

CERTIFICATE

III Sem
Physical Science

This is to certify that Mr./Mrs./Kum.....

Class No:..... of SMS&SMCMR College of

Education visited our institution and conducted the required activities / collected the

required data regarding to.....

practicum as a part of B.Ed. Course work stipulated by the Government of Andhra Pradesh

and approved by Acharya Nagarjuna University.

Signature of the Concerned Teacher

Signature of the Head of the Institution:

Name:.....
Name: DS
Seal: DS

This is to certify that Mr./Mrs./Kum.....

Class No:..... Regd No:..... has completed the required activities

regarding to.....practicum

towards the fulfillment of B.Ed. Course work stipulated by the Government of Andhra

Pradesh and approved by Acharya Nagarjuna University.

This record is assessed.

Lecturer in-charge
SMS&SMCMR College of Education
GUNTUR.

Sno.	Class	Topic	Pg. Nos
1.	VII	Motion and types of motions.	1-8
2.	VII	Concave Mirror	9-13
3.	VII	Confirmation of presence of food components	14-18
4.	VII	Changing the colour of animal fibre	19-23
5.	VII	Animal fibre	24-27
6.	VII	Time & Speed	28-32
7.	VII	Heat & Temperature	33-37
8.	VII	Air	38-42
9.	VII	Measurement of Rainfall	43-46
10.	VII	Heat - A form of energy	47-50
11.	VII	Magnet	51-54
12.	VII	Make your own Magnet	55-58
13.	VII	Forms of Water	59-62
14.	VII	Water Cycle	63-66
15.	VII	Transparency	67-70

S.No.	Class	Topic	Pg.Nos
16.	VI	Solubles and Insolubles	71-74
17.	VI	Crystallization	75-78
18.	VI	Simple Electric Circuit	79-82
19.	VI	Sublimation	83-86
20.	VI	Chromatography	87-90

Macro Teaching Lesson Plan - I

Preliminary Information:-

Name of the Student-Teacher :- RAnusha

Subject :- Physical Science

Class :- VII

Unit :- Motion and Time

Topic :- Motion and Types of Motions.

Time :- 45 min.

Aim:-

Understanding the content:- Students will be able to understand the concept of Motion and its types etc with few examples.

Steps / Content	Teaching & Learning activities	B.B.W.	T. L.M.
* Introduction * Objectives of Pre-concepts.	<p><u>Teacher</u>:- Good Morning students this are you all's</p> <p><u>Students</u>:- Good Morning Ma'am.</p> <p><u>Teacher</u>:- Children, Imagine you are travelling by a car. If you look outside the window of your car, you will notice that you are in motion in relation of light posts, houses, shops,</p>		

Steps / Content

Concept- Motion is caused by the unbalanced force acting on an Object at rest.

- * Announcement of the topic
- * Demonstration and Discussion.
- Reading

Teaching & Learning Activities

Trees, etc. ~~The~~
 * Now what is this changing of position called?
Students :- - - - Moving of an object.
Teacher :- Well, almost up there, what is the term we use there?
Students :- - - -

- * Children, Today we are going to learn the concept of Motion.
- Definition- Motion is caused by the unbalanced force acting on an object at rest.

B.B.W.

* Name of the topic:- Motion

T: L.M.

Definition- Motion is caused by the unbalanced force acting on an object at rest.

Steps / Content

* Keywords.

* Activities for Understanding the Concept.

Teaching & Learning Activities

-x Here we have few hard words, now we are going to discuss about them.

- 1) Translatory Motion.
- 2) Rectilinear Motion.
- 3) Curvilinear Motion.
- 4) Rotatory Motion.
- 5) Oscillatory or Vibratory Motion
- 6) Periodic Motion

1) Translatory Motion:- An object is permanently displaced from its original position.
eg- A vehicle moving on a straight Road.

B.B.W

- 1) Translatory Motion.
- 2) Rectilinear Motion.
- 3) Curvilinear Motion.
- 4) Rotatory Motion.
- 5) Oscillatory or Vibratory Motion
- 6) Periodic Motion.

T.L.M.

* Showing the video of Translatory Motion on smart board with explanation

Steps/Content	Teaching & Learning Activities	B. B. W.	T. L. M.
<p>* Discussion on the topic</p>	<p>* Rotatory Motion:- The motion of hands of a clock, & rotating blades of a windmill are a ceiling fan</p> <p>* Teacher will be asking students few questions about the topic and can estimate how much students have understood.</p>	<p>* Rotatory Motion:- The motion of an object is said to be rotatory if the motion of all particles of the object is along a circular path with respect to an imaginary line called the axis of rotation</p>	<p>* Showing the video of Rotatory Motion on Smart Board with explanation.</p> <p>* Black Board</p>

Steps Content	Teaching & Learning Activities	B. B.W.	T.L.M.
* Few Examples or Questions	<p><u>Example 11-</u> A boy starts from home, goes to a shop, which is 2 km away, buys things & comes back in an hour. What is the distance travelled by him, his displacement from the starting point, & the speed with which he travels?</p>	<p><u>Solution:-</u> Distance covered by the boy from his home to the shop = 2 km</p> <p>Distance covered while coming back home = 2 km</p> <p>So, the total distance covered by the boy = $2 + 2 = 4$ km</p> <p>Since the final position positions are the same, displacement of the boy is 0 km.</p> <p>Speed = $\frac{\text{Distance travelled}}{\text{Time taken}}$</p> <p>$= \frac{4}{1} = 4 \text{ km/h}$</p>	* Black Board.

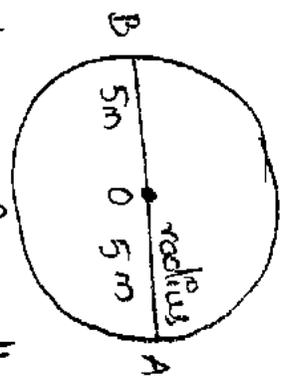
Steps / Content

Teaching & Learning Activities

B. B. U.

D. L. M.

Example 2:- A girl runs along a circular track of radius 5m starting from point A. What will be the distance travelled by her & speed if she comes back to the initial position in 300s & if she stops halfway at B in 100s?



Solution:- Since the girl comes back to the original position, her distance would be the circumference of the circle, which is

$$2 \times \pi \times r = 2 \times 3.14 \times 5 = 31.4 \text{ m}$$

Speed = Distance travelled / time taken

$$= 31.4 / 300 = 0.1046 \text{ m/s}$$

b, If the girl stops halfway through her distance would be half

Steps / Content	Teaching & Learning Activities	<p>8.8.10</p> <p>the circumference, which is equal to $(2 \times \pi \times r) / 2$</p> $= 3.14 \times 5 = 15.7 \text{ m}$ <p>Speed = Distance travelled / time taken</p> $= 15.7 / 100$ $= 0.157 \text{ m/s}$	P. L.M.
<p>* Conclusion:</p>	<p>Students today we have seen the meaning of motion, types of motions and few questions were solved with students and also students were asked few questions at the end of the class.</p>		

Macro Teaching

Lesson Plan - II

Preliminary Information:-

Name of the Student-Teacher :- R. Anusha

Subject :- Physical Science

Class :- VII

Unit :- Reflection of Light

Topic :- Concave Mirror

Time :- 45 min

Aim:-

Understanding the content - Students will be able to understand the concept of Concave Mirror and the rules of drawing images formed by a Concave mirror.

Steps/Content

Teachings Learning Activities

B.B.W.

T.L.M.

* Introduction

Teacher - Good Morning, Students
Students - Good Morning Ma'am

* Objectives of Pre-Concepts

Teacher - What kind of mirrors do you think a dentist would require to examine teeth?
Why is this type of mirror used?
Students -

Steps Content	Teaching & Learning Activities	B.B.W.	P.L.M.
<p>* Announcement of the topic</p> <p>* Demonstration of the topic</p> <p>→ Reading.</p> <p>→ Keywords</p> <p>→ Activities for Understanding the concept</p>	<p>* Today we are going to learn the concept of <u>Concave Mirror</u></p> <p><u>Definition</u> - Rays travelling <u>parallel</u> to the <u>principal axis</u>, after reflection, meet or converge at a point on the <u>principal axis</u>. This point is called the <u>principal focus</u> of a <u>concave mirror</u>.</p> <ul style="list-style-type: none"> * Concave * Converging * Reflection * Incident Ray * Parallel axis * Corresponding <p>→ Rules of drawing images formed by a <u>concave mirror</u>.</p> <p>Children, now we are going to discuss</p>	<p>B.B.W.</p> <p>* Name of the topic - <u>Concave Mirror</u>.</p> <p><u>Definition</u></p> <p>Same ←</p> <ul style="list-style-type: none"> * Concave * Converging * Reflection * Incident Ray * Parallel axis * Corresponding 	<p>P.L.M.</p>

Steps/Content

Teaching & Learning Activities

few rules to draw the images by a concave mirror.

Rule 1- A ray of light travelling parallel to the principal axis passes through the principal focus after reflection.

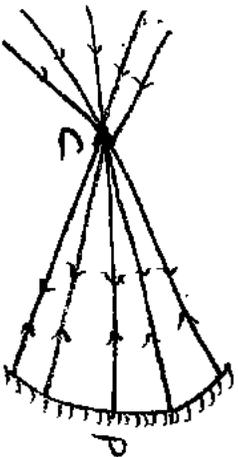
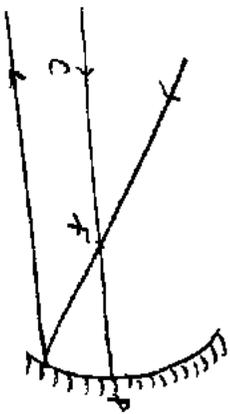
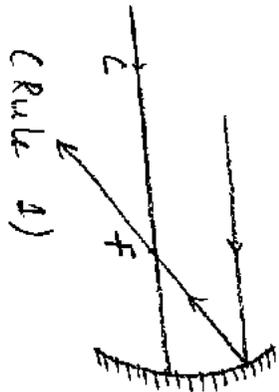
Rule 2- A ray of light passing through the focus travels parallel to the principal axis after reflection.

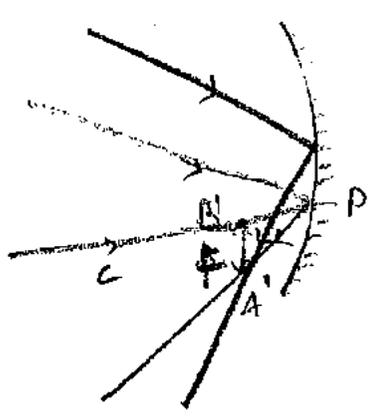
Rule 3- A ray of light passing through the centre of curvature travels back along its original path after reflection.

Rule 4- A ray of light incident at the pole is reflected at the same angle with the principal axis.

B. B. W.

7.1.11.



Steps / Content	Teaching & Learning Activities	B.B.U.D.	O.L.M.
<p>* Discussion on the topic</p> <p>* Few Examples for Questions.</p> <p>* Conclusion</p>	<p>* Teacher will ask students few question to estimate how much they have understood</p> <p>Ex- when the object is placed far off or at infinity, the image will be formed at the focus (F). The nature of the image will be real, inverted, & diminished.</p> <p>* Students today we have seen the meaning & rules and few examples of concave mirror, And were asked few questions at the end of the class.</p>		

Macro Teaching Lesson Plan - 3

Preliminary Information:-

Name of the Student - Teacher - R. Anusha

Subject - Physical Science

Class - VII

Unit - Food Components

Topic - Confirmation of presence of food components.

Time - 45 min.

Apni:

Understanding

Concept of

Steps / Content

* Introduction

* Objectives of
the - Concepts.

* Announcement
of the topic

the content - Students will be able to understand the

Confirmation of presence of food components.

B.B.U.

T.L.M.

Teaching & Learning Activities
Good Morning, Students.

Children, * Suppose you don't get food for lunch how do you feel?

* Why should we take food? What

are the components in it?

* What skill you do or feel, if you don't get anything for

more than a day.

* Today, we are going to learn about food components and many more

* Name of the topic - Food components & Confirmation of presence of food components.

Steps / Content	Teaching & Learning Activities	B.B.W	T.L.M
<p>* Demonstration & Discussion</p> <p>→ Reading</p> <p>→ Keywords</p> <p>* Activities for Understanding the Concept.</p>	<p>* Our food consists of Carbohydrates, Proteins, Fats, Vitamins & Minerals. Besides these, water and fibres are also present.</p> <p>* Carbohydrates</p> <p>* Fibres</p> <p>* Balanced Diet</p> <p>* Proteins</p> <p>* Fats</p> <p>* Constipation</p> <p>* Collect different types of food materials like milk, a potato, little quantity of oil, ghee. Take a sample of each food item in a test tube in a plate and test what are the quantities of fats, fibres, carbohydrates present.</p>	<p>* Carbohydrates</p> <p>* Fibres</p> <p>* Balanced Diet</p> <p>* Proteins</p> <p>* Fats</p> <p>* Constipation</p>	

Steps / Content	Teaching & Learning	Activities	B.B.U.	R.L.M.
<p>* Discussion on the topic</p> <p>* Few Examples on Experiments.</p>	<p>* Teacher will be asking few questions to students to estimate how much they have understood..</p>	<p>* Experiment 1:- Test for Starch.</p> <p>* Observe the change in colour. What do you find?</p> <p>* Experiment 2:- Test for fats.</p>	<p>* Take a sample of food item in the test tube. Add a few drops of dilute Iodine solution to the sample.</p>	<p>If the substance turns dark-blue or black it contains starch.</p>

Steps / Content	Teaching & Learning Activities	B.B.W.	R.L.M.
<p>* Conclusion</p>	<p>* Today students, we have seen the confirmation of presence of food components on different food items.</p>	<p>* Take a small quantity of each sample. Rub it gently on a piece of paper. If the paper turns brown -> solvent the substance contains fats.</p>	

Macro Teaching Lesson Plan - 4

Preliminary Information:-

Name of the Student Teacher :- R. Anusha

Subject :- Physical Science

Class :- VII

Unit :- Acids & Bases

Topic :- Changing the Colour

Time :- 45 min.

Aim:-

Understanding

the content :- Students will be able to understand the change concept of changing the colour with few experiments.

Steps / Content

Reaching & Learning Activities

B.B.W

T.L.M.

* Introduction

Good Morning Students

* Objectives of Pre-Concept.

* In our daily life we use a lot of materials. Even our food has a lot of variety. Different items also have different taste. In preparing & storing food we take a lot of care.

* Name of the topic = Colour Change.

* Announcement of the topic

* Today we are going to learn how colour changes in food items.

Steps / Content

- * Demonstration
- & Discussion.
- Reading
- Keywords
- * Activities for understanding the concept.

Reading & Learning Activities

- * We can notice that turmeric powder changes colour when soap water or lime water is added to it.
- * Indicator, Acid, Base, Red litmus, Blue litmus, Acidic Substance, Basic Substance, Neutral Substance, Salts, Neutralization, Acid Rain
- * Activity 1:-
Take some turmeric powder. Add a bit of water to it & prepare turmeric paste. Rub the turmeric paste on a white paper. Draw a flower

B.B.W.

- * Indicator
- * Acid
- * Base
- * Red litmus
- * Blue litmus
- * Acidic Substance
- * Basic Substance
- * Neutral Substance
- * Salts
- * Neutralization
- * Acid Rain.

R.L.M.

Steps / content	<p>Teaching & Learning Activities</p> <p>on that paper with a pencil. Colour the flowers with soap water using a brush.</p> <p>* Teacher will be asking students few ques. about the topic.</p> <p><u>Experiment:-</u> Preparation of lime water.</p>	B.B.W.	T.L.M.
<p>* Discussion on the topic.</p> <p>* Few examples on Experiments</p>		<p>* The colour of the paper changes</p> <p>Take half a beaker full of water. Add about 5gm of lime that we apply to betel leaves. Stir the beaker well & let it stand overnight. Filter this solution the following day. Use this filtrate in all experiments you perform</p>	

Steps / Content	Teaching & Learning Activities	B.B.U.	P.L.M.
* Conclusion.	* Students, today, we have learned the concept of how acids changes the colours.	<p>This solution should be transparent. The that turn blue litmus to red are acidic in nature. The substances that are soapy to touch & turn red litmus to blue are basic in nature.</p>	

Macro Teaching Lesson Plan - 5

Preliminary Information:-

Name of the student - Teacher - R. Anusha

Subject - Physical Science

Class - VII

Unit - Animal fibre

Topic - Animal fibre

Time - 45 min

Aim:-

Understanding the contents- Students will be able to understand the concept of Animal fibre.

Steps | Content

Teaching & Learning Activities

B. B. 10.

RLM.

* Introduction

* Objectives of the Concepts.

* Announcement of the topic.

* Demonstration & Discussion
→ Reading

* Good Morning students

* What fibres do animals give us? Is the way of obtaining them similar to plants? Which part of animal is useful to make fabrics.

* Today, we are going to discuss about Animal fibre.

* We get fibre from plants & animals. All caterpillars ~~is~~ made will help to make

* Name of the topic: Animal fibre

Steps / Content

→ keywords.

* Activities for Understanding the concept

* Discussion of the topic

Teaching & Learning Activities

dresses which we wear.

* Animal fibre

* Silkworm

* Cocoon

* Mulberry

* Sericulture

* Bombyx mori

* Visit near by sericulture industry to gather more information about silk.

* Discussing about the visit to sericulture industry with students to

know how much they have understood.

B.B.U.

* Animal fibre

* Silkworm

* Cocoon

* Mulberry

* Sericulture

* Bombyx mori

G.L.M.

Steps / Content			
* Conclusion		<p>Teaching & Learning Activities</p> <p>* Today we have discussed about Silk worms and about SPK and also about animal fibre etc by visiting to nearby sericulture industry.</p>	
		BIBD.	R.M.

Macro Teaching Lesson Plan - 6

Preliminary Information:

Name of the Student Teacher - R. Anusha

Subject - Physical Science

Class - VII

Unit - Motion and Time

Topic - Time & Speed

Time - 45 min.

Aim:-

Understanding the content :- Students will be able to understand the concept of time and Speed.

Steps / Content

- * Introduction
- * Objectives of Pre- Concepts
- * Announcement of the topic
- * Demonstration & Discussion.
- Reading

Teaching & Learning Activities

- Good Morning Students
- * We have learned about Motion, now we are going to learn new topic.
 - * We will discuss about Speed and Time.
 - * We can define speed of an object as the distance travelled by it in a unit of time.

B.B.U.

* Name of the topic
= Speed & Time

R.L.M.

Steps / Content

Teaching & Learning Activities

B.B.W.

G.L.M.

* Key words

- * Motion
- * Rest
- * Translatory Motion
- * Rotatory Motion
- * Axis of Rotation
- * Oscillatory Motion
- * Speed
- * Average Speed.

* Activities for Understanding the Concept.

* Time	Reading of Distance Covered
0 minute	0 km
10 "	15 "
20 "	25 "
30 "	38 "
40 "	60 "

- * Motion
- * Rest
- * Translatory Motion
- * Rotatory Motion
- * Axis of Rotation
- * Oscillatory Motion
- * Speed
- * Average Speed.

<p>Steps / Content</p> <p>* Discussion on the topic</p> <p>* Few Examples (or) Questions.</p>		
	<p>Teaching & Learning Activities</p> <p>* Teacher will be asking students few questions about the topic & can estimate how much students have understood.</p> <p><u>Example</u>:- The speed of a bus is 72 km/h, whereas the speed of a car is 12.5 m/s, which vehicle moves faster?</p>	
	<p><u>Solution</u>:- Speed of a bus = 72 km/h Speed of a car = 12.5 m/s 1 km/h = 5/18 m/s Thus the speed of car is</p>	<p>B. Bus -</p> <p>R. L. M.</p>

Steps / Content	Reaching & Learning Activities	Resources	Time
<p>* Conclusion.</p>	<p>* Students today use have seen the meaning of Speed and Time & few questions were solved with students in classroom.</p>	<p>B.B.I.U., $\Rightarrow 12.5 \times 18 / 5 \text{ km/h}$ $\Rightarrow 45 \text{ km/h}$ Hence, the bus moves faster than the car.</p>	

Notes] Macro Teaching Lesson Plan - 7

Preliminary Information:-

Name of the Student Teacher - R. Anusha

Subject - Physical Science

Class - VII

Unit - Temperature and its Measurement

Topic - Heat & Temperature

Time - 45 min.

Aim:-

Understanding the content:- Students will be able to understand the concept of Temperature & Heat.

Steps / Content	Teaching & Learning Activities	B.B.W.	R.L.M.
<ul style="list-style-type: none">* Introduction* Objectives of Pre-Concept* Announcement of the topic.* Demonstration & Discussion→ Reading.→ Keywords.	<p>Good Morning Students</p> <ul style="list-style-type: none">* We have learned about different changes that take place in different seasons in the previous classes. Now what do we call such situations?* We are going to discuss about temperature and heat.* <u>Temperature</u>:- Temperature is a measure of the degree of hotness or coldness of an object.* Heat Energy* Temperature	<ul style="list-style-type: none">* Name of the topic :- Heat* Temperature:-* It is a measure of the degree of hotness or coldness of an object.* Heat Energy* Temperature	

Steps / Content	Teaching & Learning Activities	B.O.W.	T.L.M.
<p>* Accepts for understanding the concept.</p>	<p>* Thermometer * Fahrenheit Scale * Celsius Scale * Clinical thermometer * Expansion * If you stand close to fire, you feel warm. When a warm object is placed close to a cooler object, heat energy moves from the warmer object to the cooler one until both objects attain the same temperature. Often we think that heat & temp are same things, but this is wrong. Temperature is a measure of the heat energy in a body & which indicates the ability</p>	<p>* Thermometer * Fahrenheit Scale * Celsius Scale * Expansion * Clinical Thermometer</p>	<p></p>

<p>Steps / Content</p>	<p>* Discussion on the topic.</p> <p>* Few Experiments or Examples.</p>		
	<p>Teaching & Learning Activities of a body to give heat to another body can absorb heat from another body. We use thermometers to measure temperature.</p> <p>* Teacher will be asking students few questions about the topic & can estimate how much students have understood.</p> <p>Experiment:- To find the temperature of your palm.</p>		
	<p>* For this, place the bulb of a thermometer in contact with the palm for 2 mins. & see the Mercury rise. When Mercury</p>	<p>B.B.U.</p>	<p>G.L.M.</p>

Steps / Content	Reading & Learning Activities	B.B.W.	P.L.M
<p>* Conclusion</p>	<p><u>Experiment</u> - Take some water in a beaker. Measure the temperature</p> <p>* Students today we have learned the concept of temperature and heat with few experiments</p>	<p>stops rising fits level becomes steady, note the position of its upper end. This is the temp of your palm.</p> <p>* Immerse the thermometer in water beaker and start heating the water. It will start boiling while getting converted into steam. Mercury level starts rising & reaches a point beyond which it doesn't rise. Hence observe the temperature.</p>	

Macro Teaching Lesson Plan - 8

Preliminary Information:-

Name of the Student Teacher - R. Anusha

Subject - Physical Science

Class - VII

Unit - Air, Winds & Cyclones

Topic - Air

Time - 45 min.

Aims:-

Understanding the contents Students will be able to understand the concept of Air with few experiments or examples.

Steps / Content

Teaching & Learning Activities

B.B.W.

T.L.M.

* Introduction

* Good Morning Students.

* Objectives of
Pre-Concept.

* When we ride on a bicycle in the direction of the wind, it is easy to ride the bicycle, but when we go opposite to the direction of the wind, it is very hard & we may tire easily.

* Name of the
topic :- Air

* Announcement
of the topic

* We are going to learn about
Air

* Demonstration &
Discussion

* The air around us is rarely
still. It moves continuously from
one direction to another. The movement

→ Reading

Steps / Content

* Key Words

* Activities for
Understanding the
Concept

Teaching & Learning Activities

is in many directions. This is what we call winds. So we know that wind is moving air.

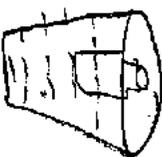
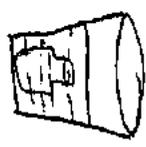
- * Wind
- * Expansion
- * Anemometer
- * Cyclone
- * Low pressure
- * High pressure

* Sometimes the wind is cold & sometimes it is pleasant & nice. It can blow clouds and sometimes raises dust. It is sometimes gentle

B.B.W.

R.L.M.

- * Wind
- * Expansion
- * Anemometer
- * Cyclone
- * Low Pressure
- * High Pressure.

Steps / Content	Teaching & Learning Activities	B.B.W.	R.L.M.
<p>* Few Experiments or Examples.</p>	<p>but can be really strong too & blow away things.</p> <p>* Teacher will be asked few questions about the topic to estimate how much students have understood.</p> <p>* Fill a bucket with water. Take a bottle with a narrow mouth & immerse it in the bucket till it fills with water.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Fig 1</p> </div> <div style="text-align: center;">  <p>Fig 2</p> </div> </div> <p>* Did something come out of the bottle when water entered it?</p> <p><u>Solution</u>:- Yes water bubbles sound.</p> <p>* How do you know whether</p>	

Steps / Content	Reaching & Learning	Activities	Sum
<p>* Conclusion</p>	<p>* Today we have learnt about air and also saw few examples which happen around us.</p>	<p>BIBID- something come out (or not?) <u>Solution</u>- By seeing the bubbles which comes out.</p>	

Macro Teaching Lesson Plan - 9

Preliminary Information :-

Name of the Student - Teacher - R. Anusha

Subject - Physical Science

Class - VII

Unit - Weather and Climate

Topic - Measurement of Rainfall

Time - 45 min

Aim:-

Understanding

the content:- Students will be knowing the concept of weather & climate and also measuring Rainfall.

Steps / Content

Teaching & Learning Activities

B.I.B.U.D,

T.L.M.

* Introduction

Good Morning students

* Objectives of Pre- concepts.

* Children we have learned about weather and its conditions.

* Name of the topic:-

* Announcement of the topic

* Today we are going to learn about measuring of Rainfall and its uses.

Measuring of Rainfall,

* Demonstration & Discussion

* Meteorologists measure the rainfall using a 'Rain gauge'.

→ Reading

* Weather

→ Keywords

* Forecast

* Climate

* Humidity

* Weather
* Forecast
* Climate
* Humidity

Steps / Content

* Activities for understanding the concept.

* Discussion on the topic

Teaching & Learning

Activities

* How can we measure the amount of rainfall at a particular place?

Farmers estimate the rainfall based on the wetness of the soil after the rain. They call it as 'PADUNO'. This much of rainfall is sufficient to start agricultural activities like ploughing. This is an app. measure.

* Teacher will be asking few questions to estimate how much they have understood.

B. B. U.

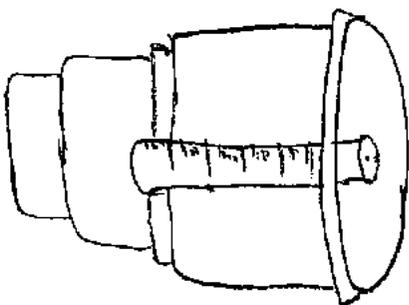
T. L. M.

Steps / content

* Few Examples
of Experiments

Teaching Learning Activities

Exp Take a 10cm wide
beaker & insert a funnel of
the same width. Keep the
apparatus in an open place
when it is raining. The rain
water would be collected
through the funnel into the
beaker. After the rain is over,
measure the amount of water
collected in the beaker. If
the depth of water is 1cm then
that is the magnitude of rainfall
is 1cm.
* Students today we have
seen how to measure
the rain fall. And also seen
one experiment.



B.B.W.D.

T.M.M.

Macro Teaching Lesson Plan - 10

Preliminary Information :-

Name of the Student - Teacher - RAnusha

Subject - Physical Science

Class - VII

Unit - Temperature and
its Measurement

Topic - Heat - A form of
Energy.

Time - 45 min.

Aim:- Understanding the content - Students will understand the concept of heat with few experiments (ex) examples.

Steps/Content	Teaching & Learning Activities	B.B.W.	T.L.M.
<p>* Introduction * Objectives of Pre-concepts</p> <p>* Announcement of the topic</p> <p>* Demonstration & Discussion → Reading</p>	<p>Good morning students</p> <p>* We feel hot when we sit in sunlight or near fire. We feel cold when we put a piece of ice on our palm. Have you ever thought why it is so?</p> <p>* Today we are going to discuss about heat.</p> <p>* <u>Definition</u>:- The energy which makes an object appear hot or cold is called <u>heat</u>.</p>	<p>* Name of the topic - heat.</p> <p>* The energy which makes an object appear hot or cold is called <u>heat</u>.</p>	

Steps / Content	Teaching & Learning Activities	B.B.W.	D.L.M.
<ul style="list-style-type: none"> * Keywords * Activities for Understanding the Concept * Discussion on the topic * Few Examples on Experiments 	<ul style="list-style-type: none"> * Heat Energy * Temperature * Thermometer * Fahrenheit Scale * Celsius Scale * Clinical Thermometer * Expansion. * When ice is being cooked you observe the plate on the ice bowl jumps! * Teacher will ask students few questions to estimate how much did they have understood. Ex- Take a flat bottom flask & fill it with coloured water. Fix a cork, having a capillary 	<ul style="list-style-type: none"> * Heat Energy * Temperature * Thermometer * Fahrenheit Scale * Celsius Scale * Clinical Thermometer * Expansion. * Have you observed water boiling in a vessel with a lid? What do you notice? 	

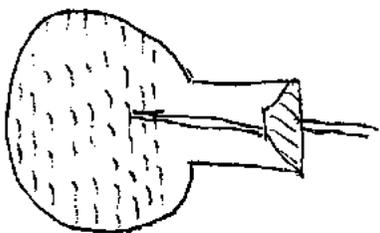
Steps / Content

* Conclusion

Teaching & Learning Activities

Take, in the mouth of flask such that level of water is as shown in fig. Place the flask in a metal trough. Pour boiling hot water into the trough & carefully observe the level of coloured water. We can observe that mercury will expand while heating.

* Students today we have seen the concept of heat with few examples in experiments.



B.B.U.

7/11/11

Macro Teaching Lesson Plan - 11

Preliminary Information:-

Name of the Student - Reacher - Ritushka

Subject - Physical Science

Class - VII

Unit - Playing with Magnets

Topic - Magnet

Time - 45 min.

Aim:-
Understanding the concept - Students will be able to understand the concept of Magnet.

Steps / Content	Teaching & Learning Activities	B.B.W.	T.L.M.
* Introduction * Objectives of Pre- concepts	* Good Morning, Students * You would have seen a pin holder in your school office, in this some pins are attached to the top of cap. What is the material used there? * We are going to discuss about Magnets today. * Magnets are the materials which can stick or hold iron materials.	* Name of the topic:- Magnets.	
* Announcement of the topic * Demonstration & Discussion => Reading			

Steps / Content

* Keywords

* Activities for Understanding the concept.

Teaching & Learning Activities

- * Magnets
- * Magnetic materials
- * Magnetic Compass
- * Like poles
- * Unlike poles
- * Attraction
- * Repulsion
- * Magnetic Induction
- * Non-Magnetic Materials
- * Spread some iron filings uniformly on a sheet of paper. Place a bar magnet below the sheet.

BSUO

- * Magnets
- * Magnetic Materials
- * Magnetic Compass
- * Like poles
- * Unlike poles
- * Attraction
- * Repulsion
- * Magnetic Induction
- * Non-Magnetic Materials

PLM.

* We will observe that the uniformly spread iron filings concentrate at two points of the paper sheet. At some distance you will find some scattered

Steps/Content	Teaching & Learning Activities		Date
<p>* Conclusion</p>	<p>* Students today we have learned the concept of magnets with few activities.</p>	<p>B.BUD, iron filings also these two points. This change in the spread of iron filings on the sheet of paper is due to the magnet present below it.</p>	<p>21/11/21</p>

Macro Teaching Lesson Plan-12

Preliminary Information:-

Name of the Student - Teacher - R. Anusha

Class - 9

Subject - Physical Science

Unit - Playing with Magnets

Topic - Make your own magnet

Time - 45 min.

Aim:-

Understanding the content :- Students will be able to make their own magnets after this topic.

Steps / content	Teaching & Learning Activities	B.B.W.	R.L.M.
<ul style="list-style-type: none">* Introduction* Objectives of the topic* Announcement of the topic	<p>Good Morning Children.</p> <ul style="list-style-type: none">* We have already learned about magnets.* Today we are going to learn how to make our own magnets	<ul style="list-style-type: none">* Name of the topic :- Make your own magnet.	
<ul style="list-style-type: none">* Demonstration of Discussion→ Reading	<ul style="list-style-type: none">* Magnets are the materials which can stick or hold iron materials.		

Steps / Content	Teaching & Learning	Activities	B.B.W.	G.L.M.
<p>* Keywords</p>	<ul style="list-style-type: none"> * Magnets * Magnetic Materials * Non-Magnetic Materials * Magnetic Compass * Like poles * Unlike poles * Attraction * Repulsion * Magnetic Induction <p>* Take an iron nail & place it on a table. Make sure that the nail neither attraction nor repels iron pins or iron filings. Take bar magnet & place one of its pole near one edge of the nail. Without lifting the bar magnet, move it</p>	<ul style="list-style-type: none"> * Magnets * Magnetic Materials * Non-Magnetic Materials * Magnetic Compass * Like poles * Unlike poles * Attraction * Repulsion * Magnetic Induction 	B.B.W.	G.L.M.
<p>* Activities for understanding the concept</p>				

Steps / Content	Teaching & Learning Activities	B.B.W.	T.M.
* Conclusion	<p>along the length of the iron nail till you reach the other end. Then lift the bar magnet, bring it to the first end and repeat this process for few minutes. Then the nail will be acting as a magnet.</p> <p>* Students today we have learned how to make magnet by our own.</p>	B.B.W.	T.M.

Macro Teaching Lesson Plan - 13

Preliminary Information:-

Name of the Student Teacher - R. Anusha

Subject - Physical Science

Class - VI

Unit - Rain: Where Does it
Come from

Topic - Forms of Water

Page - 45-46

Aim:-
Understanding the Content:- Students will understand different forms of water.

Steps / Content	Teaching & Learning Activities	B.B.U.	T.L.M
* Introduction * Objectives of the Concept	* Good Morning Children * Why do we get rains? * Where do the rains come from? * Do all the clouds formed in the sky cause rain? * We are going to learn different forms of water	* Name of the topic :- Different forms of water	
* Announcement of the topic	* Demons talkoo * Discussion & keywords	* Evaporation * Condensation * Water cycle	

Steps / Content	Teaching & Learning Activities	B.B.U.	D.L.M.
<p>* Activities can Examples to understand the Concept.</p>	<p>* Cloud * Water Vapour * Atmosphere * Stream * Droplets * Dew * Breeze</p> <p>* <u>Solid form</u>:- * <u>Liquid form</u>:-</p>	<p>B.B.U.</p> <p>* Cloud * Water Vapour * Atmosphere * Stream * Droplets * Dew * Breeze</p> <p>* We call solid form of water ice. Snow occurs naturally * If we heat ice, it will change into water. Water in liquid form is present in oceans, seas, lakes, rivers & even underground</p>	<p>D.L.M.</p>

Steps / Content

Teaching & Learning Activities

B.B.W.

T.L.M.

* Gaseous form

* We know that when ice is heated it converts into water & if water is heated it turns into water vapour. Similarly when water vapour is cooled we get back water. If water is cooled further we will get ice.

* Conclusion

Students we have learned about different forms of water with few examples.

Macro Teaching Lesson Plan - 14

Preliminary Information :-

Name of the Student - Teacher - R. Anusha

Subject - Physical Science

Class - VI

Unit - Rain: Where Does It
Come from

Topic - Water Cycle

Time - 45 min

Aim:-

Understanding the content :- Students will understand the concept of water cycle.

Steps/Content	Teaching & Learning Activities	B.B.W.	G.L.M
<ul style="list-style-type: none">* Introduction* Objectives of Re-Concept.* Announcement of the topic* Demonstration & Discussion→ Keywords	<ul style="list-style-type: none">* Good Morning Children* We have already learned about different forms of water* We will discuss about water cycle* Evaporation* Condensation* Water cycle	<ul style="list-style-type: none">* Name of the topic :- Water Cycle* Evaporation* Condensation* Water cycle	

Steps | content

* Activities con.
Examples for
Understanding the
concept

Reaching & Learning Activities

- * Cloud
- * Water Vapour
- * Atmosphere
- * Stream
- * Droplets
- * Dew
- * Breeze

* When it rains ponds, lakes etc are filled with water. Water from rain fall runs down as small streams. These small streams join together & make bigger streams. As it is very hot during summer, large quantity of water

B.B.U.

- * Cloud
- * Water Vapour
- * Atmosphere
- * Stream
- * Droplets
- * Dew
- * Breeze

P.L.M

Steps / Content

Teaching & Learning Activities

B.B.D.

7/11/21

evaporates from seas, lakes, rivers etc & converts into water vapour. This goes up into the air to form clouds. These clouds again cool & produce rain. The circulation of water into water vapour by evaporation, is known as water cycle.

* Students, today we have learned about

Water cycle.

* Conclusion

Macro Teaching Lesson Plan - 15

Preliminary Information:-

Name of the Student - Teacher - RiAnusha

Subject - Physical Science

Class - VI

Unit - Materials & Things

Topic - Transparency

Time - 45 min.

Aim:-

Understanding the content:- Students will be able to understand the concept of Transparency.

Steps/Content

Teaching & Learning Activities

B.I.B.U.O.

T.L.M.

* Introduction

* Good Morning, Students

* Objectives of the Pre-Concepts

* We will learn about different objects which are made up of different materials.

* Name of the topic :- Transparency.

* Announcement of the topic

* Today we are going to learn about Transparency.

* Demonstration &

Discussion

* Material

* Material

→ Keywords

* Object

* Object

* Metal

* Metal

* Transparent

* Transparent

Steps/Content	Teaching & Learning	Activities	R.B.W.	O.L.M
* Activities (or) Examples for Understanding the concept.	<ul style="list-style-type: none"> * Opaque * Translucent * Solid * Insoluble <p>* Are we able to see through a paper.</p> <p>* Today we have learned about Transparency. 3x</p>	<ul style="list-style-type: none"> * Opaque * Translucent * Solid * Insoluble 	* Take a sheet of white paper & try to see the lighted bulb through it. Now put a few drops of oil on that sheet & again try to see the bulb through it. You will see that in the first case	

Steps/Content

Teaching & Learning Activities

BIBUD.

01.11.14

* Conclusion

* Students, today we have learned about Transparency with one activity done by you.

you can't see the bulb but in second case you are able to see the bulb.

The materials through which we can see objects, but not very clearly, are said to be translucent.

Macro Teaching Lesson Plan - 16

Preliminary Information:-

Name of the Student - Teacher - R. Anusha

Subject - Physical Science

Class - VI

Unit - Materials and Things

Topic - Solubles & Insolubles

Time - 45 mins

Apr

Understanding the content- Students will be able to differentiate b/w Soluble and Insolubles

Steps / Content | Teaching & Learning Activities

B.B.W.

T.L.M

* Introduction * Good Morning, Students

* Objective of the Pre-concepts made of different materials

* Announcement of the topic * Today we are going to learn about Soluble & Insolubles

* Demonstration of

Discussion * Object

* Keywords * Metal

* Transparent

* Material

* Object

* Metal

* Transparent

Steps/Content	Teaching & Learning	Activities	BIBID,	7/2/24
<ul style="list-style-type: none"> * Activities can Examples for Understanding the concept 	<ul style="list-style-type: none"> * Opaque * Translucent * Solid * Insoluble * Soluble * Soluble can Insoluble in water. 	<ul style="list-style-type: none"> * Opaque * Translucent * Solid * Insoluble * Soluble 	<ul style="list-style-type: none"> * Take five beakers with water. Take small quantities of sugar, salt, chalk powder, sand & saw dust. Add each material to separate beakers & stir. Observe the changes. When we observe that certain materials dissolve when mixed with water. 	

Steps/Content

Teaching & Learning Activities

Review

TLM

* Conclusion

To day we have learned about Solubles & Insolubles with few examples with Activities done

When we mix Sugar salt and chalk powder are said to be soluble in water as these will dissolve in water.

Sand, Sawdust are said to be Insoluble in water as they will not dissolve in water.

Macro Teaching Lesson Plan - 17

Preliminary Information:-

Name of the Student - Teacher - R. Anusha

Subject - Physical Science

Class - VI

Unit - Separation of Substances

Topic - Crystallization

Time - 45 mins

Aim:

Understanding the content, - Students will learn about crystallization.

Steps / content	Teaching & learning Activities	B.B. or	T.L.M.
<ul style="list-style-type: none">* Introduction* Objectives of Re- concepts* Announcement of the topic* Demonstration & Discussion→ keywords	<p>Good Morning Students</p> <ul style="list-style-type: none">* Do you know how water changes into crystals.* We are going to learn about crystallization.* Mixture* Separation* Hand picking* Winnowing* Sedimentation	<ul style="list-style-type: none">* Name of the topic :- Crystallization.* Mixture* Separation* Hand picking* Winnowing* Sedimentation	

Steps / Content	Teaching & Learning Activities	BIBID	O.L.M
<p>* Activities for understanding the concept.</p>	<p>* Decantation</p> <p>* Sieving</p> <p>* Filtration</p> <p>* Crystallization</p> <p>* Distillation</p> <p>* Sublimation</p> <p>* Chromatography</p> <p>* Water is generally evaporated in sunlight. We use this property while extracting salt from sea water. Sea water is captured in wind pans & is exposed to air & sunlight. Thus water evaporates &</p>	<p>* Decantation</p> <p>* Sieving</p> <p>* Filtration</p> <p>* Crystallization</p> <p>* Distillation</p> <p>* Sublimation</p> <p>* Chromatography</p>	<p>0.1.1.1</p>

Steps / Content	Reaching & Learning Activities	B.B.W.	M.M.
<p>* Experiments con Examples</p>	<p>the salt is left behind in the pans.</p>	<p>* Heat some salt water in a beaker, over a flame. Stir the sol. with a glass rod. Continue heating till all the water in the beaker has evaporated. You will find salt crystals spread in the dish.</p>	
<p>* Conclusion</p>	<p>* Students, today we have got learned about crystallization with few examples or activities.</p>		

Macro Teaching Lesson Plan - 18

Preliminary Information:-

Name of the Student - Teacher - R. Anusha

Subject - Physical Science

Class - VII

Unit - Simple Electric Circuit

Topic - Simple Electric Circuits

Topic Time - 45 mins

Aim:-

Understanding the content- Students will understand the concept of Simple Electric Circuits

Steps content	Teaching & Learning Activities	B.B.U.C	T.L.U.,
<ul style="list-style-type: none">* Introduction* Objectives of the concept	<ul style="list-style-type: none">* Good Morning Children* Neharika took back the torch & opened it & realised her mistake. She changed the position of the cells & handed over the working torch light to her father.* We will discuss about Simple Electric Circuits	<ul style="list-style-type: none">* Name of the topic:- Simple Electric Circuits.	<ul style="list-style-type: none">* Electricity* Cell* Bulb* fused Bulb
<ul style="list-style-type: none">* Announcement of the topic* Demonstration & Discussion* Key Words	<ul style="list-style-type: none">* Electricity* Cell* Bulb* Fused Bulb		

Steps / Content

Teaching / Learning Activities

BRBUD.

TRIM

* Activities or Experiments or Examples for understanding the concept.

* Terminals

* Filament

* Switch.

* Circuit

* Conductors

* Insulators

* Plugster

* Simple Electric Circuit.

Electric wires are often

covered with plastic. First

remove about 2cm of the

plastic covering from both ends

of each wire. Now attach

two wires to a bulb & two

wires to the cell with a cell

* Terminals

* Filament

* Switch

* Circuit

* Conductor

* Insulator

* Plugster.

* Take four wires of diff. colours say green, blue, red & yellow each about 15cm long.

Steps | Content

Teaching & Learning Activities
tape on cell holder, we
can use a cell holder to
hold the cells & wires
together tightly.

B.B.10.

7.2.14.

* Conclusion

Today we have learned
about simple Electric
circuits.

Macro Teaching Lesson Plan - 19

Preliminary Information -

Name of the Student - Teacher - R. Anusha

Subject - Physical Science

Class - VI

Unit - Separation of Substances

Topic - Sublimation

Time - 45 min

Aim:

Understanding

the content :- Students will

Learn about Sublimation

Steps/Content

Teaching & Learning Activities

B.B.U

P.K.M

* Introduction

Good Morning Children

* Objectives of
Pre-Concepts.

* Do you know what we
call ~~the~~ separate the components
of a mixture.

* Announcement of
the topic

* We will discuss about
Sublimation

* Name of the
topic:- Sublima
-tion

* Demonstration of

* Mixture

Discussion

* Separation

→ keywords

* Hand picking

* Winnowing

* Sedimentation

* Mixture
* Separation
* Hand picking
* Winnowing
* Sedimentation

Steps / Content

* Activities can
Examples for
understanding
the content.

* Discussion on
the topic

Teaching & Learning Activities

- * Decantation
- * Sieving
- * Filtration
- * Crystallization
- * Distillation
- * Sublimation
- * Chromatography

* In order to separate
the components of a mixture,
we make use of their
difference in color, shape,
size, weight, solubility.

* Teacher will be asking
few questions to estimate
how much they have
understand.

RBW:

- * Decantation
- * Sieving
- * Filtration
- * Crystallization
- * Distillation
- * Sublimation
- * Chromatography

PLM:

Steps | Content

Experiments ver

Examples .

* Conclusion

Teaching & Learning Activities

* Sublimation of camphor.

Take a mixture of camphor & powdered salt in a china dish & cover it with a funnel. Close the tube of the funnel with cotton. Place the dish on a stand & heat it with a burner.

* What does you observe

* Today, we have learned about Sublimation with few examples & activities.

B.B.U,

M.L.M.

* When camphor is heated, it transforms to gaseous form without changing in liquid. Similarly, on cooling, the gaseous form of camphor changes directly into a solid without going to the liquid state. The process in which a substance changes directly from solid to gaseous form & vice-versa is called Sublimation.

Macro Teaching Lesson Plan - 20

Preliminary Information:-

Name of the Student - Teacher - R. Anusha

Subject - Physical Science

Class - V

Unit - Separation of Substances.

Topic - Chromatography

Time - 45 min.

Apni

Pr. Understanding the content - students will be able to understand the concept of chromatography.

Steps / Content	Teaching & Learning Activities	BIBID:	TLM.
<ul style="list-style-type: none">* Introduction* Objectives of Pre- concepts* Announcement of the topic* Demonstration & Discussion* Keywords	<ul style="list-style-type: none">* Good Morning Students* Can we separate colours from a mixture of colours.* Today, we are going to learn about Chromatography.* Mixture* Separation* Hand picking* Winnowing* Sedimentation	<ul style="list-style-type: none">* Name of the topic :- Chromatography.* Mixture* Separation* Hand Picking* Winnowing* Sedimentation	

Steps/Content	Teaching & Learning	Activities	B.B.U.	T.L.M
<p>* Activities for understanding the concept.</p>	<p>* Separation of substances is a very important scientific activity & is also important in our daily life. We are using dif. types of separation techniques for various purposes to get desirable quantities of materials.</p>	<ul style="list-style-type: none"> * Decantation * Sieving * Filtration * Crystallization * Distillation * Sublimation * Chromatography 	<ul style="list-style-type: none"> * Decantation * Sieving * Filtration * Crystallization * Distillation * Sublimation * Chromatography 	

<p>Steps Content</p> <p>Discussion on the topic</p> <p>* few examples</p> <p>* Conclusion</p>	<p>Teaching & Learning Activities</p> <p>* Today, Teacher will ask few questions regarding the explained topic in classroom</p> <p>* A chalk with different colours</p> <p>* Remove the chalk before the water reaches the top. Now you can see dif. colours on the chalk</p> <p>* Today we have learned the concept of chromatography with few examples & activities.</p>	<p>B.B.U.</p> <p>* Make a whole stick of white chalk. Around the curved surface of the chalk put an ink mark with blue ink & black ink. Now pour some water in a plate & keep the piece of chalk in the water. Ensure that the water in the plate is very little & does not touch the ink. Remove the</p>
		<p>T.L.M.</p>