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Micro Lesson

MICRO LESSON PLAN - 1

P. T. Roll No. - 1915
Subject : Physical Science
Topic : Accelaration
Skill : Introducing

Class : IX
Duration : 6 min
Period : 1
Date : 17/11/14
Session : Teach

Pupil Teaching Activity	Student's Activity
• What is Distance ?	The actual path crossed by body is called distance.
• Give the defination of displacement.	When a body moves from one place to other, the shortest distance between initial and final position is called displacement.
• Can you tell me distance and displacement are scaler or vector.	Distance is scaler and displacement is vector.
• Tell me students what is speed.	Speed of the body is the distance travelled by it in unit time.
• Give the defination of velocity	Velocity of the body is the distance travelled by a body in unit time in specific direction.
• Tell me students the speed and velocity are not always equal in magnitude.	Problematic Question

OBSERVATION TABLE

Tallies	Components	Rating Scale
1.	Use of previous knowledge	0 1 2 3 4
2.	Use of proper objective and subjective statement.	0 1 2 3 4 5
3.	Lack of proper sequence.	0 1 2 3 4 5
4.	Long term of introduction.	0 1 2 3 4 5
5.	Use of appropriate method	0 1 2 3 4 5
6.	Use of appropriate teaching aids.	

EVALUATION TABLE

Tallies	Components	Rating Scale
1.	Use of previous knowledge.	0 1 2 3 4 5
2.	Use of proper objectives and subjective statement.	0 1 2 3 4 5
3.	Long term of introduction.	0 1 2 3 4 5
4.	Lack of proper sequence	0 1 2 3 4 5

18/7/14

MICRO LESSON PLAN - 02

P.T. Roll No. 1915
Subject : Physical Science
Topic : Force
Skill : Introducing

Class : IX
Duration : 6 min
Period : 1
Date : 18/11/14
Session : Teach

Pupil Teacher Activity	Student Activity	Components
Dear Students do you know about force, yes force is used in everyday life	A push or pull on a body is called force.	
What is the effect of force	1. Force can move an stationary body. 2. Force can stop an moving body. 3. Change in the speed of moving body. 4. Change in direction	Change in interaction style.
Teacher write on the BB the nomination of force.		Body movement.
Do you know about type of forces.	Yes, write the types of forces on BB 1) Balanced force 2) Unbalanced force	Focusing
You know about unit	Yes, SI and CGS	Busing
Give the S.I. unit of force	SI unit of force is Newton, N.	Change in Voice.
V.V. Good		

OBSERVATION TABLE

Tallies	Component	Rating Scale
1.	Movements	0 1 2 3 4
2.	Gesture	0 1 2 3 4
3.	Change in voice focusing	0 1 2 3 4
4.	Change in interaction style	0 1 2 3 4
5.	Oral, Visual, Switching	0 1 2 3 4
6.	Praising	0 1 2 3 4

EVALUATION TABLE

Tallies	Components	Rating Scale
1.	Movements	0 1 2 3 4
2.	Gestures	0 1 2 3 4
3.	Changes in voice	0 1 2 3 4
4.	Focusing	0 1 2 3 4
5.	Chang in interaction Style	0 1 2 3 4
6.	Oral, Visual, Switching, Praising	0 1 2 3 4
7.	Physical in movement of the pupil	0 1 2 3 4

Micro Lesson Plan - 3

P.T. Roll No. - 1915
Subject : Physical Science
Topic : Work

Class : IX
Duration : 6 min
Date : 19/11/15
Session : Jeach

Pupil Teaching Activity	Student's Activity	Components
- What is Work	Work is done when a force produ	Use of the statement encouragement, Supported behaviour.
- Good, yes force makes a body moves then work is said to be done.		
- On which fact on work depends.	It depends on two factor Magnitude of force distance through which body moves.	Use of the Statiement
- What is the mathematical formula of work.	Ram → Work = Force x distance $W = F \times S$	Use
- Yes, right write on the BB Work = Force x distance W = Work, F Force S = Distance $W = F \times S$		Supported to pupil suggestion and encouraged and writing the coward representation on the BB.
- Give the unit of work	Meen, Unit of work is Newton Meter.	

Tell me students, work is scalar or vector	It is a Scale Quantity	Use of gest
V.V Good. It is Scalar because it has no direction.		

Observation Table

Tallies	Components.	Rating Scale
1.	Use of the Statement	0 1 2 3 4 5
2.	Support of pupil suggestion	0 1 2 3 4 5
3.	Pupil encouragement	0 1 2 3 4 5
4.	Uses of gestures and other non-verbal clues.	0 1 2 3 4 5
5.	Writing the correct response of the pupil on B.B.	0 1 2 3 4 5
6.	Use of verbal statement.	0 1 2 3 4 5
7.	Use of non-verbal statement.	0 1 2 3 4 5
8.	Proper use of reinforcement.	0 1 2 3 4 5
9.	Use of reinforcement	0 1 2 3 4
10.	Statement used in reinforcement.	0 1 2 3 4

EVALUATION TABLE

es	Components	Rating Scales
		0 1 2 3 4 5 6
1.	Use of statement.	0 1 2 3 4 5 6
2.	Support of pupil suggestion.	0 1 2 3 4 5 6
3.	Pupil encouragement	0 1 2 3 4 5 6
4.	Use of gesture and other non verbal clues	0 1 2 3 4 5 6
5.	Writing the correct response of the pupil on the BB.	0 1 2 3 4 5 6
6.	Use of Verbal Statement.	0 1 2 3 4 5 6
7.	Use of non-verbal.	0 1 2 3 4 5 6
8.	Proper use of reinforcement.	0 1 2 3 4 5 6
9.	Use of reinforcement.	0 1 2 3 4 5 6

MICRO LESSON PLAN - 4

P. Teacher Roll No - 1915
Subject : Physical Science
Topic : Newton's third law of motion

Class : IX
Duration : 6 min
Date : 20/11/14
Session : Teach

Pupil Teacher Activity	Students Activity	Components
• Dear Students do you know about third law of motion. For every action there is equal and opposite reaction.	No Response	
• Now Students can anyone tell me why two forces does not cancel each other. For example : Action and reaction do not act on same body so they do not cancel each other.	No Response	
For example : FAB = Force exerted by A on B FBA = Force exerted by B on A According to third law, FAB = FBA Now, anybody explain the Newton's 3 law	No Response	
• The third law of motion state that when anyone object exerts a force on another object, the second object instantaneously exerts the force on the first. These three forces are always equal but opposite in direction.		

• Can anybody tell me example of third Law of motion. • Example-1. When a gun is fired. It exerts a force forward on the bullet. The bullet extert on equal and opposite reaction force on the accelarating force on the bullet • Example-2 When a sailor jump out of rowing boot, as the sailer jump forward. The force on the boot moves it backward.	No Response	

OBSERVATION TABLE

Sl.No.	Components	Rating Scale
1.	Formation of relevout example	0 1 2 3
2.	Formation of simple example	0 1 2 3
3.	Formation of interesting example	0 1 2 3
4.	Use of appropriate media	0 1 2 3
5.	Use of inductive and deductive method.	0 1 2 3

EVALUATION TABLE

SLNO.	Components	Rating Scale
1.	Formation of relavant example	0 1 2 3
2.	Formation of simple example	0 1 2 3
3.	Formation of integrating example	0 1 2 3
4.	Use of appropriate media	0 1 2 3
5.	Use of industive and deductive method.	0 1 2 3

MICRO LESSON PLAN - 5

P.T. Roll No. 1915
Subject : Physical Science
Topic : Solar System

Class : IX
Duration : 6 min
Date : 21/11/14
Session : Teach

Pupil Teaching Activity	Student's Activity	Components
What is the name of the planet on which we live?	Earth	Prompting
Besides, Earth how many planets do you know?	There are eight more planet besides Earth.	Critical awareness
Now tell me, why sun is visible to us and other planets are not visible to us.	No response	Seeking further information
What do you think about this?	These planets are very small and away from us.	
Yes, they are far away too much but these are not smaller. Can you tell me why sun is visible daily in the morning.	Because it rises in the east daily.	

• Can you explain this.	Yes, the earth complete its rounds revolves around its own axis in 24 hours (one day).	
• Can you tell me how much earth revolves around the sun.	The sun is much larger then earth we are on earth, the earth revolves around the sun and its own axis.	
• What is the cause of daylight on the earth?	Because earth's one part is enlightened by sun due to rotation on its axis.	Prompting.
• How the moon gets enlightened.	Moon is a star and twintle due to refraction	Critical awareness.

OBSERVATION TABLE

Sl.No.	Components	Rating Scale
1.	Prompting	0 1 2 3 4 5
2.	Refocusing	0 1 2 3 4 5
3.	Redirection	0 1 2 3 4 5
4.	Seeking further Information	0 1 2 3 4 5
5.	Critical awareness	0 1 2 3 4 5

Mega Lesson

MEGA LESSON PLAN - 1

Roll No - 1915
Class - IX
Subject - Physical Science
Date - 24/11/15
Topic - Force
Duration - 80 mins

Content Analysis

1. Explain what happens when a force is applied on an object.
2. Define term force.
3. Example of term force.
4. Defination of the term balanced force.
5. Example of balanced force.
6. Defination of unbalanced force.
7. Example of unbalanced force.
8. Differentiate between balanced and unbalanced force.
9. What happens when some children try to push a box on rough floor.
10. What happened when we ride on a bicycle.

General Objective

1. They develop scientific attitude.
2. They develop scientific creativity.
3. They develop / show keen interest.
4. They develop scientific hobbies.

Specific Objectives - Knowledge -

1. What happens when a force is applied to an object.
2. Recall the defination of force.
3. Recall and recognise the example of the force.
4. Recall the meaning of term balanced force.
5. Recall the example of balanced force.
6. Recall the defination of unbalanced force.
7. Recall and recognise what happens when and some children try to push a box on a rough floor.

Understanding Objectives

Pupil will be able to -

1. Explain what happens when a force is applied to an object.
2. Explain the term force.
3. Illustrate the meaning of balanced force.
4. Explain or illustrate example of force.
5. Detect error in the given force.

Application Objectives

Pupil will be able to know

1. How the object are moving.
2. What happens when some children try to push a box on rough floor.
3. How the pulling and pushing objects changes their state of mot

Skill Objective

Pupil will be able to
Experimental Skill
Observation Skill
Practical Skill

Teaching Aids

Chalk, Duster, Blackboard and Printer etc.

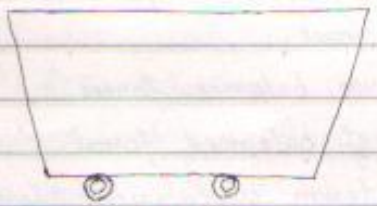
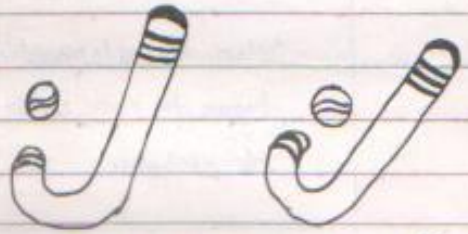
Previous Knowledge

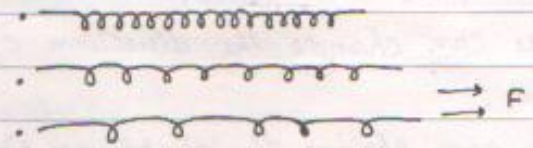
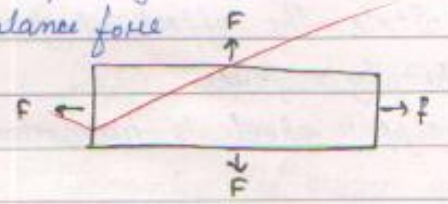
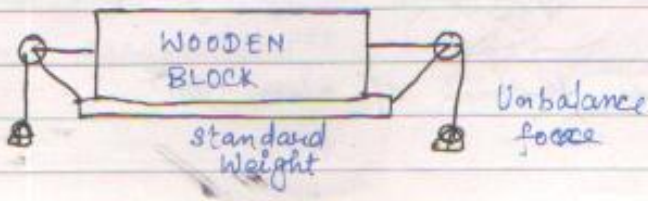
1. They formulate what happen when a force is applied to an object.
2. They formulate about term force.
3. They formulate about the term balance forces.
4. They know few examples of balanced forces.
5. They formulate about the term unbalanced forces.
6. They also know examples of unbalanced forces.
7. They know example of force.
8. They know what happens when some children try to push a box on a rough floor.

Introduction Pupil teacher Activity	Students Activity
• What happens when a force is applied to an object.	The object will move.
• What happens when we ride bicycle.	When we stoppadaling the bicycle began to slow down.
• What is meaning of force.	No response.

Annoucement of the topic :

Well students today we will study about the topic force

T. Point	Pupil Teacher Activity	Pupil Act
• Defination of force	Pushing, hitting and pulling of the object is called force.	Listening c
Example	What is the example of force.	The trolly a the direction push it
Use of teaching Aids	→ Force Applied  Trolly along the direction of force	Draw diag
Use of teaching Aid	 The drawer is pulled	Draw diag
Use of teaching Aid	Pushing, Pulling or hitting object change their state of motion  The hockey sticks hits forward	

Application	Aspring expand on application of force 	Draw diagram
Balanced Force	A wooden block on a horizontal table. Two forces x & y be applied on the block if these two forces are equal and opposite in direction. Then block will in rest called balanced force.	Listen carefully
Unbalanced force	If pusting force greater than the friction force. There is an unbalanced force in this case which cases the object to one.	
Use of Teaching Aids	If pushing force is greater than the frictional force there is an unbalanced force. This can be explained by the example below.	
	Example of balanced and unbalanced force.	
	Balance fore 	
	Unbalance force 	

Effect of force — Force can change the speed of a body making it slow and fuster.

* Force can change the direction of motion.
* Force can change the shape or size of the body.

Evaluation : 1. Can anybody tell me what is the meaning
2. Tell me the example of force.
3. Tell me what is the meaning of balanced and unbalanced force.
4. Can anybody tell me example of balanced for
5. Can anyone tell me what is the difference be balanced and unbalanced force.

Home Work :

- Eassay Type Question :
  1. Explain the teram force with example.
  2. Explain balanced force with example.
  3. Explain unbalanced force with example.
- Short answeer type : State the effect of force in eac
  1. A spring is stretched by a force.
  2. A small piece of copper sheet is hammered to m the foil.
  3. A football lying on the ground is kicked.
  4. Brakes are applied to a moving car.

Reference : Science textbook of class VIII

MEGA LESSON PLAN - 2

Roll No. 1915
Class : IX
Subject : Physical Science
Time : 30 min
Topic : First law of motion
Date : 25/11/14

Content Analysis

1. Explain what is the law of inertia.
2. Name three laws of motion.
3. Defination of 1st law of motion of law of inertia.
4. Explain its experiment with example.
5. Explain its application with example.

General Objectives

1. They develop scientific attitude.
2. They develop scientific creativity.
3. They will show keen interest.
4. They develop keen observation
5. They develop scientific hobbies.

Scientific Objectives

1. Knowledge : Pupil will be able to
   a. Recall what happens when a marble rolly down on an inclined plane.
   b. Recall and recognise the name of three law of motion.
   c. Recall the difinition of the term inertia.
   d. Recall the definition of 1st law of motion.
   e. Recall and recognise 1st application with example.

Understanding Objective

1. Explain the example of multiple reflection of the sound.
2. Explain the reflection of sound with example.
3. Explain the definition of reverbation with example.
4. Explain the definition of Echo with example.

Application Objective

Pupil will be able to -

1. When a marble rolls down on an inclined place its velocity inc
2. Why the 1st law of motion is also called law of inertia
3. How, when a motor car makes a sharp turn at a high spee we tend to get through outside.

Skill Objective

Pupil will be able to -

i) Develop the experimental skill.
ii) Develop the observation skill.
iii) Develop the practical skill.

Teaching Aid : Chalk, Duster, Pointer, Chart etc.

Previous Knowledge :

1. They formulating what happen when a marble rolls on inclined plane its velocity increases.
2. They formulating the name of three laws of motion.
3. They formulating about the term inertia.
4. They formulate about the defination.
5. They also know example of 1st law of motion.
6. They also know the example of application of 1st Class of

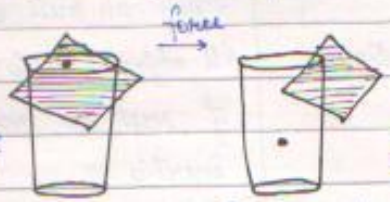
Introduction

Pupil Teacher Activity	Students Activity
- Define the term force.	Push or pull on a object.
- What is the meaning of inertia?	All objects resist change in their state of rest or motion this property is inertia.
- Name the three laws of motion.	1st Law of motion 2nd Law of motion 3rd Law of motion
• What is the first law of motion.	No response.

Annoucement of Topic

Well Students, today we will study about first law of motion.

Teaching	Pupil Teachers Activity	Pupil Activity
Defination of inertia	All objects resists a change in their state of rest or motion in qualitative way the tendency of an distributed objects of stay at rest or to motion.	

1st Law of motion	An object remains in state of rest or uniform motion a straight lines unless compelled to change that state by an applied force.	
Experiment to show first law of inertia		writing
	Initially both card-coin are at rest. When card is flicked it is in motion and coin remain at rest due to inertia.	
Why we fall backward when bus stopped suddenly	In stating bus and passangers both in rest but bus stopped suddenly the lower part of passenger move with bus and upper part tend to remain in rest and passengers fall backward.	
Why passanger fall forward when breaks are applied in bus.		Same as first and passanger in motion of breaks the (e is in rest a part in mot falls forwa

Evaluation :

1. Tell me what happens when a marble rolls down on an plane, its velocity increase.
2. Tell anybody, the name of three laws of motion.
3. Can anybody tell me the defination of first law of mo with eaample.

Home Work :

1. Define the teram inertia.
2. Explain first law of motion.
3. Explain why passangers fall bankward when bus start, and forward when bus stops suddenly.

Reference ?

26/11/14

MEGA LESSON - 3

Roll No. - 1915 Class : IX

Subject - Physical Science Time : 30 mins.

Topic - Third law of motion Date : 26/11/19

Content Analysis

1. Defination of Newton's third law of motion.
2. Example of Newtoons third law of motion.
3. Action and reaction do not act on the same body and they never cut each other.
4. Explain the example of given and exerting a forward force of bullet.
5. Explain the experiment of spring balance.

Specific Objective Knowledge

Pupil will be able to

1. Recall the defination of Newtons third law of motion
2. Recall the example of Newtons third law of motion.
3. Recall the recognise as action and reaction do not action the same body.
4. Recall the recognise and explain the experiment of the two spring balance connected together.

Understanding Objectives . Pupil will be able to -

1) Explain the statement of Newtoon's third law of motion.
2) Explain the example of Newton's third law of motion.
3) Explain the experiment of two spring balance connected together.
4) Explain the example of gun exert forward force on the bullet

Application Together :

- How the action and reaction do not act on the same body.
- Why when gun is fired, it exerts a forward force on the bullet.

Skill Objective :

Pupil will be able to -

1) Develop experimental skill.
2) Develop observation skill.
3) Develop practical skill.

Teaching Aids : Chalk, Duster, blackboard, Pointer etc.

Previous knowledge :

- The formulating about the statement of Newton's third law
- They also known example of third law of motion.
- They know action and reaction do not act same body
- They also know when gun is fired it exert a forward force on

Introduction

Pupil Teachers Activity	Student's Activity
• What is the first law of motion?	A body continues in its state of motion in a straight line unless external force act on it.
* Second law of motion.	The rate of change of momen an object is proportional.
* Third law of motion	No response.

Announcement of Topic :

Well, Student ! today we will discuss about Newton's third law of motion

Teaching Points	Pupil Teacher's Activity	Student Activity
tement of ird law of otion	The third law of motion state that when one object exerts a force on another object, the second object instantaneously exert a force back on the first.	Note in their notebook
o opposing status	These two opposing forces are also known as action and ~~and~~ reaction	Speaking
Example	Two spring balance connected together. They fixed and of balance B is attached with a rigid support like wall, when a force is applied to the spring balance it is observed that both the spring balance show the same reading on their scale. force exerted by spring balance A and B is equal and opposite in direction. Hence in the diagram below the force exerted by action A on B. The force of balance B on balance.	
The gun is fired it exerts forward force the bullet	When a gun is fired, it exert a forward force on the bullet, the bullet exert an equal and opposite reaction force on the gun. Since, the gun has greater mass so acceleration of gun is much small.	

Sailor jump out of a rowing boat.	The third law of motion is ~~called~~ also used when a sailor jumps out of a rowing boat, sailor jump forward the force on the boat makes it backward.	

Evaluation -

1. Can any one tell me what is the statement of third law of mo
2. Tell me what is action.
3. What is reaction?
4. Can anybody tell me, what is the example of Newton's third law motion

Home Work

• Easy type -

1. Explain the statement of Newton's third law of motion.
2. What is the difference between action and reaction.
3. Write three application of Newton's third law of motion with

Short Answer type Question -

1. Name the two opposing force act on different body
2. State Newton's third law of motion.
3. When gun is fired, write action and reaction force wor on which gun or bullet.

29/11/14

MEGA LESSON : 4

Roll No : 1915 Class - IX

Subject : Physical Science Duration - 50min

Topic : Atomic Number Date : 27/11/14

Content Analysis -

1. Defination of Atomic number.
2. Defination of Isotopes and isobars.
3. Numerical based on atomic number.

General Objectives -

1. To develop the scientific attitude among the student.
2. They develop keen observation.
3. They develop scientific hobbies.
4. They develop knowledge about principal theory.

Specific Objective -

Knowledge - Pupil will be able to

a) Recall defination of atomic no.
b) Recognise numerical based atomic no.
c) Recall isotopes and isobar.

2. Understanding Objective

Pupil will be able to

1. Explain the concept of atomic no.
2. Make difference between isotope and isobar.
3. Recognise numerical based on atomic no.

3. Application Objective

Pupil will be able to

1. Apply this knowledge informing some daily life problem.
2. Explain isotopes and isobar.
3. To know example of isotopes used for treatment of disea

Skill Objectives

Blackboard, chart, duster, chalk, Pointer etc.

Previous knowledge

Pupil already know -

a) Defination of atomic no.
b) Numerical base on atomic no.

Introduction

Pupil Teacher Activity	Students Activity
What is atomic number	Atomic no. is defined as total of protons present in the n of an atom.
What is isotope	No response.

Anouncement of Topic

Well students today we will discuss about atomic Number.

Teaching Point	Pupil Teacher Activity	Students Activity
Numerical		Note in the Note book
Define Isotopes	The atom of the same electron which have the same no. of protons ie atomic no. but different atomic mass are called Isotopes of that atom.	
Isotopes of Hydrogen	$^{1}_{1}H$ $^{2}_{1}H$ $^{3}_{1}H$ Protium Deuterium Tritium	Note in their Note book.
Isotopes of Chlorine	$^{35}_{17}Cl$ $^{37}_{17}Cl$ Proton → 17 | 17 Neutron → 18 | 20	
Use of Isotopes	* For estimating the age of old archeological sample * For treatment of disease * For estimating age of glaciers.	Listen Carefully.
Define Isobars	The atom of different electron which have same mass no. but different atomic no. $^{40}_{18}Ar$ $^{40}_{19}K$ $^{40}_{20}Ca$ Atomic → 18 | 19 | 20 Mass No → 40 | 40 | 40	Listen Carefully

Numerical — Identify which pair is Isotope or Isobar.

$_{5}^{7}A$ $_{7}^{14}B$ $_{5}^{10}C$ $_{7}^{14}D$

$_{5}^{7}A$ and $_{5}^{10}C$ are Isotope

$_{7}^{14}B$ and $_{6}^{14}D$ are Isobar

Evaluation –

1. What is the defination of Atomic no.
2. Define Isotope with example and write its two application.
3. Configuration of electron of different element.

Home Work –

1. Learn the defination of Atomic no.
2. Define Isobar.
3. Learn the defination of Isotopes with example and its application.

28/11/14

MEGA LESSON PLAN - 5

Roll No - 1915 Class - IX

Subject - Physical Science Time - 30 min

Topic - Momentum Date - 28/11/14

Content Analysis :

1. Define momentum.
2. SI unit of momentum.
3. Conservation of momentum.
4. Numerical based on momentum.

General Objective :

1. To develop keen observation.
2. They develop creativity in the field of science.
3. They develop scientific hobbies.
4. They develop scientific attitude among children.
5. They develop knowledge.

Specific Objective :

1. Pupil recall definition of momentum.
2. Recognise SI unit of momentum.
3. Numerical based on momentum.

Understanding Object -

Pupil will be able to -

1. Explain the concept of momentum.
2. Make difference between momentum and mass.

Application Objective -

1. Apply this knowledge in founding some daily life problem
2. Explains the law of conservation of momentum.

Skill Objective -

Pupil will be able to

1. Develop the observation skill.
2. Develop the scientific skill.
3. Develop the experimental skill.

Teaching Aid -

Blackboard, chalk, duster etc.

Previous Knowledge -

Pupil already know about

1. Mass and momentum.
2. About SI unit.

Previous Knowledge Activity

Pupil Teacher Activity	Students Activity
What is momentum ?	Momentum is the property of object by mass and velocity which it contain.
What is SI unit .	No response.

Annoucement of the topic

Well Students , today we will study about momentum and mass.

Presentation

Teaching Point	Pupil Teacher Activity	Pupil Activity
Definition of momentum	The momentum of an object is the product of its mass and velocity.	Students Listen Carefully

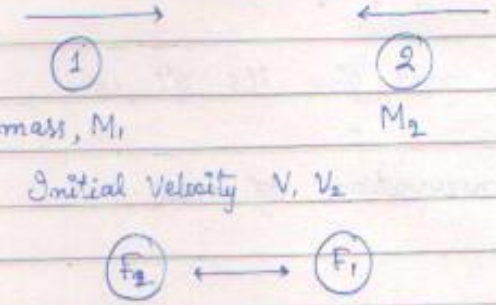
Momentum = Mass X Velocity

$P = M \times V$

$P = MV$

	P = momentum of body M = Mass of body	
What is mass	The mass of an object is the quality of matter contained is is * Mass is a scalar quantity. * It remains same everywhere. * Its SI unit is kilograms. * It is denoted by m.	What Scalar
Scalar Quantity	These qualities which are defined by magnitude only are called scalar quantity.	OR
Conservation of momentum	When two (or more) bodies act on each other and external force act on them. The total momentum of all the bodies is equal to their initial momentum. [Sum of final momentum of the two bodies] = [Sum of the initial momentum of the two bodies]	Listen carefu

Illustration of teaching aid



Final Velocity V_1 and V_2

Time taken $\longrightarrow t$

$m_1v_1 + m_2v_2 = M_1V_1 + M_2V_2$

Numerical

Which body have greater momentum 2kg mass at the speed 5 m/s or 4kg mass of the speed of 2 m/s.

$m_1 = 2kg$ $m_2 = 4kg$

$V_1 = 5\ m/s$ $V_2 = 2\ m/s$

$P_1 = m_1V_1 = 2 \times 5 = 10\ kg\ m/s$

$P_2 = m_2V_2 = 4 \times 2 = 8\ kg\ m/s$

Second body has greater momentum.

Evaluation –

1. What is the momentum and give its SI unit.
2. What is mass.
3. What is law of conservation of mass.

Home Work

1. Learn law of conservation of momentum.
2. Learn the definition of momentum and mass.
3. Learn SI unit of mass and momentum.
4. Do more practical for numerical.

29/11/19

Real Teaching Lesson

LESSON PLAN - 1

Pupil Teacher's Roll no : 1915

Class : IX

Subject : Physical Science

Topic : Atom and molecules

Date : 2/12/19

Duration : 30min

Period : VI

Content Analysis :

i) Defination of atom and molecule.
ii) Laws of conservation of mass, chemical combination.
iii) Symbols of atoms and molecules.

General Objectives :

i) To develop scientific attitude.
ii) To develop keen observation.
iii) To develop creativity in the field of science.
iv) To develop scientific hobbies.
v) To develop knowledge about principal theory and facts.

SPECIFIC OBJECTIVE

1) Knowledge : Pupil will be able to
   i) Recall defination of atoms and molecules.
   ii) Recognise laws of atoms and molecules.

2) Understanding : Pupil will be able to
   i) Explain the concept of atoms and molecules.
   ii) Make similarity between atoms and molecules.
   iii) Make similarity between atoms and molecules.
   iv) Explain the laws of atoms and molecules.

3) Application : Pupil will be able to
   i) Apply this knowledge in finding some daily life problems.
   ii) Explain the laws of atoms and molecules.

4) Skill : Pupil will be able to
   i) Develop the observation skill.
   ii) Develop the mathematics and science skill.

Teaching Aids : Black board, Chalk, Duster, Pointer chart etc.

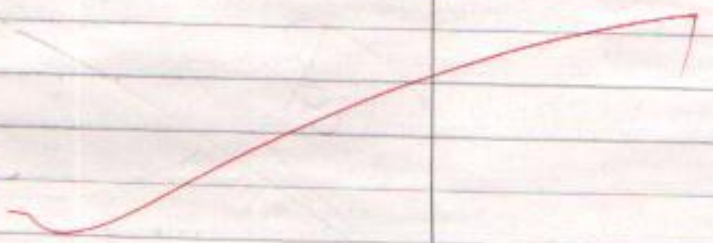
Previous knowledge : Pupil already know -
   i) The defination of atom and molecules.
   ii) The some example of atom and molecules.

Pupil Teacher's Activity	Pupil's Activity
"Good Morning" Students	"Good Morning" Sir.
Ok! Student can anyone say what is atom?	All matter is made up of very particles called atoms.
Very good, Now say me what is molecules?	A molecule is a group of tw or more atoms which are che bounded together.
What is the law of atoms & molecules?	No response.

Announcement of the topic : Well students today we will study about atoms and molecules.

J. Point	Pupil Teacher's Activity	Pupil's Activity	Chalk board Work
Defination	Atom : All matter is made up of very tiny particles called Atom.	Students are listening carefully.	
	Molecules : A molecule is a group of two or more atoms that are chemically bonded together		
Symbols	Atoms — Symbols		
	Hydrogen — H	Students are listening & noting in their notebook	
	Carbon — C		
	Oxygen — O		
	Nitrogen — N		
	Clorine — Cl		
	Sodium — Na		
	Calcium — Ca		
	Flurin — F		
	Aluminium — Al		
	Sulphur — S		

T. Point	Pupil Teacher's Activity
Type of Molecule	There are two types of molecules. They are :
	1. Primitive molecule : A primitive molecule is a group chemically bonded.
	Example - H_2, O_2, O_3 & P_4 etc. are primi
	2. Compound molecule : A compound molecule or mor together.
	Example - H_2O, CO_2, HCl, NaCl etc.
Formula	Formula of Hydrogen Cloride : HCl
	" " Hydrogen Sulphide : H_2S
	" " Water : H_2O
	" " Ozone : O_3
	" " Sodium Cloride : NaCl
	" " Sulphuric Acid : H_2SO_4
	" " Sodium Oxide : NaO
Atomic No.	Defination : The no. of total proton in a atom is calle
	Element : H He Li Be B C N O Ne Na S
	Atomic No : 1 2 3 4 5 6 7 8 10 90 16

	Pupil's Activity	Chalk board Work
1. Primitive molecule 2. Compound molecule ok more same atoms that are atoms that's are chemically bounded compound molecules.  number as like	listening & noting carefully	

Evalution :

1) What do you mean by atom ?
2) What do you mean by the laws of conservation of atom & molec

Home work :

1. Learn the defination of atoms and molecules.
2. Write down the symbols of oxygen, gold, chlorine, potass
3. Write down the formula of aluminium oxide, formula o calcium oxide.

Reference :

NCERT book of science of class IX.

4/12/14

LESSON PLAN : 2

Pupil Teacher's Roll No. : 1915

Class : IX

Subject : Physical Science

Topic : Atom and molecules
Continued

Date : 4/12/14

Duration : 30 minutes.

Period : VIII

Content Analysis :

1. Law of chemical combination and conservation of Mass.
2. Dalton's Atomic theory.
3. Size of atoms.
4. Modern day symbols of atoms.

General Objectives :

1. To develop scientific attitude.
2. To develop keen observation
3. To develop creativity in the field of science.
4. To develop keen interest.
5. To develop scientific hobbies.
6. To develop knowledge about principal theory and facts.

SPECIFIC OBJECTIVES

i. Knowledge : Pupil will be able to

1. Know the laws of chemical combination and conservation of mass.
2. Recognise the Dalton's atomic theory.
3. Know the sizes of atoms.

ii) Understanding : Pupil will be able to

1. Explain the Dalton's atomic theory to the point.
2. Criticise the Dalton's atomic theory.
3. Make difference among the sizes of different atoms.
4. Make difference among the modern symbols of differe

iii) Application : Pupil will be able to

1. Apply this knowledge in daily life problem.
2. Explain the Dalton's atomic theory.

iv) Skill : Pupil will be able to

1. Develop observation skill.
2. Develop the mathematical and science skill.

Teaching Aids : Block board, Chalk, Duster, Pointer, Chart etc.

Pupil Teacher's Activity	Pupil's Activity
"Good Morning" Students	"Good Morning" Sir
Can anyone say that if we mix copper sulphate with sodium carbonate then what will be happen?	Chemical reaction
The mass is changed or not?	No response

Announcement of topic : Ok today we will study the law of conservation of mass in the chapter atom and Molecules.

T. Point	Pupil Teacher's Activity	Pupil's Activity
Law of Conservation of mass.	Take a little amount of solution of sodium carbonate in a conical flask and some solution of copper sulphate in an ignition tube	Pupil are listening and writting carefully.

Teaching Point	Pupil Teacher's Activity
Dalton's Atomic Theory	Now hang the ignition tube in the flask carefully chonk on the flask. • Weight the flask with its contents carefully • Now tilt and swirl the flask so that they • Weight again. • Does the mass of the flask and its content • Do you think a chemical reaction has t "During Chemical reaction, the sum of the mass ie mass can neither be created nor destroyed i conservation of mass. In 1808 AD. John Dalton presented his atomic which was a turning point in the study of m • All matter is made of tiny particles calle • Atoms are indivisible particles which cann reaction. • Atoms of a given element are identical in • Atom of different elements have different m • Atoms combine in the ratio of small whole • The relative number and kinds of atoms

	Pupil's Activity	Chalk board Work
the solution do not get mixed. Put a		
	No Response	
	Yes	
reactants and products remains unchanged chemical reaction" – is called law of	Pupils are writting carefully	
which is called Dalton's Atomic theory, The postulates are as follows :		
	Pupil are listening and writting very carefully	
created by or destroyed. in a chemical		
and chemical properties.		
chemical properties.		
to form compound.		
constant in a given compound.		

J. Point	Pupil Teacher's Activity	Pupil's Act
Size of atoms	Atoms are very small they are smaller than anything that we can imagine. Relative size (radii (in m)) Example 10^{-10} → Hydrogen 10^{-9} → Water (molecule) 10^{-4} → Grain of sand 10^{-2} → Ant 10^{-1} Watermelon	Pupils a listening noting d
Mordern Symbols of atoms of different elements	Dalton was the first scientist to use the symbol for elements in a very specific sense, when he used a symbol for an element he also meant a definite quantity of that element.	

Evaluation : i) What do you know about law of conservation of masse
ii) What do you know about Dalton's atomic theory.
iii) What do you know about different sizes of different a

Home Work : Hydrogen and oxygen combine in the ration of 1:8 mass to form water. What mass of oxygen gas would be req react completely with 3 gm of hydrogen gas?

- Which postulates of Dalton's atomic theory is the result of law of conservation of mass?

Reference Book :
Science NCERT book of class IX.

5/12/14

LESSON PLAN : 3

Pupil Teacher's Roll No. 1915

Class : IX

Date : 6/12/14

Subject : Physical Science

Duration : 30 min

Topic : Tissue

Period : VII

Content Analysis :

i) Defination of cell.
ii) Defination and examples of tissue.
iii) Different types of tissues.

Instructional Objectives :

i) To develope scientific attitude.
ii) To develope keen observation
iii) To develope creatiwity in the field of science.
iv) To develope knowledge about cell and tissue.

SPECIFIC OBJECTIVES

1. Knowledge : Pupil will be able to
   i) Recall the definition of cell and its types.
   ii) Recognise the cell.
   iii) Recognise the tissue.
   iv) Recognise different type of tissues.

2. Understanding : Pupil will be able to
   i) Explain the concept of tissue
   ii) Make differences between cells and tissues.

3. Application : Pupil will be able to
   i) apply this knowlege in their own life.
   ii) apply this function of cell in their life

4. Skills : Pupil will be develops their
   i) Observation Skills
   ii) Thinking Skills
   iii) Practical Skills
   iv) Experimental skills

Teaching Aids : Chalk board, Chalk, duster, Pointer, Chart etc.

Previous knowledge Test

Pupil Teacher's Activity	Pupil's Activity
"Good Morning" Students	"Good Morning" Sir
Can any say what is a Cell?	Cell is the smallest function and structural unit of all living organism.
What are types of organism based on cell?	Organisms are of two Types - ie unicellar and multicellular
What is a tissue?	No answer

Announcement of the topic :
Today we will discuss about the "Tissues".

T. Point	Pupil Teacher's Activity	Pupil's Activity	Chalk based work
Definition of Tissue	Tissue is a group of cells similar to structure and function. Each tissue performs a specific function effectively.	listening carefully	
Example of Tissue	Blood, Nerves and Muscles	Noting down	
Plant Tissue	Tissues which are present in plants are called plant tissue. These are of two types.		
Meristematic Tissues	It is the dividing tissue present in the growing region of a plant.	Students are noting down.	
Permanent Tissues	They are derived from meristematic tissues, once they loss the ability to devide. They are classified as simple and complex tissues.		
Animal Tissues	Tissues which are present in animal called animal tissue. These are of four types.	listening carefully	

T. Point	Pupil Teaching's Activity	Pupil Activity	CS
Epithelial Tissue	The protective tissue in animal body are called epithelial tissue. The skin, lining of mouth.		
Connective Tissue	The cells of this tissue are loosely spaud and embedded in an intercellular matrix Blood is a type of connective tissue.		
Muscular Tissue	Muscular tissue consists of elongated cells also called muscle fibres. This tissue is responsible for movement of our body.		
Nervous Tissue	The nervous tissue are highly specialised for being stimulated and then transmitting the stimulus very rapidly from one place to another.		

Evaluation :

i) What is the utility of tissue and describe its types.

ii) Name the tissue responsible for movement in our body.

Home Work :

i) What is the utility of tissue in multicellular organism.

ii) How are simple tissues different from complex tissue in plants?

Reference : NCERTE book of class IX.

7/12/14

LESSON PLAN : 4

Pupil Teacher's Roll No. 1915

Subject : Physical Science
Class : IX
Topic : Water

Date : 8/12/14
Duration : 30 min
Period : VIII

Content Analysis

i) Importance of water.
ii) Forms of water : Solid, Liquid and gases.
iii) Use of water.

Instructional Objectives

i) To develop the three forms of water.
ii) To develop the scientific attitude.
iii) To develope the creativity in the field of science.
iv) To develop keen observation.

Specific Objective

1) Knowledge : Pupil will be able to
   i) Recall the defination of water.
   ii) Recognize the things which contain in water.
   iii) Recognize different forms of water.

2) Understanding : Pupil will be able to
   i) make difference among different form of water.
   ii) define sources of water.
   iii) define uses of water.

3. Application : Pupil will be able to apply this knowledge in their daily life.

4. Skills : Pupil develops their
   i) Observation skills.
   ii) Thinking skills.
   iii) Practical skills.

Teaching Aids : Chalk board, chalks, duster etc.

Previous knowledge test :

Pupil Teacher's Activity	Pupil's Activity
"Good Morning" Students.	"Good Morning" Sir
Can anyone give some names of sources of water form which we get water.	Lake, River, Sea etc.
Give some uses of water ?	Drinking, Washing, Bathi
What are the forms of water?	

Announcement of the topic : Today we are going to discuss about the topic water.

Pupil Teacher's Activity	Pupil's Activity	C.B.W
Water: Water is the most important inorganic required by both plants as well as animals. It is necessary for the life of living organism.	Students are understanding well.	
Forms of water: Water exists in three forms is solid, liquid & gases.	Noting down in notebooks.	
Solid: Water freezes to ice at 0°c. It exists in the form of ice-bergs, glaciers, snow frost and as clouds formed of ice crystal. If we give heat to an ice then it will be started to melt and changed in water ie liquid.	Noting down in Notebooks	
Liquid: This is the solid form of water and this is the normal form in normal temperature. When the temperature of solid form of water will be increased and overcome the temperature 0°c. then it changed in liquid water. The normal temperature of water is 4°c. Liquid water remains three quarter of earth's surface ie lakes, rivers, sea and oceans.	Students are listening carefully	
Gases: If we give heat to normal water then it will be changed in gases at 100°c		

Uses of Water

i) Water is used for drinking purpose.
ii) It is used for cleaning.
iii) It is used for washing clothes, bathing & cooking.
iv) It is used for irrigation which is necessary for growth of plants.
v) It is used in industries.

Noting down in Note books.

Evaluation :

1) What are three forms of water ?
2) Write down any two use of water.

Home Work :

1) Give some examples of solid form of water.
2) Mention some more sources of water.

Reference : NCERT Book of class IX.

28/12/14

LESSON PLAN 5

Pupil Teacher's Roll No. 1915
Class : IX
Subject : Physical Science
Topic : Matter

Date : 9/12/14
Duration : 30 min
Period : IX

Content Analysis :

i) Definition of matter.
ii) States of matter ie solid, liquid & gaseous.
iii) Effect of change of melting point.

General Objectives :

i) They develop scientific attitude.
ii) They develop keen observation
iii) They develop creativity in the field of science.
iv) They develop scientific hobbies
v) They develop knowledge about principle theory and facts.

SPECIFIC OBJECTIVES

1) Knowledge : Pupil will be able to
   i) Recall definition of matter.
   ii) Recall states of matter.

2) Understanding Pupil will be able to
   i) Explain the concept of matter.
   ii) Make difference between different states of matter.

3. Application : Pupil will be able to

i) Apply this knowledge in finding some daily life problems.

ii) Explain the effect of change of melting point.

4. Skill : Pupil will be able to

i) Develop the observation skill.

ii) Develop the science skill.

Teaching Aids : Black board, Chalk, Duster, Chart, Pointer etc.

Previous knowledge : Pupil already know

i) Definition of matter.

ii) The state of matter

Pupil Teacher's Activity	Pupil's Activity
"Good Morning" students	"Good Morning" Sir
Can any one say what is matter	Everything in the universe is made up of material.
Can you give any example of matter ?	Stones, soil, water etc.
What is the states of matter	No response

Announcement of the topic : Well students today we will study about the matter and its states.

Presentation :

T. Point	Pupil Teacher's Activity	Pupil Activity
Explanation	Everything in this universal is made up of material is known as matter.	Listening carefully
Example	The airs we breath, the food we eat, stones, clouds, stars, plants and animals, even a small drop of water or a particle of sand - everything is matter.	Note down in their notebook
States of matter	There are three different states of matter lives i) Solid State ii) Liquid State iii) Gaseous State	Listening carefully
i) Solid	Solids have a diffinite shape, distinct boundaries, and fixed volumes it have negligible compressibility.	Listening & noting down carefully.
Example	Ice, Stone, Chalk, aluminium, soil etc.	
ii) Liquid	Liquids have no fixed shape, but have a fixed volume and taking up the shape of the container in which they are kept.	
Example	Water, Petrol, diesel etc.	Listening carefully

J. Point	Pupil Teacher's Activity	Pupil's Activity
iii) Gaseous Example	Gases have no fixed shape and no fixed volume. Vapour, air, oxygen etc.	Listening carefully
Effect of temperature	The temperature at which a solid melts to become liquid at the atmospheric pressure is called melting point. The state of matter can be changed into another state by changing the temperature.	Listening Carefully

Evaluation :

i) What is the definition of matter?
ii) What are the state of matter?
iii) What are the melting point ?

Home Work :

i) Learn the definition of solid state.
ii) Learn the effect of change of temperature.

Reference : ?

11/12/15

LESSON PLAN - 6

Pupil Teacher's Roll No. 1915

Class : IX

Subject : Physical Science

Topic : Archimedis Principle

Date : 12/12/15

Duration : 30 min

Period : III

Content Analysis

i) Statement of Archimedes Principle.

ii) Example of Archimedes Principle.

iii) Experimental : How the elongation of the string decreases as the stone is suspended in the water.

General Objectives

i) They develope scintific attitude.

ii) They develop scientific creativity.

iii) They will shaw knee interest.

iv) They develop knee observation.

Specific Objectives

1. Knowledge : Pupil will be able to
   i) Recall the statement of Archimedis Principle.
   ii) Recall the applications of Archimedis Principle.

2. Understanding : Pupil will be able to
   i) Explain the statement of the Archimedes Principle.
   ii) Explain the application of Archimedes Principle.

Teaching Point	P. Teacher's Activity	Pupil's Ac

Observation — You will find that the elongation of the string on the reading. However no further change is observed one the stone gets fully immersed in the water.

1. The extension once the stones flowered in water, as the result, upward force on the string.

2. Lactometers, which used to determine the purity of a sample of milk and hydrogen used for determining density of liquid.

Evaluation

i) Tell me what is buoyency ?

ii) What is the statement of Archimedes Principles ?

iii) What is the experiment of Archimedes Principles ?

14/12/14

LESSON PLAN - 7

Pupil Teacher's Roll No : 1915
Class : IX
Subject : Physical Science
Topic : Analyse the Gravitational force

Date : 15/12/14
Duration : 30 min
Period : IX

Contant Analysis :

i) Definition of gravitational force.
ii) Example of gravitational force.
iii) Definition of gravitation.
iv) Example of gravitation.
v) Difference between gravitational and centripetal force.
vi) Explain universal law of gravitation.
vii) Importance of universal law of gravitation.

General Objectives :

i) To develop scientific attitude among students.
ii) To develop keen observation.
iii) To develop scientific creativity.
iv) To develop scientific hobbies.
v) To develop knowledge about principles theory.

SPECIFIC OBJECTIVE

1. Knowledge : Pupils will be able to -
   i) Recall the defination of gravitation with example.
   ii) Recall the recognise that defination of gravitational force.
   iii) Recall the defination of centripetal force.
   iv) Recall & recognise the importance of the universal law of gravitation.

2. Understanding : Pupil will be able to

i) Explain the definition of gravitation.
ii) Write some examples of gravitation.
iii) Explain the defination of gravitation and centripetal force.
iv) Illustrate the universal law of gravitational.

3. Application : Pupils will be able to

i) How moon glues around the earth?
ii) Why, we do not see the earth moving through an apple?
iii) Why the earth does not move towards the moon?

4. Skill : Pupils will be able to

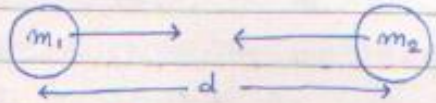
i) Develop experimental skill.
ii) Develop observation skill.
iii) Develop practical skill.

5. Teaching Aids : Chalk - board, Chalk, duster, pointer, chart etc.

Introduction

Pupil Teacher's Activity	Pupil's Activity
1. What is force?	Force is forced on this pull, hit
2. What is gravitational force	The force with which the earth attr each object toward force.
3. How moon goes around the earth?	Through gravitation
4. What is gravitation?	No response

Introduction Annoucement of the topic : Well Students ! today we will discuss about gravitation.

T. Point	Pupil Teacher Activity	P. Activity
Gravitation	The tendency of earth to attract the object toward itself is called "Gravitation".	Listen Carefully
Example	Take a piece of thread tie a small stone at one end hold the other end of the thread and whirl it round note the motion of the stone please the thread again, direction of motion of the stone.	Listen Carefully
Centripital force	The force that cause his accelerating on and keeps body moving along the circular path is acting towards the centre.	Writting
Gravitational force	Newton conclude that not only does the earth attract an apple and the moon but all object in the universal attracts each other.	
Universal law of Gravitation	Every objects in the universe attract every other object with a force which is proportional to the product of their masses and inversly proportional	Note down in the notebook
Use of teaching aids	 $F = \frac{G.m_1m_2}{d^2}$	
	$F \propto 1/d^2$ = Force is inversely proportional to the sq. of the distance	
	$\Rightarrow F \propto G.\frac{m_1m_2}{d^2}$ where G → Gravitational Constant	
	$G = 6.673 \times 10^{-11}\ N m^2 kg^{-2}$	

J. Point	Pupil Teacher's Activity	P. Ac
Importance of Universal Law of Gravitation	1. Force that finds us to the earth. 2. Motion of the moon around the earth.	Writing Listen

Evaluation :

i) Tell me, what is Gravitation ?
ii) Can anybody tell me, about Gravitation force ?
iii) Tell me what is the universal law of Gravitation.

Hoome Work :

i) Explain the Gravitation with example ?
ii) What is the difference between centripetal force & gravitational
iii) Define the statement of universal law of Gravitation ?
iv) Explain the importance of universal law of Gravitation ?

Refernce :

NCERT text book Science IX.

16/12/14

2. Understanding : Pupil will be able to

i) Explain, what happen when a force is applied to an object.
ii) Explain, the term force.
iii) Illistrate the e.g. of the force.
iv) Explain the meaning of the balanced forces.

3. Application : Pupils will be able to

i) Have the objects are moving ?
ii) What happen when some children try to push or pull a box on rec
iii) How the pulling or pushing object change their state of motion.

4. Skill : Pupil will be able to

i) Experiment Skill
ii) Observation Skill
iii) Practical Skill

Teaching Aids : Chalk board, Chalk, Duster, Pointer, Chart etc.

Previous knowledge :

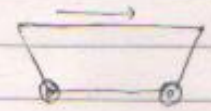
i) They formulate what happens when a force is applied to an obj
ii) They formulate about the term forces.
iii) They know some example of forces.

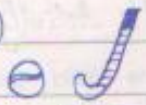
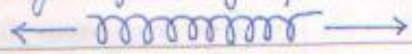
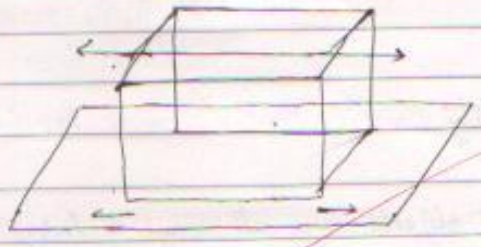
Introduction :

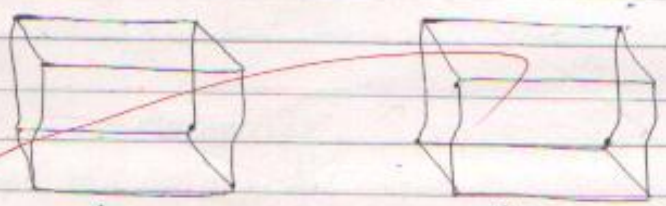
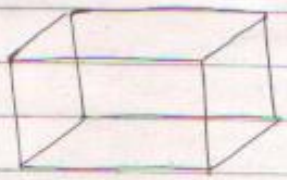
Pupil Teacher's Activity	Pupil's Activity
1. What happen when a force is applied to an object.	Pushing, hitting and pulling of objects are called way of bringing object in motion.
2. What happens when we ride a bicycle?	When we stop padalling the bicycle begins to slow.
3. What is the meaning of the term motion?	They everydays life, we see some object at rest and other in motion.
4. What is force?	Problemating Situation.

Announcement of the Topic : Well Students! today we will study about the the topic "force".

Presentation

Point	Pupil's Teacher's Activity	Pupil's Activity
Definition of force	Pushing, hitting of objects are all ways of bringing objects in motion. They move because we make a force act on them. This is called push or pull of an object is called the force.	listening carefully
Example	What is the e.g. of force.	The trolley along the direction to push it.
Use of teaching aids	i)  Trolley	
	ii) Pushing, pulling or hitting objects change their state of motion.	

T. Point	Pupil's teaching Activity	Pupil's A
Use of teaching Aids	a)  The hockey b)  Stick hits forward	Pay atte
Application	a) A spring expand by application of force. 	
Balanced forced	e.g. A wooden block on a horizontal table. Two opposite forces of the block. If we apply a force by pulling the string x, the block begin to moves to the right.	
Use of Teaching Aids	 Two forces activity on a wooden block.	Pay att and c careful
Unbalanced Forces	Pushing forces becomes bigger then the friction force there is an unbalanced force, then the object start moving.	

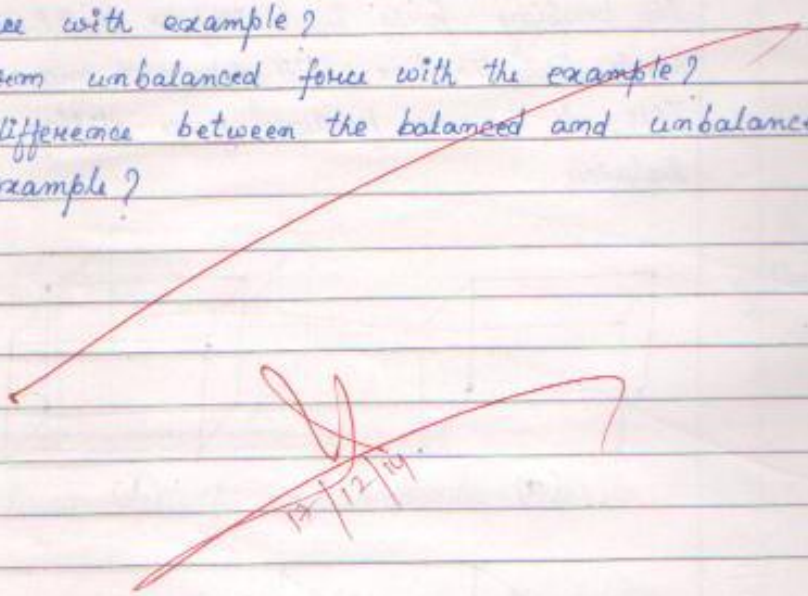
Teaching Point	Pupil Teacher's Activity	Pupil's Activity
Example	If we try to push a box on a rough floor. If they push the box with a small force the box doesnot move because of friction acting in a direction opposite to the push. This friction forces arises between two surfaces in contact in this case between the bottom of the box and floores rough surface. If balances the pushing force & therefore the box hards but the box still does not move. This is because friction force still balances.	
Use of Teaching Aids	 (a) (b)  (c)	

Evaluation :

i) Can anybody tell me what is the meaning of force.
ii) Tell me the example of force.
iii) Tell me, what is the meaning of the balanced force.
iv) Can anybody tell me, the example of balanced force.
v) Can anyone tell me, difference between the balanced force and unbalanced force.

Home Work :

i) Explain the force with example?
ii) Explain the terom unbalanced force with the example?
iii) What is the difference between the balanced and unbalanced forced with example?



Discussion Lesson

Teacher's Roll No. 1915 Date : 11/12/14

Class : IX Duration : 30 min

Subject : Physical Science Period - IX

Topic : Atomic Structure

Content Analysis -

i) Change particle in matter.
ii) Structure of atom.
iii) Bohr's model of atom.
iv) Thomson model of atom.

General Objectives -

i) To develop scientific attitude among students.
ii) To develop keen observation.
iii) To develop creativity in the field of Science.
iv) To develop scientific attitude among students.
v) To develop knowledge among principle theory and facts.

Specific Objectives -

1) Knowledge - Pupil will be able to -

i) Recall the defination of atom.
ii) Recognize the structure of atom on the basis of Bohr's model and Thomson model.

2) Understanding - Pupil will be able -

i) Explain the concept of atom.
ii) Make difference between models of atom.

3. Application : Pupil will be able to apply this knowledge in finding daily life problems.

4. Skill : Pupil will be able to
i) Develop the observation skill.
ii) Develop the science skill

Teaching Aids : Chalk board, Chalk, duster, chart, Pointer etc.

Previous knowledge Test :

Teacher's Activity	Pupil's Activity
• "Good Morning" Students	"Good Morning" Sir
• Can anyone say the defination of atom.	All matter is made up of v tiny particles called atom.
• Which particle atom contain?	Electron, Proton and Neutro
• What is the thomson model of atom?	No response.

Announcement of the topic : Well students today we will study the atom, structure of atom, Thomson's model of atom & model of atom.

Teaching Point	Pupil Teacher's Activity	Pupil's Activity
Atom	All the matters are made up of very tiny particle called atom.	Listen carefully
Structure of atom	The discovery of two fundamental particles ie. electrons and protons inside the atom, lead to the failure of this aspect of Dalton's atomic theory. It is necessary to know how they arrange in an atom. Matter made up of atom & molecules and atom made up of electrons, proton and neutrons.	Listening and noting down attentively Listening carefully
Thomson's model of atom	Structure of atom : Thomson proposed the model of an atom to be similar to that of a Christmas pudding. The electrons, in a sphere of +ve charge, where like currants (dry fruits) spherical christmas pudding. Thomson proposed that : i) An atom consist of a positively charged sphere and the electrons are embedded in it ii) The -ve and +ve charges are equal in magnitude so atom as a whole is electricily neutral.	Listening and noting down in their notebook
Rutherford's model	Atomic Structure : i) Most of the space inside the atom is empty ii) +ve charges & mass is concentrated in a very small space called nucleus.	

Teaching Point	Pupil Teacher's Activity	Pupils A
	iii) Electronics revolve around the nucleus in well defined orbits.	
Bohrs Model of atom	Neils Bohr put forward the following model of an atom :	
	1) Only certain special orbits known as discrete orbits of electrons, are allowed inside the atom.	
	ii) While revolving in descrete orbits the electrons do not radiate energy.	
	iii) These orbits or shells are represented by the letters K, L, M, N ..... or the number $n = 1, 2, 3, 4$.	
Use of Teaching Aid		

Evaluation : i) What is atom ?
ii) What is the structure of atom ?
iii) What is Thomson's model of atom?

Home Work : i) What is the structure ?
ii) What is the Bohr's model of atom ?
iii) What is the Thomson's model of atom?

Reference Book : NCERT Book of Class IX.