



SENTHIL COLLEGE OF EDUCATION

Accredited with NAAC "B" Grade

Affiliated to Tamil Nadu Teachers Education University, Chennai

PeriyavadaVadi, Vridhachalam-606104.

Cuddalore District, Tamil Nadu, India

MODEL LESSON PLAN – PHYSICAL SCIENCE

Student Teacher Name :	Name of the School :
Standard :	Guide Teacher Name :
Unit : Measurement of Length	Date :
Topic : Measurements	Duration : 45 Minutes

INSTRUCTIONAL OBJECTIVES : THE STUDENT

1. Defines the fundamental quantities and S.I. units.
2. Describes about meter scale.
3. Gives explanation of vernier caliper.
4. Draws a diagram of a vernier caliper.
5. Find out the Least Count of a vernier caliper.
6. Calculates accurately the length of an object for the given values.
7. Finds out error of a vernier caliper.

INSTRUCTIONAL RESOURCES REQUIRED

1. Vernier calipers.
2. Charts containing of the diagram of a vernier caliper and the diagram of the types of zero error.

PREVIOUS KNOWLEDGE OF LEARNERS

To identify and name of the objects
Meter Scale and Measuring tape

What are the uses of meter scale?
To measure the length

Content	Specification of behavioural outcomes	Learning Experiences	Evaluation
Length, Mass and Time SI-System International (Universally accepted system) Meter(m), Kilogram(Kg), Second(s), Ampere(A), Kelvin(K) etc	Defines	The teacher defines some fundamental quantities and SI units. Students write SI units and fundamental quantities in their notebook.	Define S.I units.
We can measure the length of an object correct to one millimeter with this scale. Because centimeter, millimeter divisions are marked on a meter scale.	Describes	The teacher describes meter scale. Students measure the length of a cloth by using meter scale.	Describe the uses of meter scale
The teacher displays a chart showing the diagram of a vernier caliper and explains about the parts of a vernier caliper-M-main scale, V-vernier scale, P-ratchet.	Explains	The teacher explains the parts of a vernier caliper. Students discuss the parts of the vernier caliper.	Explain the parts of vernier caliper
The teacher draws a diagram of vernier caliper on a blackboard	Draws	The teacher draws a diagram of vernier caliper. Students draw a diagram of vernier caliper in their notebook.	Draw a diagram of vernier caliper
$\begin{aligned} \text{Least Count} &= 1 \text{ M.S.D} - 1 \text{ V.S.D.} \\ &= 1\text{mm} - 0.9\text{mm} \\ &= 0.1\text{mm} = 0.01\text{cm} \end{aligned}$	Explains	The teacher explains the least count of a vernier caliper. Students calculate the least count.	Define Least count.

<p>A cylinder is held between the two jaws of the vernier calipers. The position of the zero of the vernier scale on the main scale is noted as a main scale reading. The vernier scale division which coincides with any one of the main scale divisions gives the vernier scale reading. Length of the object = M.S. Reading + (Vernier scale Reading * Least count).</p>	<p>Demonstrates</p>	<p>The teacher demonstrates the experiment to find out the length of a cylinder by using vernier caliper.</p> <p>Students observe the experiment and they do it themselves.</p>	<p>Give the formula used for calculating the length of an object</p>
<p>When the jaws of vernier calipers are in contact, the zero of the vernier scale coincides with the zero of the main scale. If the zero error of the vernier scale is on the right or left of the main scale is known as positive and negative error respectively.</p>	<p>Explains</p>	<p>The teacher explains zero error and its two types.</p> <p>By using vernier caliper students identify zero error, positive error and negative error.</p>	<p>Define Zero error</p>

FOLLOW UP ACTIVITIES

1. Draw a diagram of vernier caliper.
2. Find out diameter of a cylinder by using vernier caliper.

Signature of the Guide

Signature of the Student Teacher