INDEX

LESSON PLAN - 01

Preliminary Information

Name of the Student Teacher :- Reg :-

Subject :- Physical Science Class :- VII

Unit :- Food components Time :- 40 min

Topic :- Introduction of food

School :- Kavya high School

Food components

Expected out comes :-

1. To explain the importante of different Food substances.
2. To describe how energy is formed from food materials.
3. To analyse what are the component that are present in food materials.
4. To give Examples of starch, fats and proteins containing food materials.

Asking Questions and Making Hypothesis

1. Student raise questions on what is the need of fibres in food.
2. To imagine what happens if fats are high in food substances.

Experimentation and field investigation

1. To do Experiment on starch.
2. To determine that the fats are present in food through Experiment.
3. To determine that the protein are present in food through Experiment.

Teaching points	Teaching Strategies	TLM
Introduction	Good Morning students In the previous class we have learnt that we eat many kinds of foods like biryani, pulihora, idly, chapathi, dal, etc. and you also learnt how to cook some kinds of food making them tasty and palatable by adding oil, sugandha dravyalu (condiments) etc.  	Text Book
Announcement of Topic.	Now we discuss the lesson food components. • Every one have their own favorite food. • what is your favorite food / dish ? why do you like it.? • Is only favorite food sufficient for you ? why ? • what food do you eat every day ? • Think why do you eat it ?	

Teaching points	Teaching strategies	TLM
Project	Let us do-1 : We eat different types of food items. Make a group with five or six students and make a list of some day-to-day activities and food items we eat; display your group report. Discuss in group with your teacher about the relationship between eating food and performing activities. Food supplies the energy we need to do many tasks in our day to day activities.	Text Book
Discussion	• DO we need energy when we sleep? Why/Why not? DO you know that even while sleping we breath and circulation of blood to our body goes on; so we need energy while sleeping can you add some more activities Performed by our body during sleep? • Read the following and discuss with your friends? 1. Suppose you don't get food for lunch how do you feel? 2. If you don't get anything for more than a day how will you feel? 3. If you don't get food for many days what will happen to you.? 4. Why should we take food? what are the component in it. Let us find out what components are present in our food.	Pictures

LESSON PLAN - 02

Preliminary Information :-

Name of the Student Teacher :-

Reg NO :-

Subject :- Physical science

class : VII

Unit :- Food components

Time :- 40 min

Topic :- Components of food

School :- Kavya High School

Teaching points	Teaching Strategies	TLM
components of food.	Q. what is your favorite food ? Q. what food do you eat every day ? why do you like it. List out the food components present in it put a tike mark if you find the listed food components present in food items. collect some other food Packets as well like those of chips ;milk ; furit ,dal etc.	Text Book

Discussion on food item and components

Table 1: Food items & components

Food Items	Carbohydrates	protein	fat	vitamin & Minerals	other if any
Milk powder	17.4	445	18.1		
Juice					
Dal					
chips					

1. What are the components found in biscuits?
2. What components are most common in your list?
3. Do you find any vitamins & minerals in them? What are they?
4. Where do you write salt & sugar? why?
5. Are there any food items with similar components.

- what are the essential components of food?

Our food consists of carbohydrates, Protein fats, vitamins and minerals. Besides these, water & fibres are also present. The components present in food substances can be tested easily through simple experiments.

A. Teaching points :- component of food.

B. Teaching material :- Text Book, pictures.

C. Exercising the skill :- Pupils identifying what are essential components of food.

D. Assignment :- what are the essential components of food.

Text Book

Charts

Pictures

LESSON PLAN - 03

Preliminary Information :-

Name of the Student teacher :-

Reg No :-

Subject :- Physical Science

Class :- VII

Unit :- Food components

Time :- 40 min

Topic :- Determination of starch & fats

School :- Kavya High school

Teaching points	Teaching Strate	TLM
Determination of starch & facts.	Q. What are the components found in Biscuits ? Q. Do you find Starch and fats in any item ? Let's us do - 3 :- Confirmation of presence of food components Collect different types of food materials like milk, a Potato, little quantity of oil / ghee. Test them according to instruction given below. For this you will need test tubes, stand, Plate & dropper - You also need some chemicals as given in each secretion of testing. Take a sample of each food item in a test tube or plate. Experiment - Test for Starch :- Preparation of dilute iodine Solutn Take a test tube or a cup add add few drops of Iodine solutn to it then dilute it with water till it become light yellow / brown. 	Text book

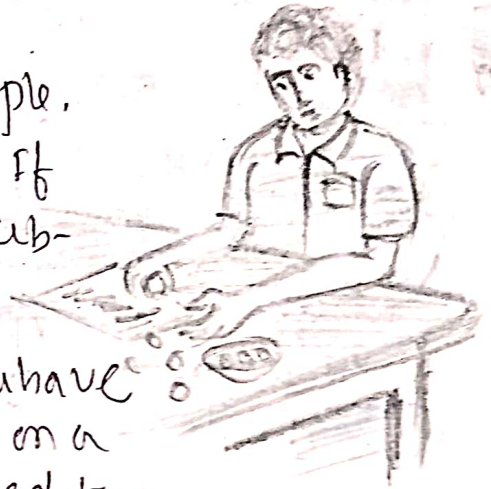
TLM

Expt-1- -Take a sample of food item in the test tube Add a few drops of dilute Iodine solution to the sample observe the change in colour. What do you find? If the substance turns dark-blue or black it.

Test for fats.

Experiment-2: Test for fats :-

Take a small quantity of each sample. Rub it gently on a piece of paper. If the paper turns translucent the substance contains facts.



Text book

paper plate

Recall your past experience when you have eaten vada or any other food item on a paper plate., you might have noticed the plate turning translucent.

A. Teaching points :- Test for starch
Test for Facts

B. Teaching Learning Materials :- Text book, Iodine, test tube, paper plate.

C. Assignment :- Do the project work of Testing of food items for carbohydrates, proteins, fats.

LESSON PLAN - 04

Preliminary Information :-

Name of the Student Teacher :-

Subject :- physical science

Unit :- Food components

Topic :- Determination of protein

Teaching points	Teaching Strategies	TLM
Determination of proteins	Q. Why did the paper plate turn Translucent ?	
	Experiment :- Test for protein -	
	preparation of 2% copper sulphate solution and 10% Sodium hydroxide solution :	
Experiment -	To make 2% copper sulphate solution dissolve 2 gms of copper sulphate in 100 ml of water.	Text Book
	To make 10% of sodium hydroxide solution dissolve 10 gms of sodium hydroxide in 100 ml of water.	$CuSO_4$ $NaOH$ Sample food.
	one gram of sodium hydroxide equal to 6 pellets of sodium hydroxide.	

Topic discussion

If the substance you wish to test is a solid grind it into powder or paste. Take a little of it in the test tube and add 10 drops of water to the powder and stir well Take 10 drops of this solution in a clean test tube and 2 drops of copper sulphate solution and 10 drops of sodium hydroxide solution & 10 drops of sodium hydroxide Solutn to test tube & shake well. change of colour to violet or purple confirms presence of protein.

The above tests show the presence of components of food which are usually present in larger amount as compared to others. All type of food that we eat contain all the above mentioned food components. The quality of each component varies from type to type.

In rich carbohydrates are more where as in oil fats are present in more quantity.

Experiment Let us do - Testing of food item :

Test different food items as given in table 2. you may add your own examples, find out the different components in them and record the information on the basis of your observation in table 2.

Analyse the data in the table and think about the components presents in the food items.

Teaching Points	Teaching strategies	TLM
Project	Testing of food items for carbohydrates, proteins, fats	Text Book

S.NO	FOOD	Starch Present/Absent	Proteins Present/Absent	Fats Present/Absent
1	Rice			
2	Potato			
3	Milk			
4	curd			
5	Egg			

Charts

Q. which food shows the presence of starch.
Q. what nutrients are present in milk.
Q. which food item contains more fats.
Q. which food items contains more proteins?

Assignment :- find out from your classmates whether all of their family members take sufficient food. If not why? find reasons and solutions.

LESSON PLAN- 05

Preliminary Information :

Name of the student teacher :-

Reg No :-

Class :- VII

Time :- 40 min

Subject :- Physical Science

Unit :- food components

Topic :- Importance of fibres

School :- Kavya High school

Teaching points	Teaching Strategies	TLM
Importance of fibres.	Q. which component of food could you identify in potatoes ? **Roughages or Dietary fibres** There are some components of food that are necessary for our body called roughages or dietary fibres. **Let us do** - Roughages in some food items. Collect some vegetables like ribbed gourd, bunch beans, lady's finger or some boiled sweet potato etc. break them or crush them into pieces & observe. • Do you find some fine strands or thread like structure • what are these strands called ? Roughages are a kind of carbohydrates that our body fails to digest. They help in free bowel movement in the digestive tract and prevent constipation.	Text book Radish Drumstick Banana

Teaching points

Sources of Roughages

Projects

Teaching strategies

Sources of Roughages :-

Bran, shredded wheat, cereals, fruits and vegetables ; sweet & plain potato, peas and berries, pumpkins, palak, apples, banana, Papaya & many kinds of beans are the source of roughages. we must take care to include sufficient fibre food in our daily diet.

Generally we have a habit of eating some fruits without peels. we eat banana without peel but fruits like apples, grapes etc. are eaten along with peels. most of the vegetable are also used along with peels, sometimes we make some speical dishes like chutneys etc. with peels. so don't peel or discard outer layers of fruit or vegetables. They are rich in nutrients.

peel contains fibre which helps in digestion. But now-a-days farmers use many pesticides in the field they are very dangerous for our health so we must wash fruits and vegetables with salt water thrugh Then only it becomes safe to eat them along with peels.

Assignment :- which food items belongs to dietrecary fibres.

TLM

Text book

fruits

vegetable

LESSON PLAN - 06

Preliminary Information :-

Name of the Student teacher :-

Reg No -

Subject :- physical Science

class :- VII

Unit :- food components

Time :- 40 min

Topic :- water - Need for body

School :- Kavya High school

Teaching points	Teaching Strategies	TLM
Water Need for body.	**Water :** water is also an essential component needed by our body. we should drink sufficient water. Do you know we get water from fruits & vegetables also? Most of the fruits and vegetables contain water. Observe the above fruits and vegetables & cut them. can you find water in them? Most vegetables like potatoes, beans, kheera, tomatoes, gourds & fruits like apples, papaya & melons etc. contain water. why does our body need water?	Text book fruits pictures

Teaching points	Teaching Strategies	TLM
water need for body	Let us do - To know the use of water Take a piece of sponge and try to move it in a pipe. It moves with some difficulty, Remove the sponge from the pipe, dip it in water and try to move it again in the pipe. It moves freely or smoothly why does it move freely? water is food & it also helps the food to move easily in the digestive tract. water helps in many other processes for our body as well, Hence, we must drink plenty of water. 	Text book pipe, & water Food
	Assignment : How is water useful to our body.	

LESSON PLAN - 07

Preliminary Information :-

Name of the Student teacher :-

Reg No :-

Subject :- physical Science

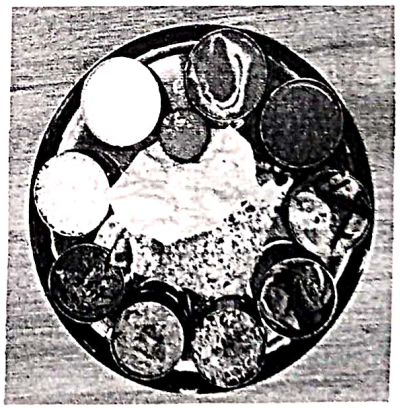
class :- VII

Unit :- Food components

Time :- 40 min

Topic :- Balanced Diet

School :- Kavya High school

Teaching Points	Teaching strategies	TLM
Balanced diet	**Balanced diet :-** **Let us do -** Look at the food Thali with many food items & list out the food items & food components in it.  **Let us do -** List the food items eaten by you yesterday from breakfas to dinner. Does your diet contain all the necessary components of food in it? Think and discuss with your friends.	Text book Dry fruits Nuts

Break fast	Lunch	Dinner

Lesson Explaining

You need not eat all items as shown in the "Thali" rather you should ensure that your food contains all food components every day in adequate quantity. For example, a diet containing food items having more of carbohydrates and protein along with a little fat, vitamins and minerals makes a balanced diet.

Food item	Food component
Rice	Starch

Text Book

Make your diet a balanced one

Taking green salads and vegetables every day. Taking foods like cereals, pulses, milk etc. adequately.
Taking a bit of fat (oil, ghee, Butter, etc)
Don't Forget to supplement your daily diet with green salads & vegetables.

Balanced diet is cheap indeed:

Scientists have found out that a balanced diet need not necessarily costly. Everyone can afford it even the poor. If a person eats dal, rice, rotis, —

Balanced Diet.

green vegetable, little oil and all the food requirements of the body are fulfilled. Just balancing out diet with different kinds of foods is not enough. It should be cooked in a proper way. You know many nutrients are lost by over cooking re-heating many times, washing the vegetable after cutting them into small pieces.

Think: Is your mid-day-meal a balanced one? write your observations and display them in bulletin board.

Do you know which foods are to be eaten moderately, adequately, plenty & sparingly?

- Foods like cereals, pulses, milk etc. should be taken adequately.
- Fruit, leafy vegetables and other vegetables should be used in plenty.
- cooking oils & animals foods should be used moderately.
- Vanaspathi, ghee, Butter, cheese must be used sparingly.

Assignment: Prepare a balanced diet chart.

Cashew nuts

Do you know

fruits like dates, Plums, raisins, nuts etc also keep us healthy.

LESSON PLAN-08

Preliminary Information

Name of the Student Teacher :-

Subject :- physical science

Unit :- Food components

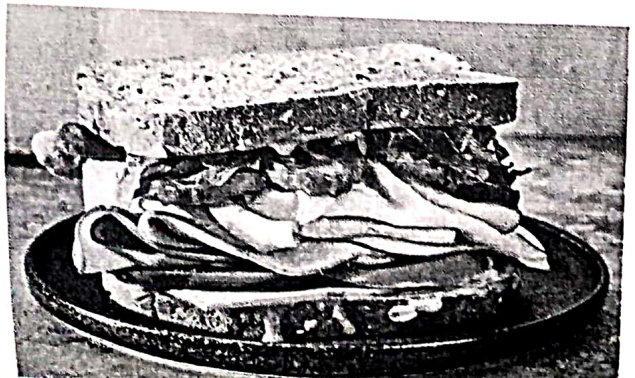
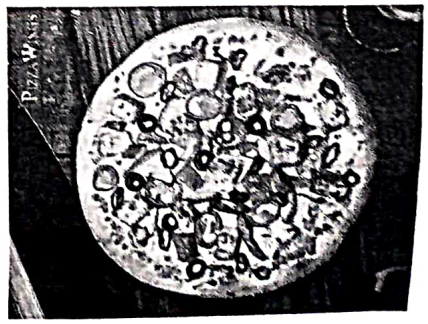
Topic :- Junk foods

School :- Kavya High School

Reg NO :-

class :- VII

Time :- 40 min

Teaching points	Teaching Strategies	TLM
Avoid Junk Foods	**Avoid Junk food :-** If you are eating only pizzas and sandwiches daily, what will happen? Your body is being deprived of the other food substances. Junk food causes damages to our digestive system. It is better to avoid eating junk food. Discuss in groups or collect information about junk food. In what way are they harmful to us?  	Text book pizza Sandwhich pictures

Junk foods

History of food and Nutrition

Text book

Pictures

Charts

Food habits of the people depend upon climatic conditions and cultural practices of the particular place. We eat rice in large quantities but people living in north India eat Chapathies as a daily food. why? Because wheat is grown widely in that region. The way of cooking and eating food also reflects the cultural practices of people.

History of food & Nutrion:

Until about 170 years ago there was little scientific knowledge in the west about west nutrition. The founder of modern science of Nutrition was frechman named Lavorsier (1743) to 1793) whose contribution paved new ways to nutrition research. In the year 1752 James Lind discovered "scurvy" which would be cured or prevented by eating fresh fruits & vegetables. It was known that diseases could be cured by eating certain kinds of foods. In 19th century it was known that the body obtains three substances namely proteins fats & carbohydrates from the food

LESSON PLAN - 09

Preliminary Information :-

Name of student teacher :-

Reg NO :-

Subject :- physical Science

class :- VII

Unit :- Motion & Time

Time :- 40 min

Topic :- Regular and Irregular motion

School :- Kavya High School

Teaching points	Teaching Strategies	TLM
Uniform and non-uniform motion	**Uniform and Non-uniform motion** A body is said to be in motion if its ~~position~~ position keeps on changing with time (with respect to the observer). But in our daily life we experience certain motion in which the change in position of objects remains the same for a time interval. In some other motion the change in position of an object will not be the same for a given time interval. Imagine the movement of hands in a wall clock and the movement of a butterfly in a garden. In these two cases, hands of wall clock and the butterfly are in motion. They change their positions with time.	Text book watch

Teaching points	Teaching Strategies	TLM
Regular and irregular motion.		Text book

Time is secinel	Distance Travelled
0	0 m
10	150 m
20	300 m
30	450 m
40	600 m

CAR-A

Pictures

1. which car has travelled equal distance in equal intervals of time?
2. which car has travelled unequal distances in equal intervals of time?

Obviously we notice that for car-A, the change in position in every 10 seconel is 150 m.

what difference do you find in the movement of ~~the~~ butterfly?

In which case is the change of position with time constant?

we observe that in case of the wall clock change in position of minute hand is the same for every minute.

How do we know this? measuring the angle between two positions of the ~~tim~~ minute hand is the way. But in the case of the butterfly, the change in its position is not constant while it is flying from one flower to another in the garden.

charts

M.T.W

Teaching Points	Teaching Strategies	TLM
Project	**Let us do - 3 :** observing time and distance value. Observe the following tables, showing distances travelled by two different cars for different intervals of time.	Text Book

Time in seconds	Distance Travelled
0	0m
10	50 m
20	90 m
30	180 m
40	250 m

car - B

but for car - B the change in position is not constant, for 1st to second, it is 50 m, for 2nd to seconds, it is 40 m. for 3rd to 3s it is 90m & for 4th to sec it is 50m
Thus motion of car A - is uniform & motion of car B is non-uniform

Let us do - 4

Identifying Uniform & Non-uniform motion :

Identify uniform & non-uniform motion among the following examples & mark uniform as (U) & non-uniform as (NU)

1. Movement of hands of a clock. ( )
2. A boy cycling in a crowded place. ( )
3. Movement of a housefly. ( )
4. The fan in an air cooler running at fixed speed. ( )
5. A train entering into a railway station. ( )
6. Kite in the air. ( )
7. Rotation of Earth. ( )

Assignments : ① what is Uniform motion & give an Example ?
② what is non-Uniform motion an give an Example ?

LESSON PLAN - 10

Preliminary Information :

Name of the Student Teacher :-

Subject :- physical science

Unit :- Motion & Time

Topic :- Introduction of Motion

School :- Kavya high school

Reg NO :-

class :- VII

Time :- 40 min

Teaching Point	Teaching Strategies	TLM
Motion Introduction	Motion is a common experience in our life we observe birds flying in air, buses, autos, cars, bullock carts, moving on roads, trains on railway tracks and many other objects around us in motion. Apart from observing motion of objects around us, we ourselves experience motion while we are walking, running, playing, riding a bicycle etc, Similarly we observe many objects like trees, buildings, display boards, electric poles etc, at rest while we walk to school. other than running, playing and walking when do you experience motion? Prepare a list. when we sit inside a moving bus or train we observe that the objects like trees, buildings electric poles etc, appear to be moving, Are these trees, buildings, electric poles etc, really in motion or at rest?	Text book

Motion and Rest

Meaning of motion and rest.

Motion and Rest:

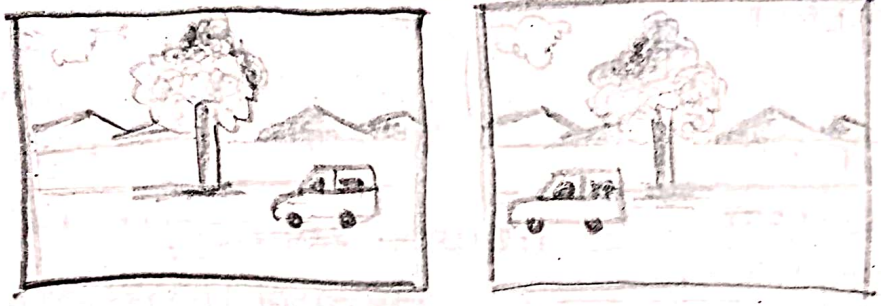


Fig: 1 Fig: 2

- What difference do you notice in the position of the car?
- What difference do you notice in the position of the tree.
- Why has this difference occurred?
- It is because the tree moved to the right of the car or the car moved to the left of the tree?

We know that the position of the car has changed with respect to the tree in 2 seconds. But there is no change in the position of the tree with respect to its surroundings.

An object is said to be in motion if it changes its position with respect to its surroundings in a given time.

An object is said to be at rest if there is no change in its position with respect to its surroundings in a given time.

Assignment:

Define motion?

Text book

pictures.

charts

LESSON PLAN - 11

Preliminary Information

Name of the student Teacher :

Subject :- Physical Science

Unit :- 2. Playing with magnet

Topic :- concept of magnet & story

School :- Kavya High School

Reg no :-

Class :- VI

Time :- 40 min

2. Playing with Magnets:

I. Conceptual Understanding

The Student will

1. give an example for magnetic & non magnetic substances.
2. Describe the differences between natural & artificial magnets.
3. Describe the story of 'Invention of magnets".
4. Identify "Earth is also a magnet".
5. Explain that every magnet contain 2 poles.

II. Asking question & making hypothesis:

The student will.

1. Ask question for knowing about "Earth is also a magnet".
2. Imagine at which part ring magnet poles are located.

III. Experimentation & field Investigation:

The Student will

1. Do an experiment to find out magnetic & non magnetic substances in our surroundings.
2. Describe the method of making game tool using magnet.
3. Describe how magnet is prepared with the of an experiment.

IV. Information skills and projects:

The Student will

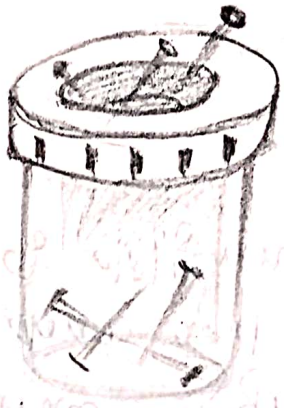
1. prepare a report on which conditions magnet are used in our daily life.
2. prepare a report on different shapes of magnets, collect information from internet.

V. communication through drawing and model making:

The student will

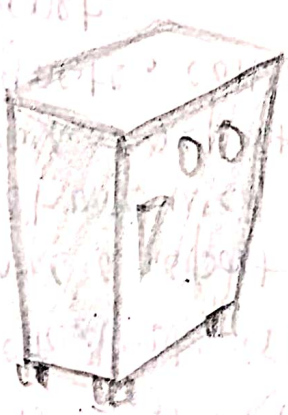
1. draw 'magnets' and identify poles
2. draw and identify the poles of different shapes of magnets.

Teaching Point	Teaching Strategies	TLM
Motivation	All of you would have seen a pin holder in your school office (see fig 1(a)). You may have seen that in this pin holder some pins are attached to the top or cap.	Text Book



- Why do the pin get attached to the cap of the pin holder?
- what could be there in that cap?
- Does it attract object other than pins? NO

You migh have seen some metal stickers stuck to the door of an iron almirah or a refrigerator (see fig 1 (b))



- what's there in those stickers which makes them stick to the iron doors? magnet
- Do they stick to wooden doors or plastic door too? no.

Teaching points

Teaching Strategies

TLM

Story of magnet

Story of magnet :-

Around 2500 years ago there lived an old shepherd named magnus. He used to take his goats and sheep to the hills for grazing. He always carried a wooden stick which had an iron cap on its lower end. One day, while his goats were grazing, magnus dipped his stick into a spring of water & poked at the pebbles & stones at the bottom with it suddenly he felt something pulling his stick. when he took it out of water, he saw a stone stuck to the iron cap. The ston which magnus pulled out called as Lode stone. It is a natural magnet & possesses the property of attracting iron.

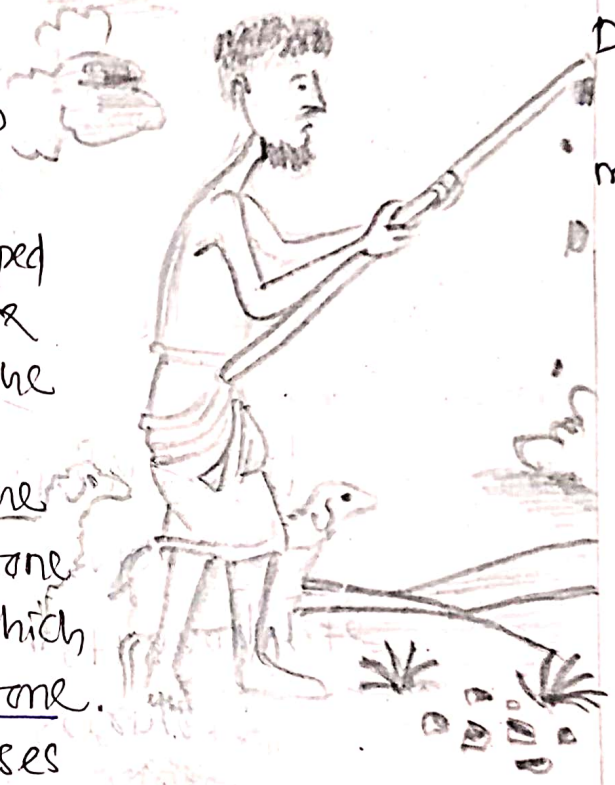


Diagram of magnets

The magnets we discussed are not natural magnets. These magnets are man-made magnets.

Assignments : what is magnet ?

LESSON PLAN - 12

Preliminary Information

Name of the Student Teacher :-

Student : physical science

Unit :- 2. playing with magnets

Topic :- magnetic compass

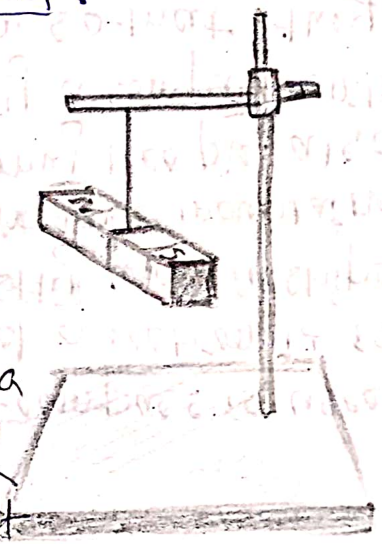
School :- Kavya High school

Reg NO :-

class : VI

Time :- 40 min

Teaching points/content	Teaching Strategies	TLM
Magnetic compass directional property Magnetic compass Discussion	Q. what are poles of magnet ? **Activity-5** finding direction with a bar magnet. Suspend the bar magnet freely with the help of a thread tied around its center as shown in (fig.4.) Does the magnet remain stationary? wait for some time what do you find now? You will notice that the magnet finally takes a position in the North-South direction. mark the end that points towards the North magnet and again wait for some time. • where does the coloured portion come to rest? • Repeat this experiment at another place. what do you observe? Magets always come to rest in the north-south direction. In each case the marked end points towards North. This end is known as north pole of the magnet. The other end, which points towards the south is known as south pole of the magnet. This property of magnet is called directional Property It is exhibited only by magnets. we use this property to make the magnetic compass.	Magnet thread, stand pictures.



Teaching points	Teaching Strategies	TLM
Magnetic compass Topic Explain	**Magnetic compass.** A compass is usually a small box with a glass covering it. A magnetized needle is pivoted inside the box in such away that it can rotate freely. The compass also has a dial with directions marked on it. The compass is kept at the place where we wish to know the direction. Its needle indicates the North-South direction when it comes to rest. The compass is then rotated until the north and south marked on the dial ~~the north & south mar~~ are exactly below the two ends of the needle. To identify the North pole of the magnet, needle, It is usually painted in a different colour (see Fig. 5). The we identify north & south at that place. After that we can also identify the East & west b/w them.  A compass is used to find direction It is mostly used in ships & Airplane mountaineers & army people also carry a compass with them so that they do not lose their way in an unknown place. **Assignment:** what is directional property.	Text book magnet Pictures

LESSON PLAN - 13

Preliminary Information :-

Name of the Student Teacher :-

Subject :- physical Science

Unit :- 2 playing with magnet

Topic :- Shapes of Magnet

School :- Kanya High school

Reg No :-

class :- VI

Time :- 40min

Teaching Points/content

Teaching Strategies

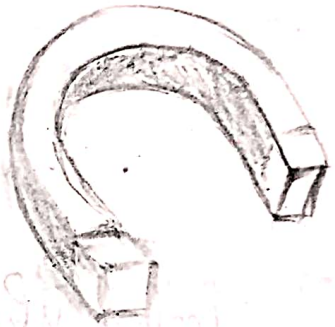
TLM

Shapes of magnets Drawing the Diagram of magnetic & non-magnetic materials.

Magnets different shapes:

The magnets we see and use in our daily life possess different shapes. Some of the usual shapes of magnets are ~~known~~ shown in Fig. 2.

Bar magnet



Horse shoe magnet

Ring magnet

Disc magnet

Think: Can we make a magnet in a required shape?

.. magnet are made of steel or iron. However, special alloys of iron nickel, cobalt, and aluminum can be made into powerful magnets.

Activity-2 Finding materials attracted by magnets

Take a bar maget, nail jump-clip. plastic scale, a piece of glass, key paper, iron bolt, pen, blade, Pencil, Knife, Stainless steel spoon, Piece of chalk, wood touch the magnet to each item. Does the magnet attract every object. observe and record your observation duly mentioning the name of the material of which the object is made in table.1

Name of the object	Material of which the object is made (Iron/ plastic / alluminum/wood glass/ any other)	Attracted by magnet (Yes / NO)
Jump clip	Iron	Yes
Scale	plastic	NO

Teaching (Points/content)

Teaching Strategies

TLM

- which materials are attracted by a magnet. iron
- which materials are not ~~attracted~~ attracted by a magnet? Plastic, Paper

The materials that are attracted by magnets are called magnetic materials. The materials that are not attracted by magnets are called non-magnetic materials.

- Give your own examples for magnetic materials.
- Give your own examples for non-magnetic materials.

Magnets have the property of attracting materials like, Iron. Based on this property of magnets they can be used to separate some mixtures.

Activity - 3 can you separate iron filings from soil?

Take a bar magnet & roll it in the soil in your school ground for some time pull out the magnet. what do you find does anything get attracted to the magnet?

You may find some dark particles soil sticking to the magnet.

Assignment: ① which of the material are magnetic materials?

② which of the materials are non-magnetic materials?

LESSON PLAN - 14

Preliminary Information :-

Name of the Student Teacher :-

Subject :- physical Science

Unit :- 2. Acid & Base

Topic :- Acid Rains

School :- Sri Karga Highschool

Reg NO :-

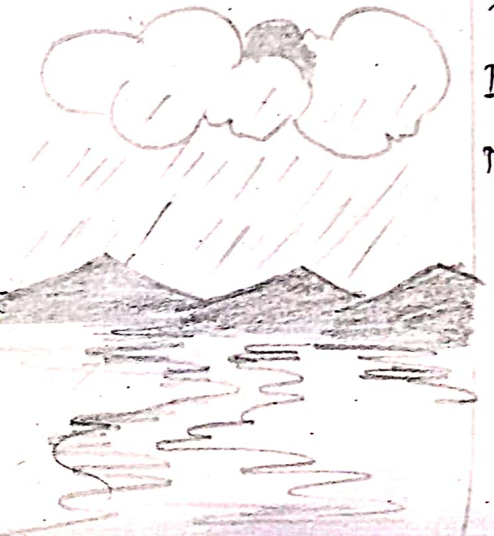
Class :- VII

Time :- 40 min

Teaching points / content)	Teaching Strategies	TLM
Acid Rains	Q. Why are the inner sides of vessels made up of brass and copper coated ? Q. Have you heard about Acid Rains ?	

Have you heard about Acid Rains ?

Do you know what acid rains are? Acid rains are the combination of carbonic acid, sulphuric acid & Nitric acid with rain water. Acid rains causes damages to buildings. monuments like tajmahal & to our skin. Industrial waste gases contain sulphur dioxide, Nitrogen oxide, carbon dioxide. when they get mixed with morsture they change to acids. Acid rains are also witnessed in our state in visakhapatnam district. can you guess the reason for acid rain in visakhapatnam ?



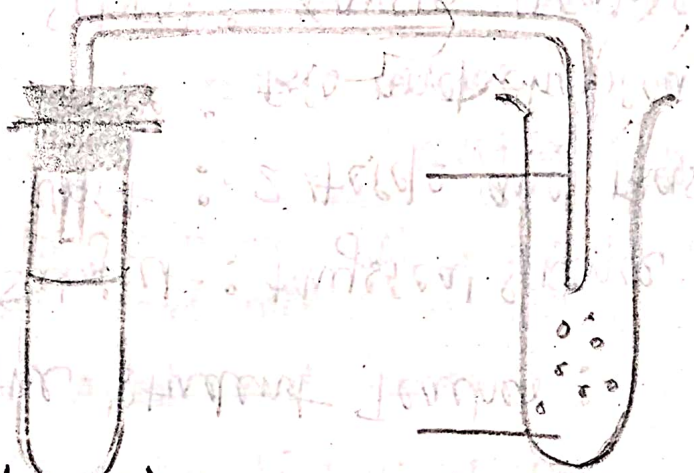
photos of Acid rains Indications News paper

Assignment: How to form the acid rains.

Acid rains

Let us do -

Take lemon juice in two test tubes and add some piece of marble to one test tube and egg shells to another.
what do you observe?
Bring a burning match stick near the test tube.
what happens?
These are due to release of some gas.
Pass the gas into lime water. what happens?
can you see the formation of precipitation?



Lime water turned milky white is it carbon dioxide?
Now try to write the properties of acids an base from your observations in the above experiments.

LESSON PLAN- 15

Preliminary Information :-

Name of the Student Teacher :.

Subject : physical Science

Unit :- 2 Acids and Bases

Topic :- Bio and chemical fertilizers Salts

School :- Kavya High school

Reg NO :-

Class :- VII

Time :- 40 min

Teaching points	Teaching Strategies	TLM

Lesson Name : 2. Acids and Bases

Conceptual Understanding :

1. To know the differences between Acids and bases.
2. To give examples of Acid and Bases.
3. To give examples of Natural indicators,
4. To determine the concepts of Neutralization.

Asking question and making hypothesis :

1. Students raise question on why acid rain falls not only in industrial area but also other places.
2. To imagine what happens if acids are present on land.
3. To ask what happens if bases are high in water.

Experimentation and field investigation :

1. To conduct Experiment and prove that when soap water & lime water are mixed colour is changed.
2. To identify Acids and bases through experiments by using red, blue litmus papers.

Teaching points	Teaching Strategies	TLM
Bio and Chemical fertilizers Salts.	**Fertile land- organic manures :-** In recent years the use of chemical fertilizers has increased. Through the use of chemical fertilizers increase the production of crops, it changes the nature of the soil. Some fertilizer increase the acidity of the soil and some changes its basicity. Thus use of natural organic manure is becoming more perfected these days.  **Salts :-** we have seen in the process of neutralization both the acid and the basic qualities are changed. Actually when an acid and a base are mixed a chemical reaction takes place and a salt is produced. For example by neutralizing Hydrochloric acid solution with caustic soda (sodium Hydroxide) solution, a salt sodium chloride is formed. Formation of a salt depends on the type of an acid and a base	Text book Urea Salts

Let us do :-

Test the following salt substances with red litmus and blue litmus papers. Record your observations in the table.

Salts which change blue litmus to red are acidic salts and salts which change red litmus to blue are basic salts. Some salts affect neither blue nor red litmus papers. These are called neutral salts.

Let us do :-

Collect some salt substances with the help of your teacher, make their salt solutions. Test the salt solutns with blue litmus & red litmus papers. Classify these salts as per your observation in the given table.

Why is our sweat salty?

Our body needs many type of salts. We lose salts through excretion. So sweat is salty.

Do you Know?

Uses of some acids, bases and salts.

Teaching points

Teaching strategies

TLM

ACIDS	BASES	SALTS
Preparation of Pickles- Acetic Acid	Removing of grease stain Ammonium Hydroxide	Food Preservation- Common salt
Preparation of Puli-hora- citric Acid	Soap contains Potassium Hydroxide & Sodium Hydroxide	wash clothes washing soda
cold drinks - carbonic Acid		
Removal of Ink Stain- Oxalic Acid	Bleaching powder contains -	cold drinks
Manures, Batteries- Sulphuric Acid	calcium Hydroxide	Cake - Baking soda
Medicine, Dyes - Hydrochloric Acid	Fire extinguisher contains -	
Explosives - Nitric Acid	Aluminium Hydroxide	

Assignment :- ① How do you feel about Nature?

② collect different flowers and prepare their Natural indicators with the help of their filter paper.

LESSON PLAN -16

Preliminary Information

Name of the Student Teacher :-

Subject :- Physical Science

Unit :- Acids & Bases

Topic :- Tastes, Sour, Sweet bitter.

School :- Kanya High School

Reg No :-

class :- VII

Time :- 40 min

Teaching Points	Teaching strategies	TLM
Tastes Sour Sweet bitter	Q. Do you experiences any other tastes in your daily life.? Q. Do you find any difference in the taste of a raw and a ripe fruit? To day we are going to discuss about tastes, sour sweet bitter.?	Text book
Announcement of Topic	In our daily life we used a lot of materials. Even our food has a lot of variety. Different items also have different taste. In preparing and storing food we take a lots of care. In this chapter we would try to understand the reason for some of them. Let us first think over the following questions related to what we eat. • what sort of food do we eat? • Are all the items alike? for example do they have the same colour, taste etc. • In what ways are they different? • what kind of tastes do food substances we eat have? fruits, vegetables and other food substances have different tastes. write the names of food substances that you have ~~different tastes~~. Know in the appropriate column, based on their taste.	vegetables

S.NO	SWEET	SOUR	BITTER	SALTY	SPICY
1.	Sugar	Lemon juice	Bitter gourd	Common salt	Red mirchi
2.	Sugar cane	orange	Buttermilk	Lime water	
3.	Cool Drink			Lemon juice	Kheera
4	mango	grapes	Tomatos	Pine apple	
5.			Mineral water	salt water.	
6.					

Text book

fruits

- Do you experience any other testes in your daily life? write them below.

_____

_____

_____

_____

- Do you find any difference in the taste of a raw and a ripe fruit.?

- Do Some substances change their taste when cooked ?
- Do substances changes their taste when added to some other substances ?
- Add salt to lemon juice. How do the two together taste now.
- Add sugar to lemon juice what change do you notice in the taste ?
- Is there any difference in the taste without sugar?

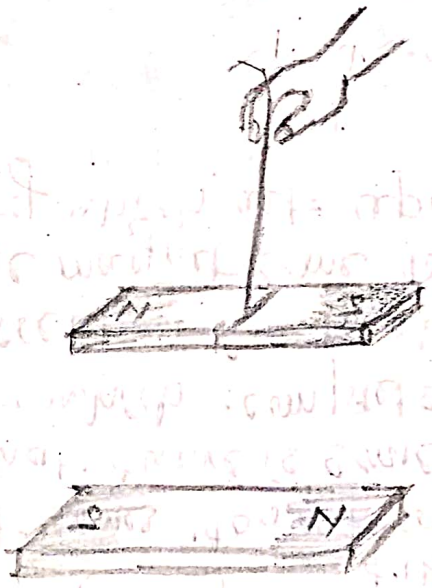
Assignment :

find any difference in the taste of sour and a ripe fruit.

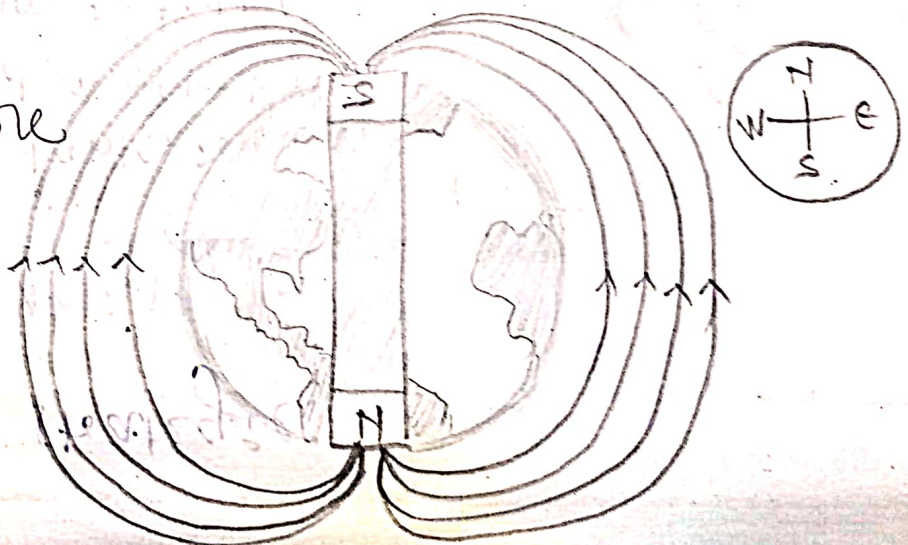
LESSON PLAN - 17

Preliminary Information :-

Subject :- physical Science
Unit :- 2- playing with magnets
Topic :- Earth as a magnet
School :- Kavya High School
Reg No :-
class :- VI
Time :- 40 min

Teaching point/content	Teaching strategies	TLM
Earth as a magnet	**Discussion with Activity :-** Place a bar magnet on table in any direction. Suspend another bar magnet over it as shown in fig. 7. The suspended bar magnet should be fairly close to the one kept on the table. Observe in which direction the suspended bar magnet forms to rest. Change the direction of the bar magnet based on the table. Do you find any change in the direction of suspended bar magnet? The suspended bar magnet always comes to rest in the direction of the bar magnet placed on the table. But the north pole of the suspended - 	Chart Text book

Teaching points/content)	Teaching Strategies	TLM
Earth as a magnet Discussion	bar magnet points toward the south pole of the bar magnet placed on the table and south pole of the suspended bar magnet points towards the north pole of the bar magnet placed on the table. • What happen if you remove the bar magnet placed on the table? on this case the suspended magnet comes to rest in the North-south direction. we can say that there is some magnet below the suspended bar magnet which compels it to come to rest in that particular direction (as in above two cases). where does this invisible magnet come from? The Earth possesses magnetic property which acts upon the suspended bar magnet. Assignment: where does this invisible magnet comes from?	



LESSON PLAN - 18

Preliminary Information :-

Name of the Student teacher :-

Subject : physical Science

Unit : 2- playing with magnet

Topic :- Identifying Activity

School :- Kavya High School

Reg NO :-

class :- VI

Time :- 40 min

Teaching points/ content)	Teaching Strategies	TLM

Identify the Activity-8

Discussion :- finding out whether the given object is a magnet or not.

You have been given three object of same size, shape and colour and a bar magnet. You have to decide which one among them is a magnet which is not a magnet but made up of a magnetic material or a non-magnetic material. Bring three objects one after the other close to one pole of the bar magnet and observe whether they get attracted or repelled or not attracted. Record your observation in table 2. After that bring those objects close to the other pole of the bar magne in the same way an record your observation.

Text book

Table-2

observation	object-1 Attracted/Repelled Not Attracted	object-2 Attracted/ Repelled Not Attracted	object-3 Attracted/ Repelled Not Attracted
changes observed brought close to one pole of the bar magnet			
change observed when brought close to other pole of the bar magnet.			

Teaching points	Teaching Strategies	TLM
	What do you conclude by comparing the recorded observation ? By the above observation we concluded the following :- If an object is attracted by one pole of the bar magnet and repelled by the its other pole, then you can say that it is a magnet. If an object is attracted by both the poles of a bar magnet and not repelled by any pole, than you can say that it is not a magnet but a magnetic substance. If an object is neither attracted by magnet nor repelled by it, then you can say that it is neither a magnet nor a magnetic substance. Assignment : List out the which of the objects are magnet or not in your classroom. ?	Text book

LESSON PLAN - 19

Preliminary Information

Name of the Student Teaching :-

Subject : Physical Science

Unit :- 2 - Playing with magnets

Topic :- Make your own magnet

School :-

Reg NO :-

class :- VI

Time :- 40 min

Teaching points/ content)	Teaching Strategies	TLM

Make your own magnet

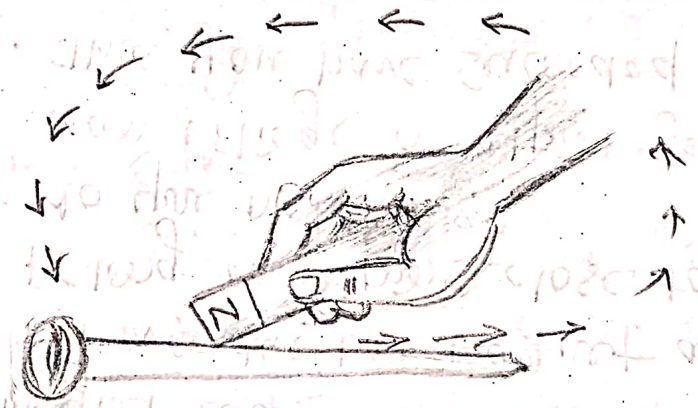
Make your own magnettie :-

Take an iron nail and place it on a table make sure that the nail neither attract nor repels iron pins or iron filings. Take bar magnet and place one of its pole near one edge of the nail - you reach the other end. Then left the bar magnet, bring it the first end of the nail and move alone the length again as shown in fig. Repeat this process 20-30 times. Always move the the magnet in one direction, do the drag the magnet back and forth.

→ Now remove the bar magnet and bring some iron filing or alpins close to the nail. what do you notice. ?

→ The iron filings or alpins get attracted by the nail. Thus you have succeded :

→ In making your own magnet by magnetizing the nail. what will happen if the nail is now suspended freely.



Assignment :

Prepare toy using magnets and write the procedure of preparation briefly.

LESSON PLAN - 20

Preliminary Information :

Name of the Student Teacher :-

Subject : physical Science

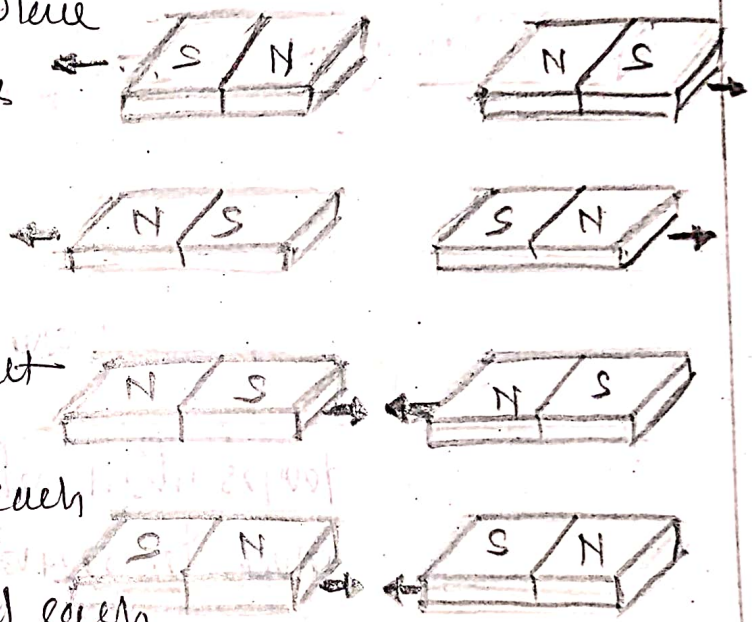
Unit :- 2. Playing with magnets

Topic :- Properties of poles

School :- Kavya High school

class :-

Time : 40 min.

Teaching points/content	Teaching strategies	TLM
properties of poles	**Attraction and Between two magnets** Take two similar magnets, place the in four different ways as shown in fig.(6) and record your observations.  What do you observe ? when do the magnets attract each other ? when do the magnets repel each other ? You notice that two poles repel each other and unlike poles attract each other. **Earth is a magnet** We saw that a suspended bar magnet always comes to rest in the North-South direction. • Why does it come to rest in that particular direction only? • what force is acting on it ?	Text Book