Physical Science Lesson Plan

Physics

Teacher's Name: xxxx **Date: xxxx** **Subject: English**
Class: **Section:** xxx **Period: xxxx**

Teaching-Learning Objectives: After teaching the students will be able to

- **Knowledge:**
  - recall the definition of energy
  - recall the meaning of kinetic energy and potential energy
  - recognize different forms of energy

- **Understanding:**
  - explain different forms of energy
  - Differentiate forms of energy

- **Application:**
  - give different examples related to forms of energy

- **Skill:**
  - Identify different forms of energy
  - Solve problems related to kinetic energy and potential energy

- **Attitude:**
    - discuss about different forms of energy and inter conversion of energy

- **Teaching Resources:**
    - charts, pictures, PPT, blackboard

Method and approaches: Lecture cum demonstration, inductive deductive approach, multimedia approach.

	Phase wise activities	**Teaching Learning Experiences**	**Specifications of learning process**
Phase-1	Foundation/stimulation And activation	Teacher: asks students different activities they do every day and asks them to share how they would feel when they continue to do the same activity for a long time and Why? Student: answers different activities like playing, Walking, running, cleaning, writing, reading etc. Also answers they feel tired when the same activity is continued for a long time because of energy loss.	Recalls
Phase-2	Introducing and presenting new information	Teacher now introduces the topic 'Energy' showing a small clipping of man lifting a heavy object and weak man trying to lift the same object Statement of aim: let us study about the concept of Energy.	Recall Explain Give examples

		Teacher explains the term energy with examples. Also, the S.I unit of energy and promote children share their experiences with examples from daily life. Teacher explains the different types of energy and discusses different forms of energy with examples. Teacher teaches problems related to kinetic energy and potential energy. Teacher also demonstrates some examples to show interconversion of energy. States the law of conservation of energy with examples.	Solves Understand and solve problems
Phase-3	Clarification of the points presented	Teacher illustrates different forms of energy and asks students to identify different forms of energy in the list, given on the chart. Teacher also asks recapitulatory questions to ensure students' understanding of learning points. Teacher assigns an activity where the students are required to classify the tasks into kinetic energy and potential energy and to reason out why they fall under that category. Asks student to give examples for inter conversion of energy and law of conservation of energy.	Understand answer Recall Understand and Reason out Give examples State

Phase-4	Practice/Review and independent practice	Teacher asks students to list out different forms of energy and types of energy in our daily life with reasons.	Students express
Phase-5	Closure	Teacher summarizes all the points i.e; the term energy, kinetic energy, potential energy, forms of energy and answers the queries asked by the students and clarify the doubts of the students.	Questions Think Express
Phase-6	Assign follow up activities	Teacher asks students to observe and list out any two examples for interconversion of energy from daily life and mention the merits of it.	Answer from experience

TEST MATERIAL

I . Completion type question

Instruction: Below is given an incomplete statement. Complete the same using appropriate answers.

There is relationship between Energy and _____ (ans. work)

II. Matching type questions

Instruction: Below are given the examples in list A and forms of energy in list B. Match the forms of energy with the examples given.

List A	List B
1.Glowing bulb	a. Light energy
2.Lifting an object	b. mechanical energy
3.working engine	c. electrical energy
4.photosynthesis	d. muscular energy

(Ans:1-c, 2-d, 3-b, 4-a)

III. Multiple Choice Questions

Instruction: Below you will find an incomplete statement followed by four choices. Indicate the best answer to complete the statement.

Two bodies A and B of equal masses are kept at heights of 'h' and '2h' respectively. Then the ratio of their potential energy is _____.

a) 2:1 b)1:2 c)1:1 d)2:2 (Ans:b-1:2)

IV. Sequential Arrangement Items

Instruction: Below is given the task to be completed while solving problems on types of energy. Arrange the tasks in appropriate sequence.

i) ½ x 0.01 x 100m/s x 100m/s

ii) Given mass of the bullet= 10g and speed = 100m/s

iii) K. E= ½ x mv^2

iv) 50 J

(Ans: ii, iii, I, iv)

v) Classification of Items

Instruction: Below are given some forms of energy. Identify the one which does not belong to the group.

a) Light energy b) muscular energy c) chemical energy d) stone energy

(Ans: d- stone energy because it is not the forms of energy)

OR

Below are given pair of words in the first part. Identify the word that fits the second word out of the choices followed by the question.

Running fan: Electrical energy: Burning coal :_____

Muscular energy, chemical energy, mechanical energy, light energy

VI) True/ False

Instruction: Identify the statement as true or false

If a body is kept at a great height, its potential energy will become less – T/F

(Ans: F Potential energy will become more)

Prepare a Unit Test for 25 marks on the same topic, along with Blue Print.