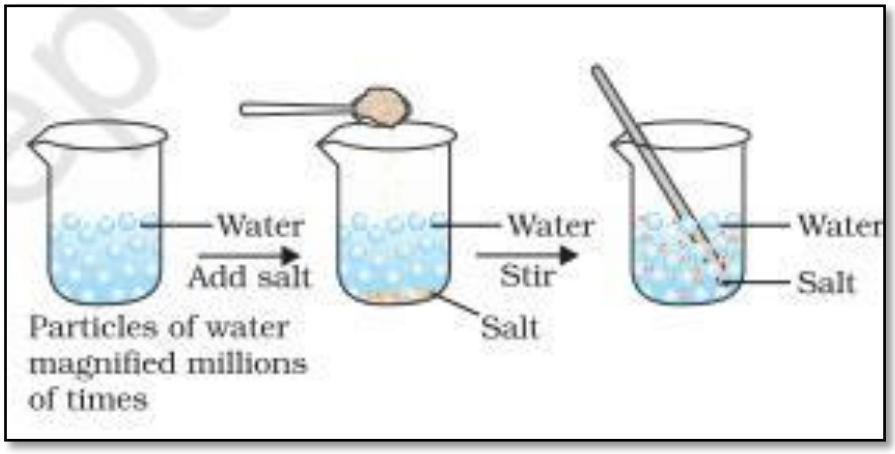
_____

5. When we put a little bit of acetone on our hands, it feels cool. Why?

_____

_____

6.



A) By conducting the above activity what physical form of matter can we know?

_____

B) The salt particles put into the water disappear after a while. What is the reason for this?

_____

_____

_____

Alternative Educational plan for August-2021-22

ACTIVITY/WORK SHEET

Student Name: _____ **Unit:** MATTER IN OUR SURROUNDINGS

School Name: _____ **Subject:** Science **Class:** 9

7. What is evaporation? Why do solids not evaporate?

_____

_____

_____

8. Can you sense the smell of agarbatthi burned in the corner of your room? What characteristic of the substance can it be said?

_____

_____

_____

9. Write the characteristics of the particles of matter.

SOLID STATE	LIQUID STATE	GASEOUS STATE

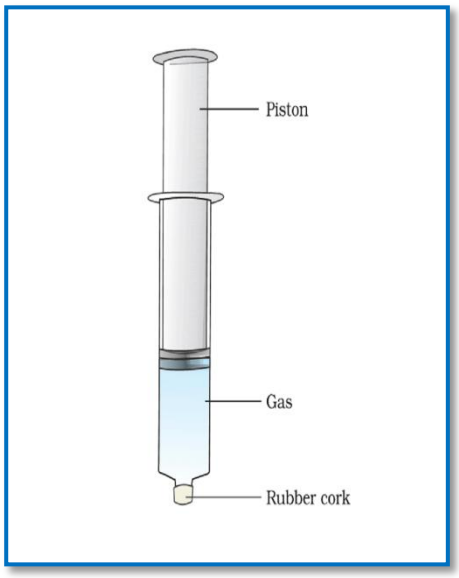
Alternative Educational plan for August-2021-22

ACTIVITY/WORK SHEET

Student Name: _____ **Unit:** MATTER IN OUR SURROUNDINGS

School Name: _____ **Subject:** Science **Class:** 9

10. Look at this picture and answer the following questions.



A. Does the gas in the syringe undergo compression? Support your reason?

_____

_____

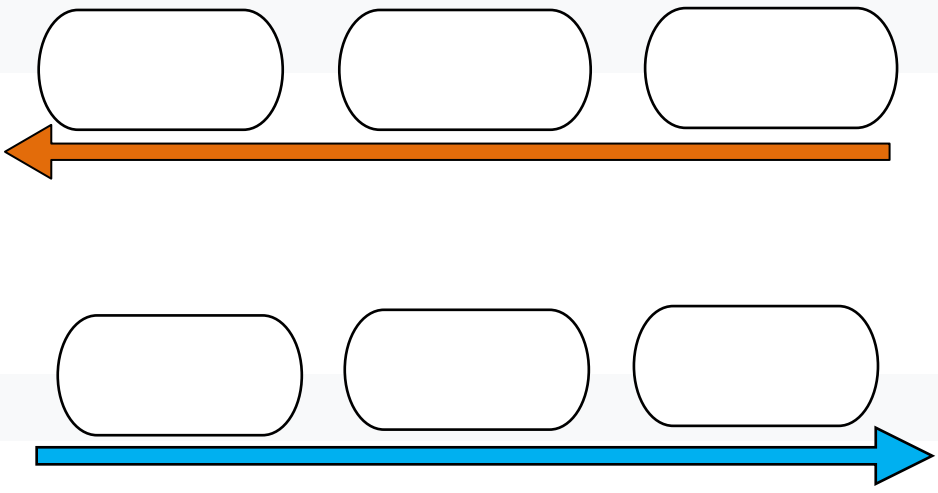
_____

B. What happens when a piston is filled with sand instead of gas in a syringe? Give reason.

_____

_____

11. Write the given material in the space of decrease and increase in gravitational attraction between their particles: WATER, OXYGEN, SUGAR



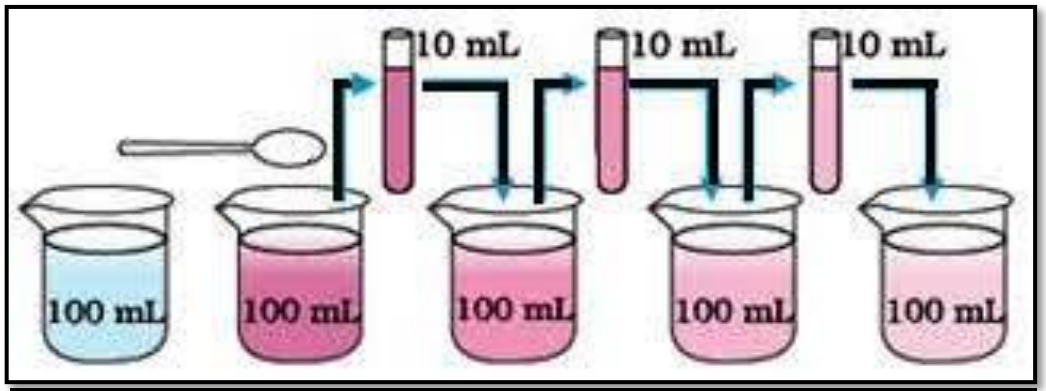
Alternative Educational plan for August-2021-22

ACTIVITY/WORK SHEET

Student Name: _____ **Unit:** MATTER IN OUR SURROUNDINGS

School Name: _____ **Subject:** Science **Class:** 9

12. **Activity: 1.2**



A	B	C	D	E

Observe above the Activity 1.2 and answer the following questions:

1. List the differences seen in between Beaker A and Beaker B

_____

_____

_____

2. In Beaker D and E which is the more violet colour? Give scientific reason.

_____

_____

_____

_____

Alternative Educational plan for August-2021-22

ACTIVITY/WORK SHEET

Student Name: _____ **Unit:** MATTER IN OUR SURROUNDINGS

School Name: _____ **Subject:** Science **Class:** 9

13. Give scientific reasons:

A. Water is liquid at room temperature.

_____

_____

B. The iron axe is solid at room temperature.

_____

_____

C. Cotton clothes should be worn during summer.

_____

_____

_____

14. Write a ray diagram illustrating the interconversion of the three states of matter?

Alternative Educational plan for August-2021-22

ACTIVITY/WORK SHEET

Student Name: _____ **Unit:** MATTER IN OUR SURROUNDINGS

School Name: _____ **Subject:** Science **Class:** 9

15. List the factors that influence on evaporation?

_____

_____

_____

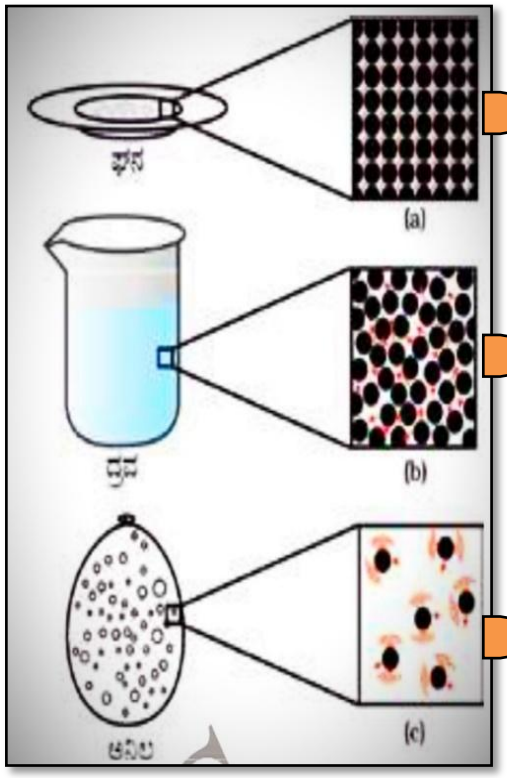
_____

_____

_____

_____

16. Observe the particle motions of the states of matter in the image below and write the differences between them in the empty space.



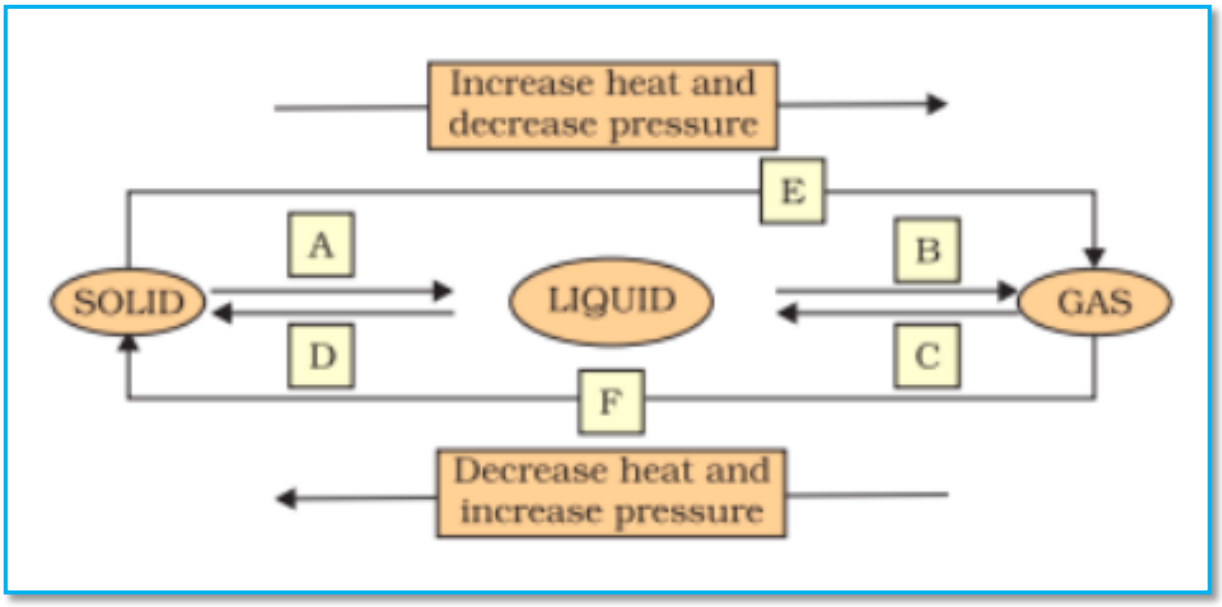
Alternative Educational plan for August-2021-22

ACTIVITY/WORK SHEET

Student Name: _____ **Unit:** MATTER IN OUR SURROUNDINGS

School Name: _____ **Subject:** Science **Class:** 9

17. Name A, B, C, D, E and F in the following diagram showing change in its state.



A _____ **D** _____

B _____ **E** _____

C _____ **F** _____

- *Watch the following video links for more study and learning:*
  - HTTPS://YOUTU.BE/MUKMFAZV3QA
  - HTTPS://YOUTU.BE/YQBLIKGKXPU
  - HTTPS://YOUTU.BE/C0HV0LGXMAO

Alternative educational plan for August 2021-22

Unit : Is Matter around us pure class : 9

Work sheet : 01

Name of the student : _____ school Name : _____

I choose the correct answer from the following.

1.Homogeneous mixture among the following is

a) Iron filings + sulphur powder b) Sand+ water c) Alcohol + water d) oil + water

---

2.Which of the following is an emulsion?

a) Automobile exhaust b) Face cream c) smoke d) Rubber

3.The zigzag random movement of colloidal particles in a colloidal solution is known as

a**)** Brownian movement b) Dispersion c) Tyndall effect d) refraction

---

4. The increasing order of the movement of particles (stability) in true solution colloid and suspension is

a) true solution<Colloid < suspension b) suspension< Colloid < true solution

c) true solution < suspension < Colloid d) suspension < true solution <colloid

---

5.Which of the following is not a characteristic of a solution?

a) Solute particles settle down in a solution b) Path of light is not visible in a solution

c) It is a homogeneous mixture d) Solute particles cannot be separated by filtration

---

6.Which of the following will show Tyndall effect

a) Salt solution b) Copper sulphate solution

c) Potassium permanganate solution d) starch solution

7.Which of the following do not undergo sublimation

a) Sulphur b) Camphor c) Anthracene d) Naphthalene

8.Identify incorrect statement regarding physical change among the following is

a) change is temporary b) change in the physical state of reactants

c) change in the chemical nature of substance d) No New substances is formed

---

9.The Crystals of alum (phitkari) from impure samples can be separated by

a) Condensation b) Crystallization c) Chromatography d) Distillation

---

10.Germanium and silicon are examples of

a) Compound b) Metalloid c) Mixture d) Alloy

Click to play quiz :

https://quizizz.com/join/quiz/610f84a751f0b2001b28ac4a/start?studentShare=true

Alternative educational plan for August 2021-22

Unit : Is Matter around us pure class : 9

Work sheet : 02

Name of the student : _____ school Name : _____

I Name the following

1.Components in Substance retain their original property
2.A homogenous mixture of two gases
3.A metal which is a liquid at room temperature
4.A colloidal solution of gas in liquid.
5.A lustrous non metal.

II Give reasons for the following

1. carbon dioxide is considered a compound while carbon is an element.

_____

2. Components of compounds do not retain their original properties.

_____

3. Fractional distillation can't be used to separate mixture of water and kerosene.

_____

4. Respiration and combustion are considered as chemical changes.

_____

III Name the solute and solvent in the following

Solution	solute	Solvent
1. Sugar solution	_____	_____
2. Tincture	_____	_____
3. Aerated drink	_____	_____

IV Fill in the blanks from the words given below

[heterogeneous, miscible, Separating funnel, apparatus, homogenous, Immiscible, densities, flask, water, kerosene]

Kerosene and water forms a _____ mixture. The mixture can be separated by _____ Method. This method used to separate two _____ liquid component of a mixture. Liquids separate out due to difference in _____ of two liquids. Heavier liquid _____ collect in the flask and lighter liquid _____ remain in the apparatus.

V Name the methods of separation in the situation given below. Mention apparatus used for it.

1.chethan mixed chalk powder with water.

_____

2.Acetone is added to a glass of water.

_____

3.Arshiya is challenged by her friend savitha to separate the mixture of sodium chloride and ammonium chloride

_____

4.chandhana mixed iron fillings with sulphur powder.

_____

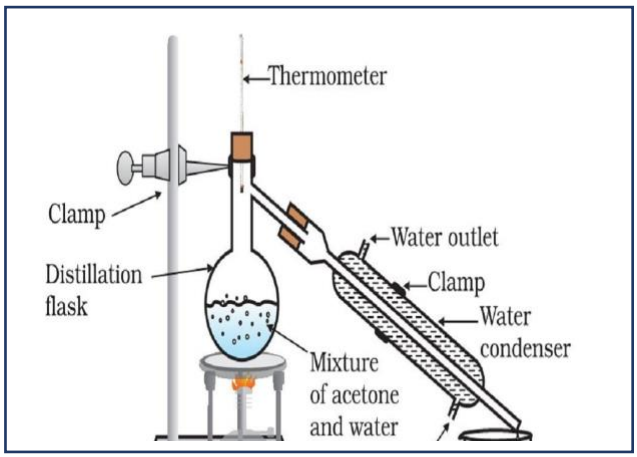
Alternative educational plan for August 2021-22

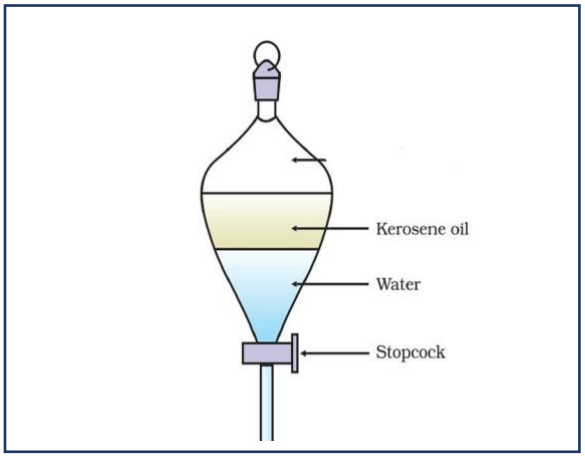
Unit : Is Matter around us pure class : 9

Work sheet : 03

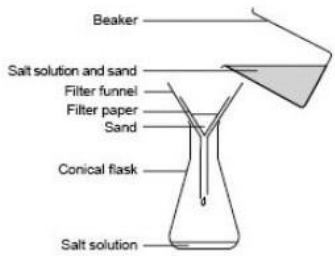
Name of the student : _____ school Name : _____

I Identify the separation technique figured below. Which technique would be useful to separate 1.oil and water 2. alcohol from water? Write the answer in the space provided.





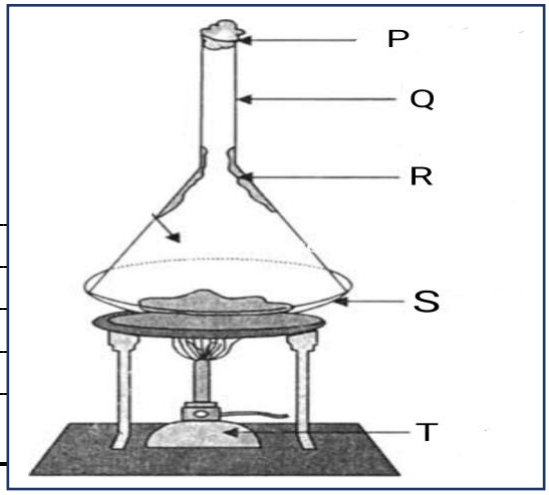
II Complete the following

Diagram	Method	Principle	Application
			
			

III Observe the diagram given below and answer the following questions.

1. Name the technique involved in this activity?
   _____
2. Why was this technique used for ?
   _____
3. Label the parts marked as P, Q, R, S & T

_____
_____
_____
_____
_____



IV You are asked to separate mixture of Air. Name the method used to carry out the procedure. Draw a Flow diagram to shows the steps of the process of obtaining Different gases from air.

_____

_____

_____

_____

V Complete the following

Example	Type	Dispersed phase	Dispersed medium
Cloud			
Butter			
Milk			

Alternative educational plan for August 2021-22

Unit : Is Matter around us pure class : 9

Work sheet : 04

Name of the student : _____ school Name : _____

I Match the following

1. Acetone in water	Centrifugation	_____
2. Pure copper sulphate from impure Sample	Chromatography	_____
3. Dye from black ink	Crystallisation	_____
4. Cream from milk	Distillation	_____

II Identify the physical and chemical change from the following

1. Melting of butter : _____
2. Wood burning : _____
3. Germination of seed : _____
4. Dissolving common salt : _____

III Some properties are listed in the following table, distinguish between metals and non metals on the basis of these properties

Properties	Metals	Non metals
1.Appearence		
2.Hardness		
3.Malleabiliry		
4.Ductility		
5.heat conductors		
6.conductor of electricity		

IV Read following sentences carefully. Differentiate it. Write the answer in the space provided.

Constituents present in a definite proportions.

Constituents may seen separately

Constituents can be separated by chemical means only

Constituents are homogenous or heterogeneous in nature.

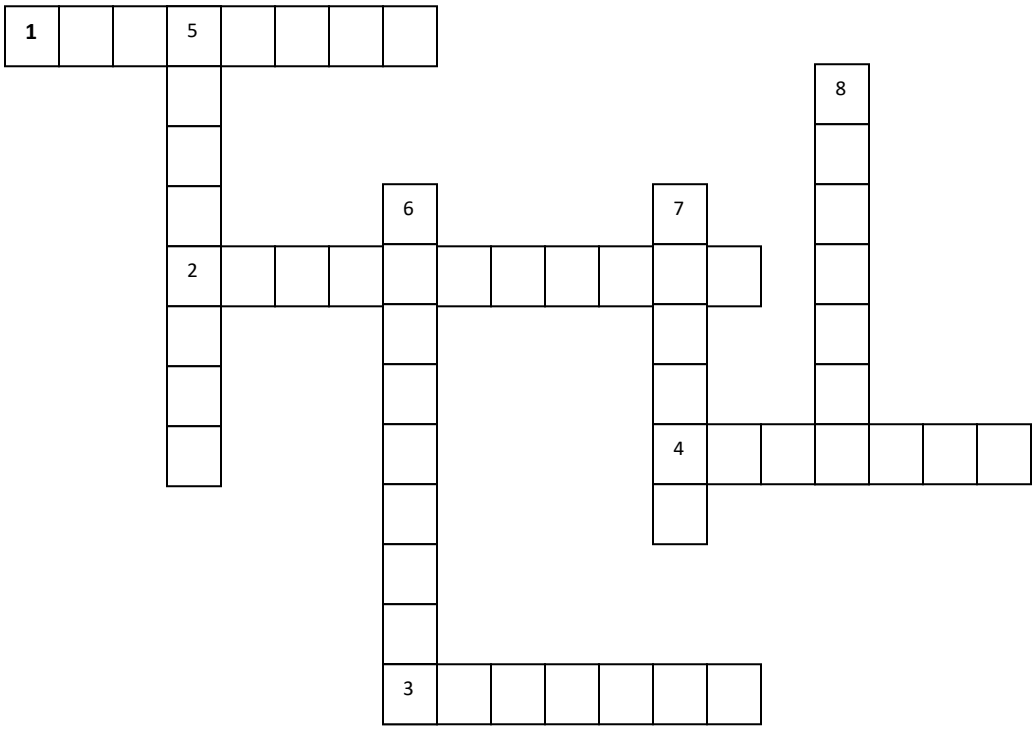
Constituents retain their original properties.

Constituents particles are of one kind only.

Compounds	Mixtures

V Draw a neat labelled diagram of apparatus used for distillation .

Complete the cross word with the help of clues given.



Across :

1. smallest unit of a compound. (8)

2.Method used to separate salt from sea water . (11)

3.Component of solution that dissolve other components . (7)

4. The scientist who discovered the scattering of light by colloidal particles. . (7)

Down :

5. Substance that can't be separated into simpler substances . (8)

6.Elements are combined in a fixed ratio . (9)

7.component that dissolves in a solution . (6)

8.Milk is an example of (7)

Alternative educational plan for August 2021-22

Unit : Is Matter around us pure class : 9

Activity sheet : 01

Name of the student : _____ school Name : _____

Activity : 2.1

Click and watch activity 2.1 : https://youtu.be/uhxJbEo2ulw

Take 4 beaker which is marked as A, B, C and D. Add one spoon of copper sulphate powder to beaker A. Two spoon of copper sulphate powder to beaker B. Add different amount of copper sulphate and potassium permanganate or sodium chloride (salt) to beaker C and D respectively.

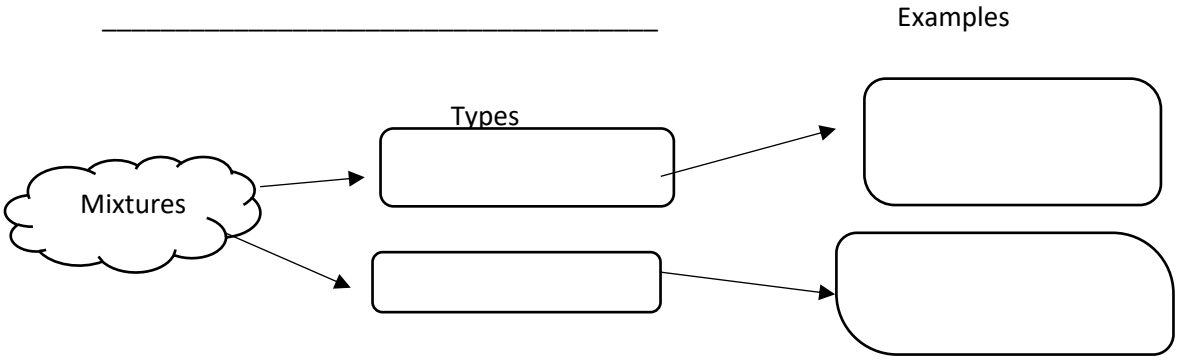
Observation:

Colour of mixture A is less than that of beaker B. Copper sulphate evenly distributed in beaker A and B. hence they are called homogenous mixture. Beaker C and D has different components of copper sulphate and potassium permanganate hence they are called heterogeneous mixture.

Questions:

1. What is Mixture?

   _____



2. What is homogenous mixture? Give two examples.

   _____

3. Why colour of beaker A is less than that of Beaker B?

   _____

4. Give two examples for heterogeneous mixture.

   _____

5. Why beaker C and D forms a heterogeneous mixture?

6. Classify the following into homogenous mixture and heterogeneous mixture.
   Vinegar, wood, Air, Soda water

Homogenous mixture	Heterogeneous mixture

Alternative educational plan for August 2021-22

Unit : Is Matter around us pure class : 9

Activity sheet : 02

Name of the student : _____ school Name : _____

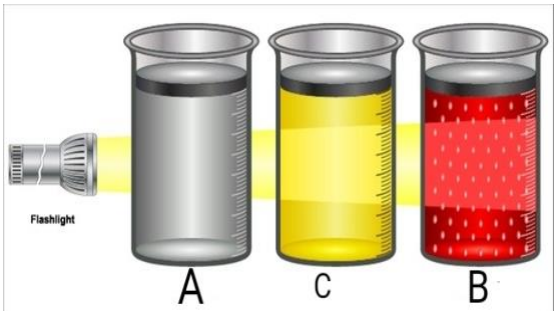
Activity : 2.2

Click and watch activity 2.2 : https://youtu.be/7TSju5csWfE

Label beaker as A, B, and C containing equal amount of water .
Add few drops of copper sulphate beaker A,
add chalk powder to beaker B
Few drops of milk to beaker C.

a) Stir mixture, observe particles of mixture is visible or not
b) Pass beam of light from a torch through beaker A, B and C. Observe the path of light
c) Leave the mixture undisturbed for few minutes
d) Filter each of the mixture ,observe is their any residue on filter paper.

Observation :
Particles seen in beaker B but not in beaker A and C.
Path of light is visible in the case of beaker B and C but not in A
Particles settle at the bottom in beaker B but not in A and C
Residue left on filter paper B but not in the case of A and C .



1. Observation table

	Solution	Suspension	Colloid
Nature			
Size of particles			
Visibility of particles			
Stability			
Filtration			
Tyndall effect			
Transparency			
Examples			

2. Why is the path of beam of light visible only in B and C?

_____

_____

3. Name the phenomenon observed and define it

_____

_____

_____

Alternative educational plan for August 2021-22

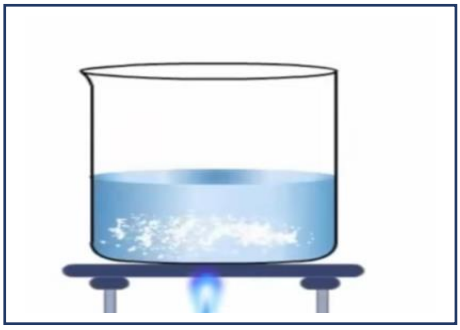
Unit : Is Matter around us pure class : 9

Activity sheet : 03

Name of the student : _____ **school Name : _____**

Activity : 2.3

Take 50 ml water in a beaker
Add common salt or sugar with continuous stirring
you will obtain unsaturated solution
When no more solute can be dissolved,
this solution is called saturated solution
heat the content in the beaker
Observation : the undissolved particles in the saturated solution dissolve slowly as the temperature raises.



Click and watch Activity 2.3: **https://youtu.be/0kZFNxiB-FM**

1. define solubility? How does solubility of a solid in water change with temperature?

_____

_____

2. Differentiate between saturated solution and unsaturated solution?

Saturated solution	Unsaturated solution

3. What do you mean by a concentration of a solution. What are the different ways of expressing the concentration of solution.

_____

_____

_____

_____

4. A solution contains 30 g of common salt in 300 g water. Calculate the concentration in terms of mass by mass percentage of the solution.

_____

_____

_____

_____

5. 20ml of acetone is mixed with 40 ml of alcohol. Calculate the volume percentage of this solution.

_____

_____

_____

_____

Activity sheet : 04

Activity : 2.5

Take curd (cream) in a pot or vessel
Using churner churn curd (cream) .
Observation : butter separate from curd (Cream)

1. What do you observe on churning of curd (Cream) ?

_____

2. Why butter float on curd?

_____

3. What is centrifugation? Name the principle involved in it?

_____

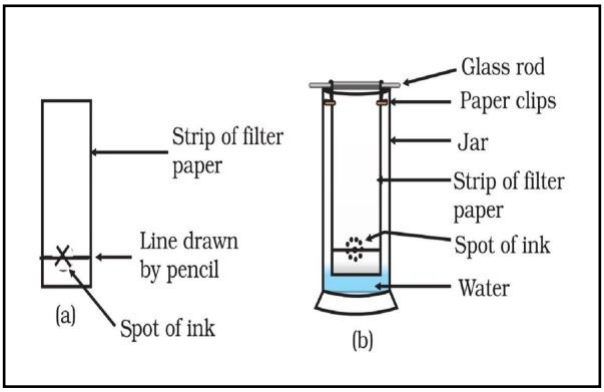
_____

4. Write any other applications of centrifugation?

_____

Activity: 2.7

Take thin strip of filter paper
Using pencil draw a line on it
Put small drop of black ink
Allow it to dry
Lower the strip into jar containing water
Observation: water raises up ,different coloured spot appeared on the paper strip.



1. Name the technique involved in this activity?

_____

2. What is the principle involved in this technique?

_____

3. Write any application of this technique?

_____

You tube link of Activity 2.5 : https://youtu.be/1LdYvgy94fg
You tube link of Activity 2.7: https://youtu.be/1LdYvgy94fg

Alternative educational plan for August 2021-22

Unit : Is Matter around us pure class : 9

Activity sheet : 05

Name of the student : _____ school Name : _____

Activity : 2.10

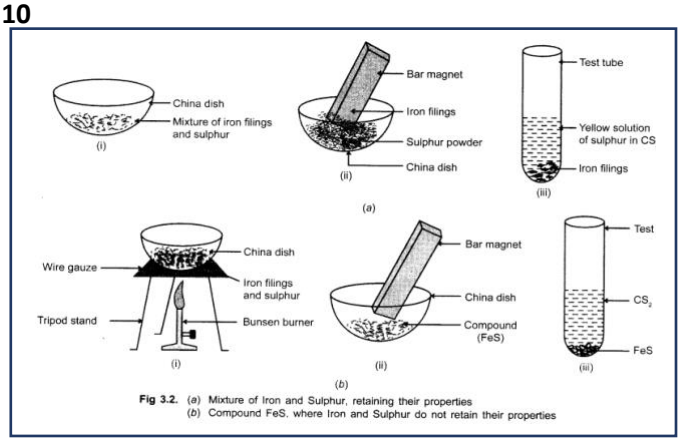


Fig 3.2. (a) Mixture of Iron and Sulphur, retaining their properties
(b) Compound FeS, where Iron and Sulphur do not retain their properties

Take china dish.
Add iron filings and sulphur powder mix it
Label it as part A
Take little amount of this mixture in another china dish
Label it as part B. Heat it.

a) Add Carbon disulphide to part A and part B
b) Add HCl to part A and B,
c) Check the magnetism in part A and B , record the observation.

Click to watch activity 2.10 : https://youtu.be/lW7m_wkYW_M

Observation :

Part	Carbon disulphide	HCl	Magnetism
A			
B			

1. Can we separate mixture in part B ?

_____

2. Name the method used to separate mixture in part A?

_____

3. Which part has obtained a material with magnetic property?

_____

" Service to the nation is the goal and purpose of all education "

Click the below links to watch samveda e classes of lesson is matter around us pure

1. https://youtu.be/TCnrdtsxeps
2. https://youtu.be/HXBmRLAsy6o
3. https://youtu.be/u1wJcAbPP-A

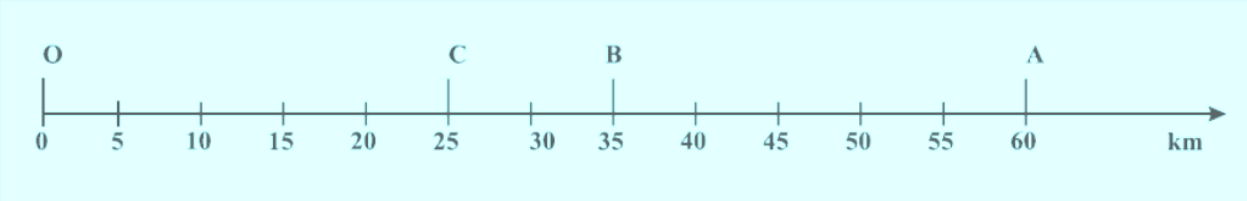
Alternative Educational plan for August-2021-22

Subject: Science **Class:** 09 **Unit:** Motion

School **Name:** _____ **Student Name:** _____

WORK SHEET

1. In the following diagram showed that A, B,and C travelled in a 30 minutes. Find the velocity of each in km/hr.

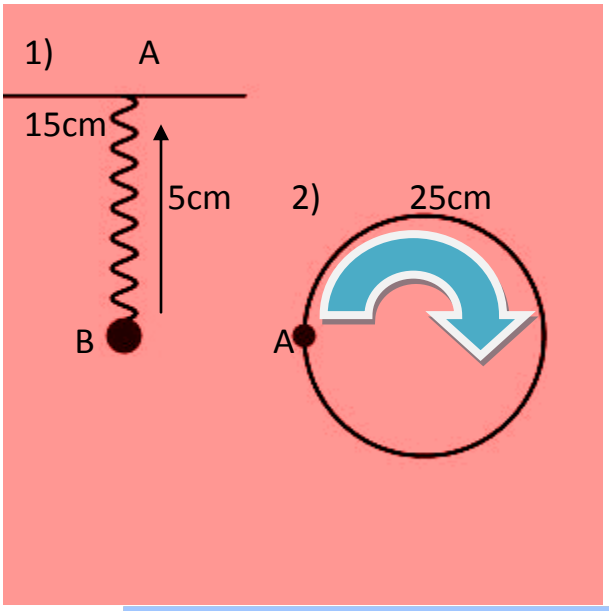


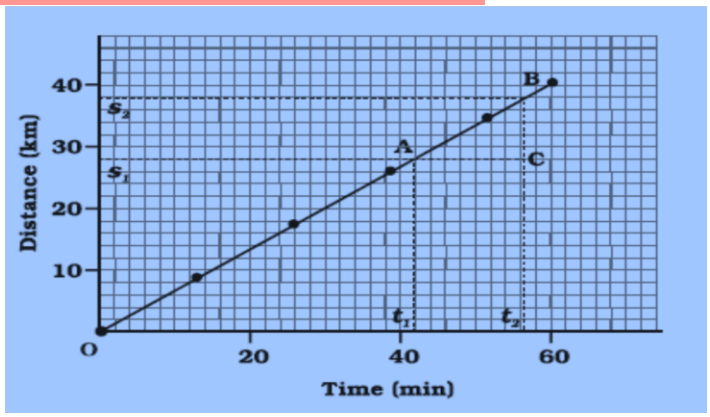
A._____

B._____

C._____

2. In the following diagram find the displacement an distance travelled of 1) and 2).





3. Find the distance and time at A and B in this graph

_____

_____

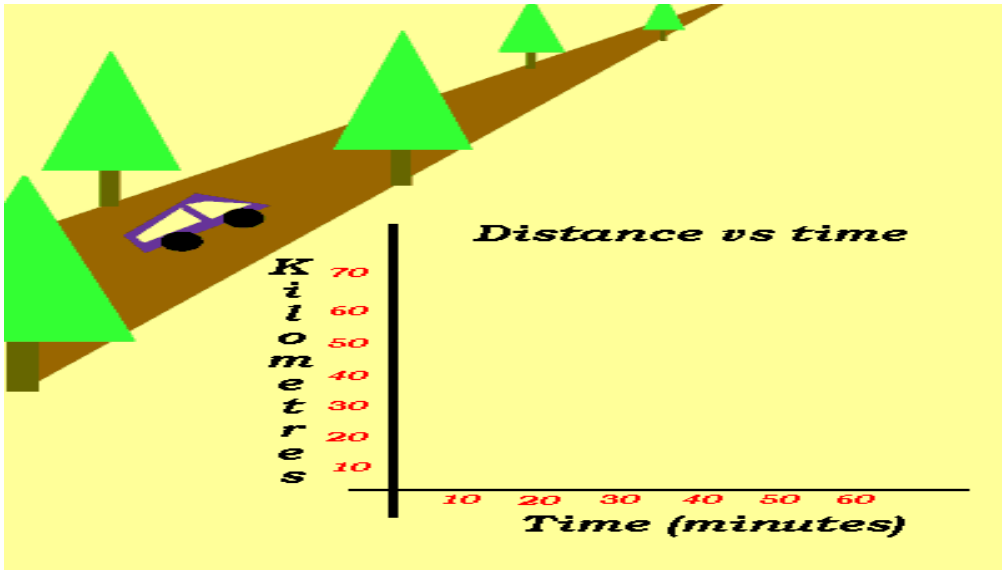
Alternative Educational plan for August-2021-22

Subject: Science **Class:** 09 **Unit:** Motion

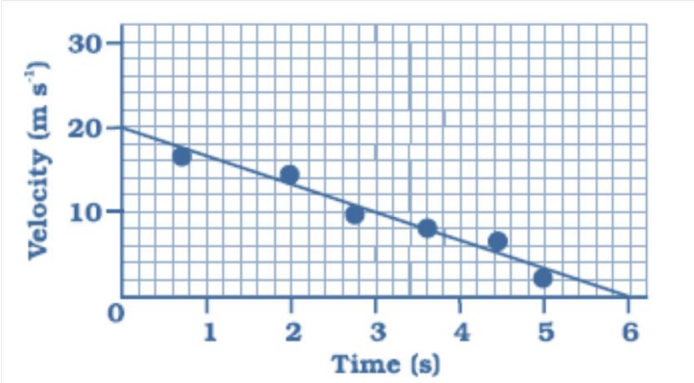
School **Name:** _____ **Student Name:** _____

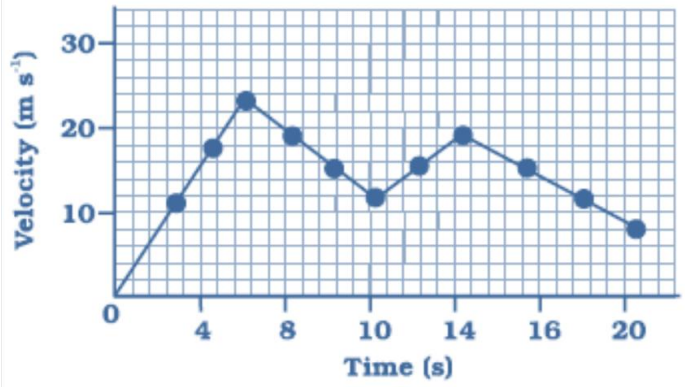
WORK SHEET

1. In the following picture car is travelled 45km in 30 minutes, show that in this picture



2. By seeing following graphs answer the following questions





a) What do you say about 1st and 2nd graphs?

_____

_____

_____

Draw 2nd graph here:-

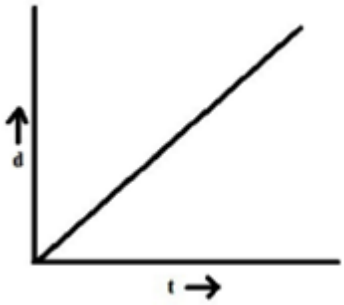
Alternative Educational plan for August-2021-22

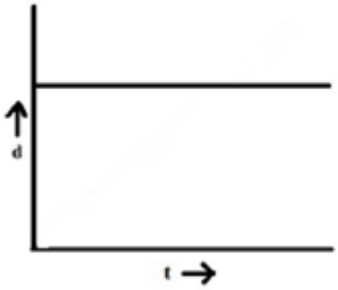
Subject: Science **Class:** 09 **Unit:** Motion

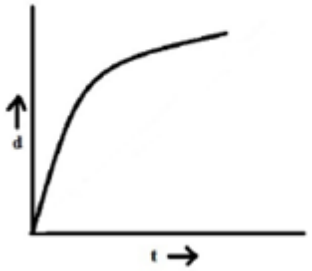
School **Name:** _____ **Student Name:** _____

WORK SHEET

1. Mention the type motion representing the following graphs







2.

Activity _____ *8.10*

- Feroz and his sister Sania go to school on their bicycles. Both of them start at the same time from their home but take different times to reach the school although they follow the same route. Table 8.5 shows the distance travelled by them in different times

Table 8.5: Distance covered by Feroz and Sania at different times on their bicycles

Time	Distance travelled by Feroz (km)	Distance travelled by Sania (km)
8:00 am	0	0
8:05 am	1.0	0.8
8:10 am	1.9	1.6
8:15 am	2.8	2.3
8:20 am	3.6	3.0
8:25 am	–	3.6

- Plot the distance-time graph for their motions on the same scale and interpret.

Alternative Educational plan for August-2021-22

Subject: Science **Class:** 09 **Unit:** Motion

School **Name:** _____ **Student Name:** _____

WORK SHEET

Question 1

A particle is moving up an inclined plane. Its velocity changes from 15m/s to 10m/s in two seconds. What is its acceleration?

Answer

u=15 m/s , v=10m/s ,t=2 sec , a=?

$a = v - ut$

Question 2

The velocity changes from 45m/s to 60m/s in Three seconds. What is its acceleration?

Answer

u=45 m/s , v=60m/s , t=3 sec , a=?

Question 3

A particle moving with an initial velocity of 5m/s is subjected to a uniform acceleration of 2.5m/s^2. Find the displacement in the next 4 sec.?

Answer

u=5 m/s , a=2.5m/s^2, t=4 s ,s=?

$s=ut+1/2at^2$

Question 4

A train is travelling at a speed of 60 km/ h. Brakes are applied so as to produce a uniform acceleration of −0.5 m /s^2. Find how far the train will go before it is brought to rest.

Answer

u=60 km/hr=16.66 m/s , a=-0.5 m /s^2 ,v=0, s=?

$v^2=u^2+2as$

Question 1

A stone is thrown in a vertically upward direction with a velocity of 10 m/s. If the acceleration of the

stone during its motion is 10 m /s^2 in the downward direction, what will be the height attained by the stone and how much time will it take to reach there?

Answer

u=10 m/s , v=0 , a=-10 m /s^2, s=? , t=?

Question 2

John runs for 10 min. at a uniform speed 9km/h. At what speed should he run for the next 20 min. so that the average speed comes 12km/hr?

Answer Total time = ---------- min

Average speed=---------- km/hr

Hence total distance = ---------- km

Now when travelling with 9 km/hr for 10 min. Distance = ---------- Km

So Distance left = 6-1.5 =----------km.

So John has to taken 4.5 km in 20 min in order to have average speed of 12 km/hr

Hence the speed should be = (4.5/20)*60= ---------- km/hr for the next 20 min

Question 3

A particle with a velocity of 2m/s a t=0 moves along a straight line with a constant acceleration of 0.2m/s^2. Find the displacement of the particle in 10s?

Answer u=2 m/s , a=0.2m/s^2 , t=10 s , s=?

Question 4

A particle is pushed along a horizontal surface in such a way that it starts with a velocity of 12m/s. Its velocity decreases at a uniform rate of 0.5m/s^2.

(a) Find the time it will take to come to rest.

(b) Find the distance covered by it before coming to rest?

Answer

u=12 m/s ,a =-0.5m/s^2 ,v=0

v=u+at

t=24 sec

s=ut+12at2s=ut+12at2

s=432 m

Alternative Educational plan for August-2021-22

Subject: Science **Class:** 09 **Unit:** Motion

School **Name:** _____ **Student Name:** _____

WORK SHEET

Question 1

A train accelerated from 20km/hr to 80km/hr in 4 minutes. How much distance does it cover in this period? Assume that the tracks are straight?

Answer

Question 2

A cyclist moving on a circular track of radius 50m completes one revolution in 4 minutes. What is his
(a) average speed
(b) average velocity in one full revolution?

3.

Activity _____ *8.5*

The data regarding the motion of two different objects A and B are given in Table 8.1.
Examine them carefully and state whether the motion of the objects is uniform or non-uniform.

Table 8.1

Time	Distance travelled by object A in m	Distance travelled by object B in m
9:30 am	10	12
9:45 am	20	19
10:00 am	30	23
10:15 am	40	35
10:30 am	50	37
10:45 am	60	41
11:00 am	70	44

Alternative Educational plan for August-2021-22

Subject: Science **Class:** 09 **Unit:** Motion

School **Name:** _____ **Student Name:** _____

WORK SHEET

To know more watch these videos

1. https://youtu.be/Zie5Lspuj28

2. https://youtu.be/q4q98xRWEjk

3. https://youtu.be/LG-hLXW8ALo

“ಶಿಕ್ಷಕರಿಂದ ಶಿಕ್ಷಕರಿಗಾಗಿ, ಶಿಕ್ಷಕರಿಂದ ವಿದ್ಯಾರ್ಥಿಗಳೆಡೆಗೆ ಜ್ಞಾನದ ಪಯಣ”

Alternative Educational plan for August-2021-22

ACTIVITY SHEET: 1

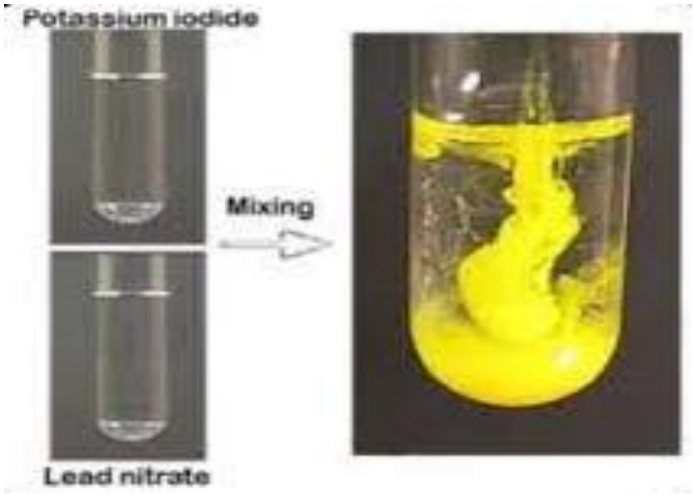
Student Name: _____ **Unit:** Chemical Reactions and Equations

School Name: _____ **Subject:** Science **Class:** 10

Activity 1.2

Activity 1.2

- Take lead nitrate solution in a test tube.
- Add potassium iodide solution to this.
- What do you observe?



- Mix an aqueous solution of lead nitrate with potassium iodide to check what happens.
- A *yellow colour precipitate* appears at the bottom.
- Lead nitrate and potassium iodide; both are colourless. They react with each other to form a yellow precipitate of lead iodide. Lead iodide settles down at the bottom of the tube.

$$Pb(NO_3)_2\ (aq) + 2KI\ (aq) \rightarrow PbI_2(s) + 2KNO_3\ (aq)$$

I. By observing above activity answer the following questions:

1) Write the names of the reactants taking part in the chemical reaction during the demonstration.

Answer:_____

2) Write the chemical formulae of both the reactants.

Answer: _____

3) List the observation (s) which justify that a chemical reaction has taken place.

Answer:_____

4) The products formed during the reaction are lead oxide and potassium nitrate. Write a word equation for the complete chemical reaction that has taken place.

Answer:_____

5) Write the skeletal equation with chemical formulae of reactants and products.

Answer:_____

6) Fill the following table on the basis of the skeletal chemical equation:

$$Pb(NO_3)_2\ (aq) + KI\ (aq) \longrightarrow PbI_2(s) + KNO_3\ (aq)$$

Element/Ion	Number on LHS	Number on RHS
Pb		
N		
O		
K		
I		

7) Is the equation balanced? If not, balance it.

Answer: _____

_____

II. Convert the following word equation to a balanced chemical equation:

1) Magnesium Oxide + Oxygen ⟶ Magnesium Oxide

Answer: _____

III. Balance the following Chemical equations:

	Skeletal Equation	Balanced Equation
a)	$MnO_2 + HCl \longrightarrow MnCl_2 + H_2O + Cl_2$	
b)	$H_2 + N_2 \longrightarrow NH_3$	
c)	$H_2S + O_2 \longrightarrow H_2O + SO_2$	
d)	$K + H_2O \longrightarrow KOH + H_2$	
e)	$Al + CuCl_3 \longrightarrow AlCl_3 + Cu$	
f)	$Ca(OH)_2 + CO_2 \longrightarrow CaCO_3 + H_2O$	

*****

Alternative Educational plan for August-2021-22

ACTIVITY SHEET: 2

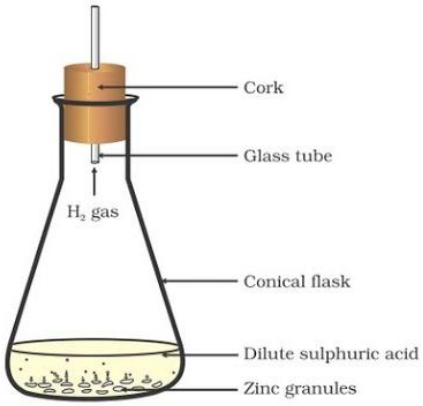
Student Name: _____ **Unit:** Chemical Reactions and Equations

School Name: _____ **Subject:** Science **Class:** 10

Activity 1.3

Activity 1.3

- Take a few zinc granules in a conical flask or a test tube.
- Add dilute hydrochloric acid or sulphuric acid to this (Fig. 1.2).
  CAUTION: Handle the acid with care.
- Do you observe anything happening around the zinc granules?
- Touch the conical flask or test tube. Is there any change in its temperature?



- Air Bubbles comes out from the granules, and conical flask becomes warm.
- Zinc granules react with hydrochloric acid or sulfuric acid and forms hydrogen gas.

$$Zn(s) + 2HCl\ (aq) \longrightarrow ZnCl_2\ (aq) + H_2\uparrow + heat$$

I. Write balanced chemical equations for the following word equations

1) Zinc + sulphuric acid ⟶ Zinc sulphate + Hydrogen

Answer: _____

2) Calcium hydroxide + carbon dioxide ⟶ Calcium carbonate + water

Skeletal equation:_____

Balanced Equation:_____

3) Aluminium + Copper chloride ⟶ Aluminium Chloride + Copper

Skeletal equation:_____

Balanced Equation:_____

4) Barium Chloride + Potassium sulphate ⟶ Barium sulphate + Potassium chloride

Skeletal equation:_____

Balanced Equation:_____

II. Answer the following Questions:

1) What is balanced chemical equation? Why should we balance?

Answer: _____

_____

_____

2) What are Reactants and Products?

Answer: _____

_____

_____

III. Match the following types of chemical reactions:

	Chemical Equations	Type of chemical equation	Correct answer
1	$Fe + CuSO_4 \longrightarrow FeSO_4 + Cu$	a) Combination Reaction	
2	$H_2 + O_2 \longrightarrow 2H_2O$	b) Decomposition Reaction	
3	$BaCl_2 + H_2SO_4 \longrightarrow BaSO_4 + HCl$	c) Displacement Reaction	
4	$CaCO_3 \longrightarrow CaO + CO_2$	d) Double Displacement Reaction	

IV. Write word equations for the following chemical equations:

1.	$Mg + O_2 \longrightarrow MgO$
Ans:	
2.	$Na + H_2O \longrightarrow NaOH + H_2$
Ans:	
3.	$Zn + H_2SO_4 \longrightarrow ZnSO_4 + H_2$
Ans:	
4.	$Fe + H_2O \longrightarrow FeO_4 + H_2$
Ans:	
5.	$Pb + CuCl_2 \longrightarrow PbCl_2 + Cu$
Ans:	

****

Alternative Educational plan for August-2021-22

ACTIVITY SHEET: 3

Student Name: _____ **Unit:** Chemical Reactions and Equations

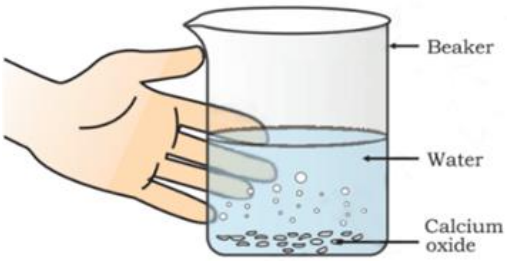
School Name: _____ **Subject:** Science **Class:** 10

Activity 1.4

I. COMBINATION REACTION:

Activity 1.4

- Take a small amount of calcium oxide or quick lime in a beaker.
- Slowly add water to this.
- Touch the beaker as shown in Fig. 1.3.
- Do you feel any change in temperature?



1) Name the type of reaction seen above this activity?

Answer:

2) Whether this reaction is exothermic or endothermic? Justify your answer.

Answer:

3) Calcium oxide reacts vigorously with water to produce slaked lime (Calcium hydroxide) releasing a large amount of heat. Write this statement in a chemical equation.

Answer:

4) Write two more reaction and balance it.

Answer: 1.

2.

5) What is combination reaction?

Answer: _____

Alternative Educational plan for August-2021-22

ACTIVITY SHEET: 4

Student Name: _____ **Unit:** Chemical Reactions and Equations

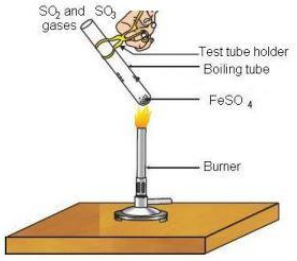
School Name: _____ **Subject:** Science **Class:** 10

Activity 1.5 & 1.6

II. DECOMPOSITION REACTION:

Activity 1.5

- Take about 2 g ferrous sulphate crystals in a dry boiling tube.
- Note the colour of the ferrous sulphate crystals.
- Heat the boiling tube over the flame of a burner or spirit lamp as shown in Fig. 1.4.
- Observe the colour of the crystals after heating.



Decomposition reaction

Activity 1.6

- Take about 2 g lead nitrate powder in a boiling tube.
- Hold the boiling tube with a pair of tongs and heat it over a flame, as shown in Fig. 1.5.
- What do you observe? Note down the change, if any.

1) What is Decomposition reaction?

Answer: _____

_____

2) Write the balanced chemical equation for the above activity.

Answer:

3) Name the reactant used in this activity.

Answer: _____

4) Which are the products are formed in this reaction?

Answer: _____

_____

5) To support the above reaction write an another example by heating
a) **Calcium carbonate** (lime stone) b) **Lead Nitrate**
and complete balanced chemical equation.

a) $CaCO_3 \xrightarrow{\text{Heat}}$ ☐ + ☐

b) $Pb(NO_3)_2 \xrightarrow{\text{Heat}}$ ☐ + ☐ + ☐

Alternative Educational plan for August-2021-22

ACTIVITY SHEET: 5

Student Name: _____ **Unit:** Chemical Reactions and Equations

School Name: _____ **Subject:** Science **Class:** 10

Activity 1.7

❖ **Electrolytic Decomposition Reaction: (Electrolysis of water):** Decomposition is carried out by passing electricity.

Activity 1.7

- Take a plastic mug. Drill two holes at its base and fit rubber stoppers in these holes. Insert carbon electrodes in these rubber stoppers as shown in Fig. 1.6.
- Connect these electrodes to a 6 volt battery.
- Fill the mug with water such that the electrodes are immersed. Add a few drops of dilute sulphuric acid to the water.
- Take two test tubes filled with water and invert them over the two carbon electrodes.
- Switch on the current and leave the apparatus undisturbed for some time.
- You will observe the formation of bubbles at both the electrodes. These bubbles displace water in the test tubes.
- Is the volume of the gas collected the same in both the test tubes?
- Once the test tubes are filled with the respective gases, remove them carefully.
- Test these gases one by one by bringing a burning candle close to the mouth of the test tubes.

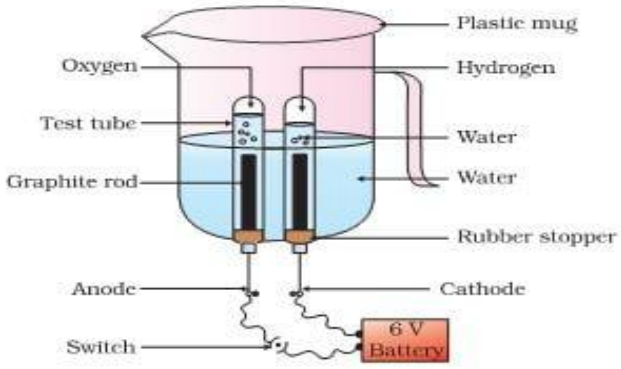


Figure 1.6
Electrolysis of water

1) What is electrolytic decomposition? Give example

Answer: _____

_____

_____

2) ***In electrolysis of water*** :

(a) Name the gases collected at Cathode and Anode.

Answer:_____

(b) Why is the volume of one gas collected at one electrode is double of another?

Answer:_____

_____

(c) Why are few drops of dilute H_2SO_4 added to water?

Answer:_____

3) Draw a neat labeled diagram of ***Electrolysis of water.***

*****

Alternative Educational plan for August-2021-22

ACTIVITY SHEET: 6

Student Name: _____ **Unit:** Chemical Reactions and Equations

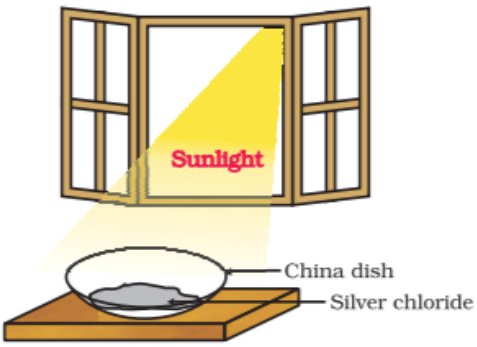
School Name: _____ **Subject:** Science **Class:** 10

Activity 1.8

❖ **Photolytic Decomposition Reaction:** Decomposition carried out in presence of sunlight.

Activity 1.8

- Take about 2 g silver chloride in a china dish.
- What is its colour?
- Place this china dish in sunlight for some time (Fig. 1.7).
- Observe the colour of the silver chloride after some time.



1) Write down the balanced chemical equation for the following:

(a) Silver chloride is decomposed in presence of sunlight to give silver and chlorine gas.

(b) Silver bromide is decomposed in presence of sunlight to give silver and bromine gas.

2) Mention one commercial use of this salt.

Answer: _____

3) Whether this reaction is exothermic or endothermic? Justify your answer.

Answer: _____

_____

4) Write the difference between exothermic and endothermic reaction?

Exothermic Reaction	Endothermic Reaction

*****

Alternative Educational plan for August-2021-22

ACTIVITY SHEET: 7

Student Name: _____ **Unit:** Chemical Reactions and Equations

School Name: _____ **Subject:** Science **Class:** 10

Activity 1.9

III. DISPLACEMENT REACTION:

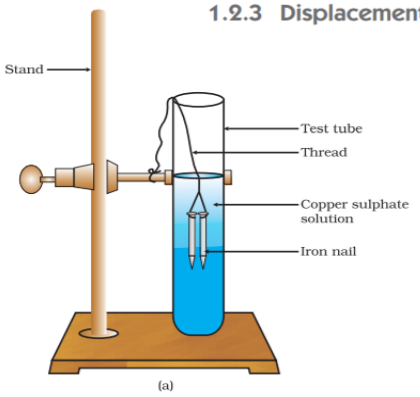
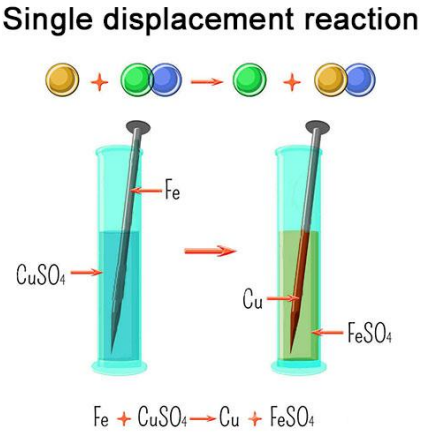


Figure 1.8
(a) Iron nails dipped in copper sulphate solution

Activity 1.9

- Take three iron nails and clean them by rubbing with sand paper.
- Take two test tubes marked as (A) and (B). In each test tube, take about 10 mL copper sulphate solution.
- Tie two iron nails with a thread and immerse them carefully in the copper sulphate solution in test tube B for about 20 minutes [Fig. 1.8 (a)]. Keep one iron nail aside for comparison.
- After 20 minutes, take out the iron nails from the copper sulphate solution.
- Compare the intensity of the blue colour of copper sulphate solutions in test tubes (A) and (B), [Fig. 1.8 (b)].
- Also, compare the colour of the iron nails dipped in the copper sulphate solution with the one kept aside [Fig. 1.8 (b)].



1) A metal strip X is dipped in blue coloured salt solution YSO_4. After some time a layer of metal 'Y' is formed on metal strip 'X'. Metal X is used in galvanization, whereas metal Y is used for making electric wires.

   (a) What would be metal 'X' and 'Y'?

   Answer:_____

   (b) Name the metal salt YSO4.

   Answer:_____

   (c) What type of chemical reaction takes place between X and YSO_4? Write the chemical equation.

   Answer:_____

2) What is displacement reaction?

   Answer:_____

   _____

3) Which metal is more reactive and less reactive in this reaction?

   Answer:_____

4) Complete the following chemical equation.

a) ☐ + CuSO4 ⟶ ☐ + Cu

b) Pb + ☐ ⟶ $PbCl_2$ + ☐

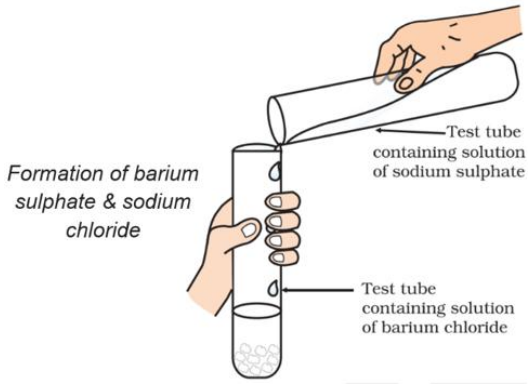
5) Blue color of copper sulphate salt solution changes into _____ after the reaction with an Iron.

Activity 1.10

IV. DOUBLE DISPLACEMENT REACTION:

Activity 1.10

- Take about 3 mL of sodium sulphate solution in a test tube.
- In another test tube, take about 3 mL of barium chloride solution.
- Mix the two solutions (Fig. 1.9).
- What do you observe?



1) What is double displacement reaction?

Answer: _____

_____

2) What is meant by precipitation reaction?

Answer: _____

_____

_____

3) Balance the following chemical reaction and name the compounds.

Na_2SO_4 (aq) + $BaCl_2$ (aq) ⟶ $BaSO_4$ (s) + NaCl (aq)

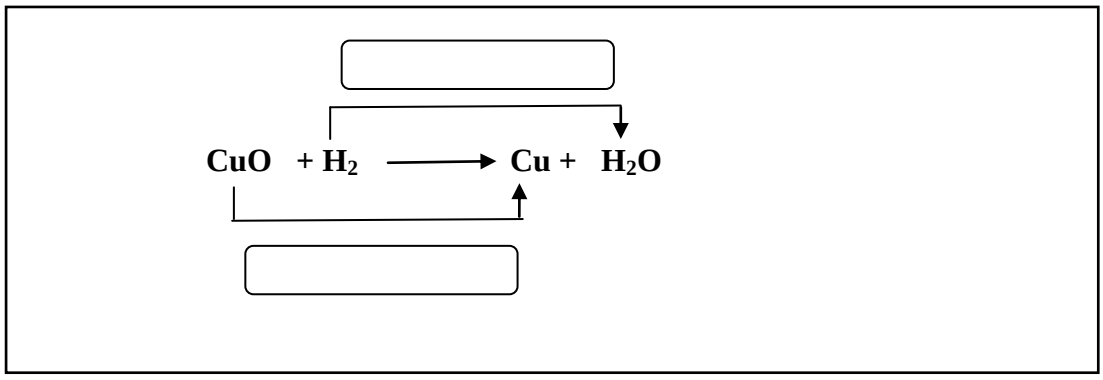
☐ ☐ ☐ ☐

4) What is Oxidation and Reduction? Give an example each.

Oxidation	Reduction

5) What is Redox reaction?

Answer:_____



In the above reaction:

a	Name the Oxidized substance:	
b	Name the reduced substance:	
c	Name the Oxidizing agent:	

6) What is corrosion? Name the methods to prevent corrosion.

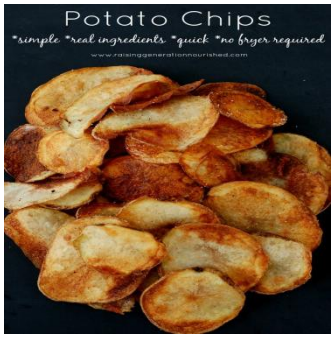
Answer: _____

_____

_____

_____

7) What is Rancidity? Name the methods to prevent rancidity



Answer: _____

_____

_____

_____

*****

Alternative Academic plan, August 2021-22

School Name : **Subject : Science**

Unit : Acids, Bases and Salts **Class : 10**

Student Name :

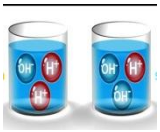
==========

Activity /Worksheet –1

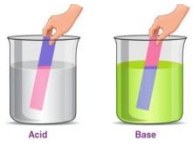
1) Classify the following given objects into sources containing acids and bases.

Acids	Bases
1)	1)
2)	2)
3)	3)

2) List out the properties of acids and bases using the following images as clues.







Acids	Bases
1)	1)
2)	2)
3)	3)

3) Complete the following tabular column.

Sl.No.	Sample solution	Red Litmus	Blue Litmus	Phenolpthalein	Methyl Orange
1)	Acetic Acid				
2)	Sodium hydroxide				

4) Write the colour change of the following Indicators in acids and alkali/bases.

Sl.No.	Indicators	Final colour	
		Acids	Alkali/Base
1)	Litmus		
2)	Methyl / Orange		
3)	Phenolpthalein		

Alternative Academic plan, August 2021-22

School Name : **Subject : Science**

Unit : Acids, Bases and Salts **Class : 10**

Student Name :

==========

Activity /Worksheet –2

I Choose the correct answer from the four alternaives given below :

1) Tooth decays when the pH of the mouth is

a) 4.5 b) 5.5 c) 6.5 d) 1.5

2) The nature of tooth paste is _____

a) Neutral b) Acidic c) basic d) alkaline

3) When dilute acids react with Metal, the gas liberated is

a) CO_2 b) H_2 c) O_2 d) N_2

4) Irritation caused by an ant bite is due to this acid

a) Methanoic acid b) lactic acid c) Propanoic acid d) acetic acid

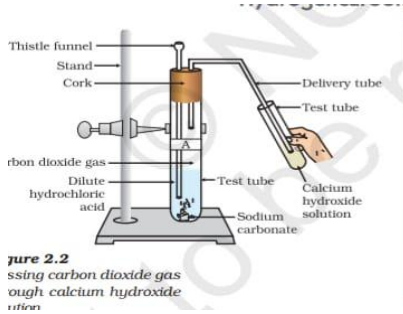
5) Magnesium hydroxide commonly called as milk of Magnesia is _____

a) Antacid b) Analgesic c) Antiseptic d) Antipyretic

6) A solution react with crushed egg-shells to give a gas that turns lime water milky. The solution contains _____

a) NaCl b) HCl c) KCl d) NH_4Cl

II



ure 2.2
ssing carbon dioxide gas
ough calcium hydroxide
ution

Activity 2.5

- Take two test tubes, label them as A and B.
- Take about 0.5 g of sodium carbonate (Na_2CO_3) in test tube A and about 0.5 g of sodium hydrogencarbonate ($NaHCO_3$) in test tube B.
- Add about 2 mL of dilute HCl to both the test tubes.
- What do you observe?
- Pass the gas produced in each case through lime water (calcium hydroxide solution) as shown in Fig. 2.2 and record your observations.

Read the given activity 2.5 and observe the figure 2.2. Represent /Write the reactions in the form of chemical equations.

1) Test tube A : Na_2CO_3 + _____ → _____ + _____ + _____

2) Test tube B : $NaHCO_3$ + _____ → _____ + _____ + _____

Alternative Academic plan, August 2021-22

School Name : **Subject : Science**

Unit : Acids, Bases and Salts **Class : 10**

Student Name :

==========

Activity /Worksheet –3

I

1) HCL + NaOH ⟶ NaCl + H_2O

Acid + Base ⟶ Salt + Water

Identify the above Reaction and define it.

Ans : _____

_____

2) What is P^H value ?

Ans : _____

_____

3) What are Alkalis ? Give 2 examples.

Ans : _____

_____

II

Figure 2.5

Observe the given figure 2.5 and write the Answers for the following questions.

a) What does the above sign indicate ?

Ans: _____

_____

b) What do you mean by dilution ?

Ans : _____

_____

III Complete the following reactions by writing the products :

a) HCl + NaOH →

b) $CaCO_3 + CO_2 + H_2O$ →

Alternative Academic plan, August 2021-22

School Name : **Subject : Science**

Unit : Acids, Bases and Salts **Class : 10**

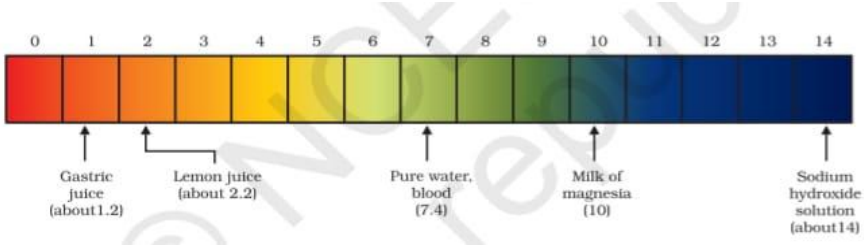
Student Name :

==========

Activity /Worksheet –4

I

1) The pH values of 5 different substances are given. Based on that classify them as acidic, basic and neutral.



Acidic	Basic	Neutral

a) Which solution is highly acidic ?

Ans : _____

b) Which solution is least basic ?

Ans : _____

2) Name two Indicators commonly used in the laboratory.

Ans : _____, _____

3) A yellowish white powder calcium compound is used as a disinfectant and also in the textile industry.

a) Name the compound _____

b) Molecular formula of the compound _____

c) Which gas is Released when this compound is left exposed to air ? _____

Alternative Academic plan, August 2021-22

School Name : **Subject : Science**

Unit : Acids, Bases and Salts **Class : 10**

Student Name :

==========

Activity /Worksheet –5

I **Give reasons for the following :**

1) The sodium chloride solution conducts electricity but sugar solution does not conduct electricity.

Ans : _____

_____

_____

2) Food cooked in copper pans using more common salt may get poisoned – Why ?

Ans : _____

_____

_____

3) It is always recommended to add acid slowly to water but not water to an acid ?

Ans : _____

_____

_____

0

II 1)

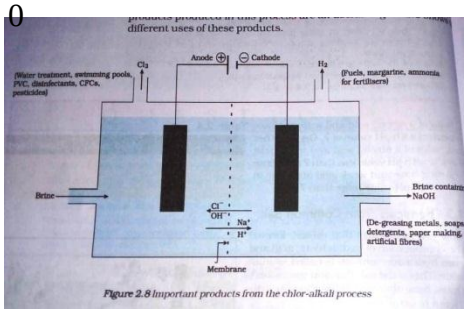


Figure 2.8 Important products from the chlor-alkali process

Observe figure 2.8 and answer the following :

a) What is Brine ?

Ans : _____

b) Name the products liberated at anode and cathode

a) Anode : _____ b) Cathode _____ & _____

2) Based on the above figure, write the uses of products formed.

Products	Uses
1) Chlorine	
2) Hydrogen	
3) NaOH	

Alternative Academic plan, August 2021-22

School Name : **Subject : Science**

Unit : Acids, Bases and Salts **Class : 10**

Student Name :

==========

Activity /Worksheet –6

I **Write the correlated word in the blank provided as comparing to the first given pair:**

1) Milk : Lactic acid : : Lemon : _____

2) Acid : HCl : : Base : _____

3) Vinegar : Acid : : Tooth Paste : _____

4) Alkali : NaOH : : Salt : _____

II **Complete the following blanks with suitable answers :**

(acids present in the different given sources)

1) Milk _____ 2) Tamarind _____

3) Vinegar _____ 4) Ant Sting _____

5) Nettle leaf _____ 6) Tomato _____

III **Match the following :**

A	B	Answers
1) Washing Soda	a) $NaHCO_3$	_____
2) Baking soda	b) Na_2CO_3	_____
3) Bleaching powder	c) $CaSO_4, 2H_2O$	_____
4) Caustic Soda	d) $CaOCl_2$	_____
5) Plaster of paris	e) NaOH	_____

Alternative Academic plan, August 2021-22

School Name : **Subject : Science**

Unit : Acids, Bases and Salts **Class : 10**

Student Name :

==========

Activity /Worksheet –7

I **For the following statements, choose the correct answer from the box provided and write them in the space provided :**

Acetic acid	**weak acid**	**H^+ ions**	**Strong acid**
OH^- ions	**O-14**	**Acids**	**Bases**
Baking soda	**Washing soda**		

1) The substances that turn blue litmus red _____
2) This is used for softening of hard water _____
3) pH of a solution can vary from _____
4) Acids gives these ions in water _____
5) Vinegar contains _____
6) Formic acid is a _____

II **List any two uses of the following salts**

1) Washing soda : _____
_____
2) Baking Soda : _____
_____
3) Bleaching powder : _____
_____
4) Plaster of paris : _____
_____

Alternative Academic plan, August 2021-22

School Name : **Subject : Science**

Unit : Acids, Bases and Salts **Class : 10**

Student Name :

==========

Activity /Worksheet –8

I **Write the molecular formula for the following compounds of water of crystallization**

a) Hydrated copper sulphate _____

b) Hydrated sodium carbonate _____

c) Gypsum _____

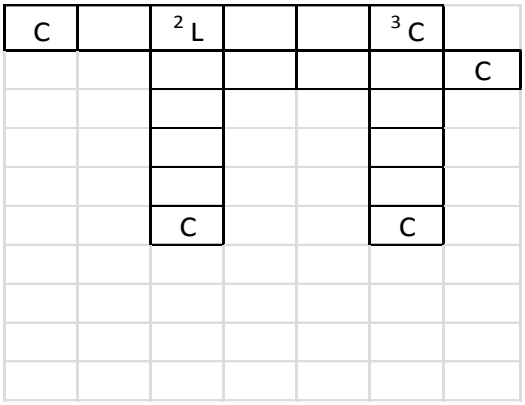
II **Solve the puzzle & complete the word-cross :**

I. Across

1) Known as Vinegar (6)
3) A mineral acid (12)

II. Down

2) Acid obtained from milk (6)
4) An acid obtained from lemon (6)



III **Draw a neat labeled diagram of Reaction of Zinc granules with Sulphuric acid liberating H_2 gas.**

Alternative educational plan for August 2021-22

Unit : Electricity **class : 10**

Work sheet : 01

Name of the student : _____ **school Name : _____**

I choose the correct answer from the following

1. The SI unit of electric current is
   a) Joule b) ampere c) coulomb d) Volt

2. The resistivity of a given metallic wire depend upon
   a) Its thickness b) Its shape c)Nature of material d)Its length

3. The opposition of flow of current is known as
   a) Power b)Resistivity c)Resistance d)Potential difference

4. conventionally , the direction of current taken as
   a) direction of flow of negative charge b) direction of flow of neutrons
   b) direction of flow of atoms d) direction of flow of positive charge

5. Observe the table,

Which material is the best conductor of electricity? why

Metal	Resistivity
Nichrome	100×10^{-6}
Silver	1.60×10^{-8}
Dry paper	10^{12}

   a) Nichrome, because of high resistivity b)Silver , because of high resistivity
   c) Silver, because of lowest resistivity d)Dry paper,because of lowest resistivity

6. The relation between potential difference and current is
   a) V α I b) V α 1/I c) V α R/I d) V α R

7. What happens to the other bulb in a parallel circuit if one bulb blows off
   a) All the bulb will stop glowing b)Rest of the bulb will glow
   c) bulb break d) their will be short circuit

8. Electric power is inversely proportional to
   a) resistance b) temperature c) current d) Voltage

9. An electric iron of resistance 20 Ω takes a current of 5 A. Calculate the heat developed in 30 seconds.
   a) 15×10^4 J b)1.5×10^4 J c) 5×10^4 J d) 15000×10^4 J

10. Work done in moving a charge of 4 C across two points having a potential difference 6 V IS
    a) 1.5 J b) 10 J c) 24 J d)2.4 j

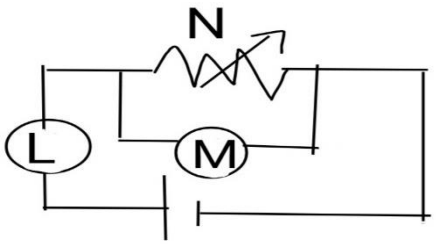
Click to Play quiz:
https://quizizz.com/join/quiz/610fadce7a2b4e001bcf3dce/start?studentShare=true

Alternative educational plan for August 2021-22

Work sheet : 02

Name of the student : _____ school Name : _____

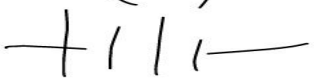
Observe the circuit diagram shown below, Identify the devices L, M and N.



Part	Name of the device	Use of the device	Symbol
L			
M			
N			

III Match electric components given in A , with their symbols shown in column B.

Column A Column B

Electric device		
Bulb	i)	
Resistance	ii)	
Battery	iii)	
Closed switch	iv)	
	v)	

IV Complete the table.

Physical quantity	**Symbol**	**SI unit**
Electric charge		
Potential difference		
Resistance		
Resistivity		
Power		

"The beautiful thing about learning is that no one can take it away from you."

Alternative educational plan for August 2021-22

Work sheet : 03

Name of the student : _____ school Name : _____

V Fill in the blanks following with suitable letters

1. $I = \frac{\square}{t}$ 2. $\square = \frac{W}{Q}$ 3. $R = \frac{V}{\square}$

4 $\square$ = VI 5. $H = I^2 \square t$ 6. $\square = \frac{R A}{l}$

VI Give reasons for the following

1.Coil of an electric toaster and electric iron box made up of an alloy rather than a pure metal.

_____

_____

2.The resistance of a conductor increases with an increase in temperature.

_____

_____

3.Ammeter is always connected in series and voltmeter in parallel.

_____

_____

VII Answer the following

1.Define 1 Ampere?

_____

2.Name the material used for making the filaments of an electric bulb?

_____

3.What is the commercial unit of electric energy? Convert it into joules .

_____

_____

_____

4.State joules law of heating. Write the application of heating effect of electric current in an electric bulb and the fuse used in an electric circuit.

_____

_____

_____

5. Differentiate between resistance in series and resistance in parallel.

Resistance in series	Resistance in parallel

6. Draw the diagram of an electric circuit in which the resistors R 1 , R 2 and R 3 are connected in 1) series 2) parallel write their mathematical expression in the space provided.

1.Resistance in Series

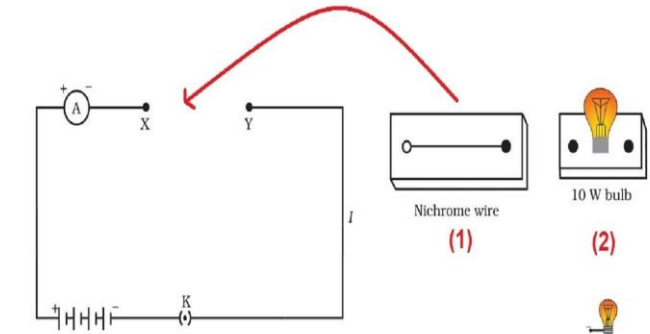
2.Resistance in Parallel

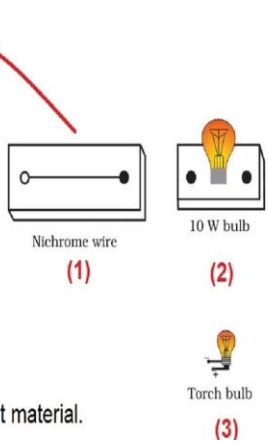
“Education is the most powerful weapon you can use to change the world.”

Alternative educational plan for August 2021-22
Activity sheet : 01

Name of the student : _____ school Name : _____

Take battery, wire, Ammeter, connect all these as shown in the diagram.
1.Place Nichrome wire, check the current
2.Replace Nichrome wire with 10 W bulb ,record ammeter reading?
3.Repeat the step with Torch bulb ,record ammeter reading
Click to watch Activity : https://youtu.be/PgM9MK6eWC0





1.Why current is different for different materials?

_____

_____

2.Which of the above materials will not show the flow of current in ammeter? Why.

_____

_____

3.State ohms law. Write it's mathematical expression.

_____

_____

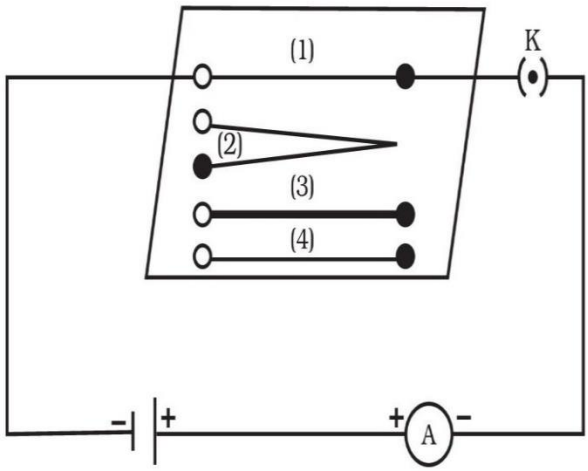
_____

***"The mind is not a vessel to be filled but a fire to be ignited."* – Plutarch**

Alternative educational plan for August 2021-22
Work sheet : 04

Name of the student : _____ school Name : _____

observe the given information. Answer the following.



(Ammeter reading changes with length and thickness of the resistance wire)

Case 1: Wire of length l, Case 2: Wire of length 2l,
Case 3: Wire of double thicness,
Case 4: Wire copper has same length & area of cross section

Material	**Ammeter reading**
Case 1 : length L	10 mA
length 2 L	5 mA
Double thickness	15 mA
Copper wire	45 mA

Click to watch above activity : https://youtu.be/w5fOhoXowwc

1.what happens to the resistance of a conductor when

a) length is doubled

_____

b) Area is doubled

_____

c) Nichrome wire is replaced by copper wire

_____

2.list the factor affecting the resistance of a conductor ?

_____

_____

_____

_____

_____

"The expert in anything was once a beginner — Helen Hayes."

Alternative educational plan for August 2021-22

Work sheet : 05

Name of the student : _____ school Name : _____

Numerical problems

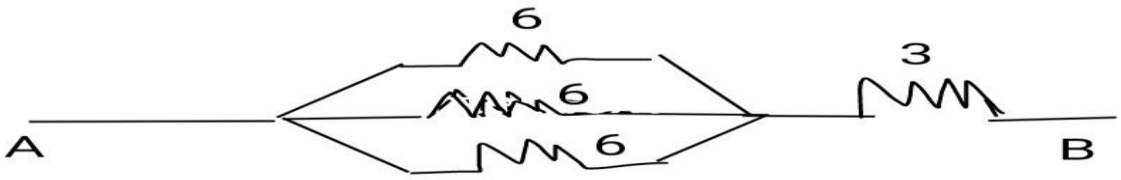
1. A charge of 500 C flows through a bulb for 5 min, then the amount of current flowing through the circuit is

_____

_____

_____

2. In the given combination of resistance , the effective resistance across A and B



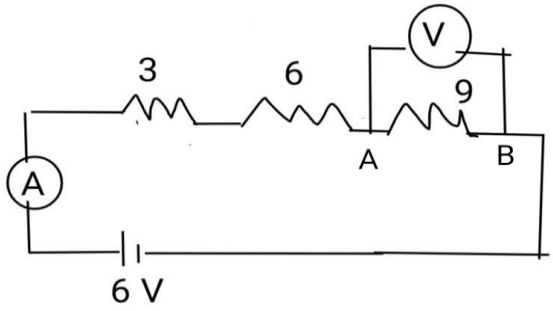
_____

_____

_____

_____

3. Observe the diagram, calculate



a) Potential difference across A and B

_____

_____

_____

_____

b) Effective resistance of the circuit

_____

_____

_____

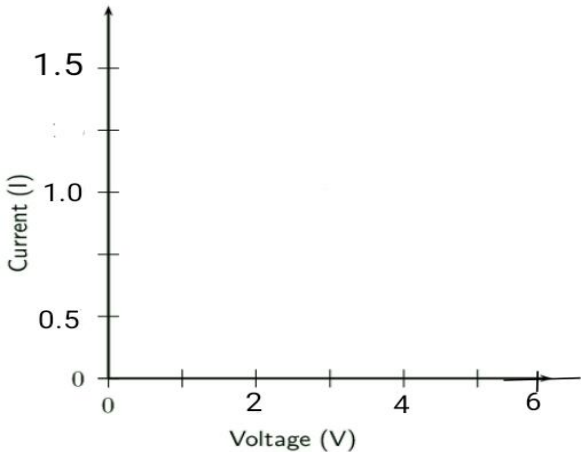
_____

_____

"Success is the sum of small efforts, repeated." — R Collier

4. The value of current I flowing through a coil for the corresponding value of potential difference V across the coil are shown below. plot a graph and calculate the resistance of the coil.

I current	0.5	1.0	1.5
V voltage	2	4	6



Calculate resistance

5. An electric bulb is connected to a 240 V generator , The current drawn is 0.25 A. Calculate the power of the bulb ?

6. A bulb marked 220 V, 40 W, calculate current flowing through the bulb and its resistance ?

7. The electrical resistivity of silver is 1.60 x 10^{-6} m what will be the resistance of silver wire of length 2 m and cross section 2 x 10^{-3} m2 ?

"The best way to predict your future is to create it." —Abraham Lincoln

Click below link to watch samveda class of lesson Electricity

1. https://youtu.be/9LPn7rpewxw
2. https://youtu.be/7T_RS8nmMzk
3. https://youtu.be/2PLES6m11Xw
4. https://youtu.be/MNrgFy9w5XM
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"The future belongs to those who believe in the beauty of their dreams."

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