



Srini Science Mind
Abdul Kalam Physical Science Group



NEW

9th class

PHYSICAL SCIENCE

MODEL LESSON PLAN



M.SRINIVASA RAO, SA(PS) AGKMHS GUDIVADA PH: 9848143855

MODEL LESSON PLAN

CLASS: 09

SUBJECT: PS

Name of the Teacher: M.Srinivasa Rao

Name of the School: A.G.K.M.H.School, Gudivada

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
MOTION	What is relative?	1	xx/xx/xxxx	xx/xx/xxxx	
	Distance and Displacement	2	xx/xx/xxxx	xx/xx/xxxx	
	Average speed and Average velocity	2	xx/xx/xxxx	xx/xx/xxxx	
	Speed and Velocity	2	xx/xx/xxxx	xx/xx/xxxx	
	Uniform motion	1	xx/xx/xxxx	xx/xx/xxxx	
	Non-uniform motion	1	xx/xx/xxxx	xx/xx/xxxx	
	Acceleration	1	xx/xx/xxxx	xx/xx/xxxx	
	Equations of uniform accelerated motion, problems	2	xx/xx/xxxx	xx/xx/xxxx	

Prior Concept/Skills:

1. How many types of motions are based on the path taken by the bodies in motion?
2. What is the rest of the object?
3. What is the S.I unit of speed?
4. How much distance from your home to school?
5. What is the shape of your traveling path?

Learning Outcomes:

1. Describes scientific discoveries and inventions beliefs regarding motion.
2. Differentiates distance and displacement based on their physical properties.
3. Differentiates speed and velocity based on their physical properties.
4. Seek answers to queries on their own about how does speed of an object change?
5. Calculates using the data given of distance, velocity and speed,
6. Draws graphs of distance-time
7. Analyses and interprets graphs of distance-time
8. Draws graphs of speed-time graphs.
9. Analyses and interprets graphs of velocity-time graphs.
- 10 Communicates the findings and conclusions effectively of distance-time and velocity-time graphs.

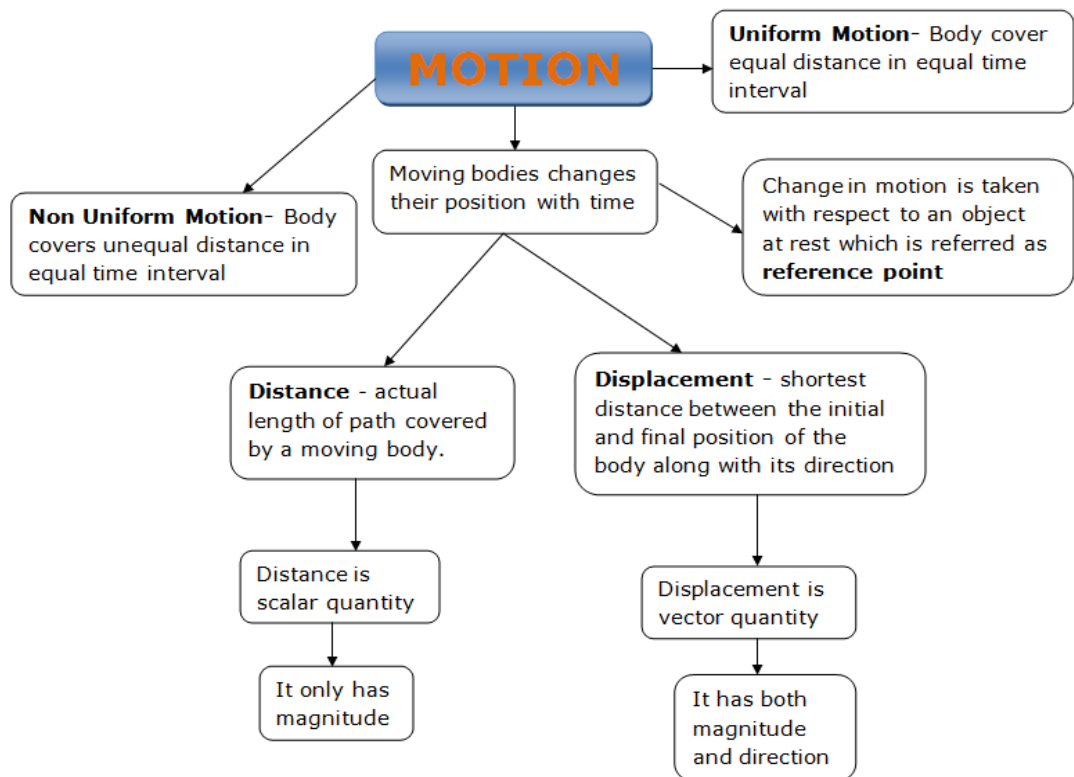
No. of Periods

- 1
1
1
1
1
1
1
1
1
1

11. Analyses and interprets graphs and figures of computing distance, speed, acceleration of objects in motion	1
12. Derives formulae, equations of motion from velocity-time graphs	1
13. Measures acceleration and velocity using appropriate apparatus, instruments, and devices.	1
14. Uses scientific convention, symbols and equations to represents initial velocity, final velocity, acceleration, displacement and time	

TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students are collecting information on types of motions in our daily life.
2. Students observe the shapes of paths during their traveling time

3. Students are able to interpret graphical data.
4. Students are able to understand the instantaneous speed/velocity and find its values in daily life.

Explicit Teaching/Teacher Modelling (I Do)	Group Work (We Do)	Independent Work (You Do)	Notes for:
<ol style="list-style-type: none"> 1. Discussion about relative terms 2. Discussion and examples of motion is relative 3. Discussion and conduct an activity of drawing path and distinguishing between distance and displacement. 4. Explain and drawing displacement vectors. 5. Discussion and explain the average speed and average velocity with help of pictures/graphs 6. Conduct activities of measuring the average speed and average velocity. 7. Explain speed and velocity 8. Observing the direction of motion of a body 9. Explain the uniform motion and draw the graph of distance –time 10. Explain the non-uniform motion and draw the graph of distance – time 11. Discussion and observing uniform circular motion. 	<ol style="list-style-type: none"> 1. Collect the information of types of motion 2. Group discussion on when distance becomes equal to displacement. 3. Solved the problems on average speed and average velocity. 4. Draw the shapes of graphs 5. Conduct an oral quiz on speed and Velocity. 6. Collect the information on uniform and non-uniform motions 	<ol style="list-style-type: none"> 1. Students give examples of relative terms? 2. Draw the paths of distance and displacement. 3. Identify the scalars and vectors 4. Write the definition of average speed? 5. Students complete the homework 6. Describe the motion of a body. 7. Draw the graph of distance – time 	<ol style="list-style-type: none"> 1. Write the relative terms in your daily life? 2. Define displacement? 3. Give an example of vector quantities? 4. How to represent a vector? 5. Write the formula of average speed? 6. Write the formula of average velocity? 7. What is the S.I unit of velocity/ 8. When the velocity is constant in the moving body? 9. What is acceleration of the object?

<p>12. Observing the motion of an object thrown into air</p> <p>13. Explain the concept of acceleration</p> <p>14. Derive and solve the problems on equations of uniform acceleration motion.</p> <p>15. Conduct an activity to find the acceleration and velocity of the object moving on inclined track in Lab.</p>	<p>7. Give an examples of motion where there is a change only in speed but no change in direction of motion?</p> <p>8. Solved the problems on motion.</p> <p>9. Discussion on conduct activity.</p>	<p>8. Solved the problems on Acceleration.</p> <p>9. Express the producer of the experiment in own way .</p>	<p>10. What is the average speed of a cyclist that 100m in 4 sec?</p> <p>11. Write the equations of uniform accelerated motion?</p> <p>12. Write the formula of acceleration and its units?</p>
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<p style="text-align: center;">Check For Understanding Questions</p> <p>1. Factual:</p> <ol style="list-style-type: none"> 1. How do we understand motion? 2. When does the average velocity becomes zero? 3. In uniform motion, Which physical quantity is constant? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> 1. When do the distance and magnitude of displacement becomes equal? 2. What happens to acceleration when an object moves in a uniform circular motion? 3. A particle is moving in a circular path of radius is 5m. What is its distance and displacement, when it complete one revolution? 4. An ant is moving on the surface of a ball. Does its velocity change or not? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> 1. Distinguish between speed and velocity. 2. Draw the distance – time graph when its speed decreases uniformly. 3. What do you mean by constant acceleration? 4. Describe an activity to find the acceleration and velocity of an object moving on inclined track. 	<p style="text-align: center;">TLM's (Digital+Print)</p> <ol style="list-style-type: none"> 1. Used prepared Quiz paper. 2. Utilized digital classroom. 3. Collect the distance-time and velocity-time graphs.
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Assessment:

1. The displacement of a moving object in a given interval of time is zero. Would the distance travelled by the object also be zero? Justify your answer.
2. Using following data, draw displacement – time graph for a moving object.

Time(s)	0	2	4	6	8	10	12	14	16
Displacement(m)	0	2	4	4	4	6	4	2	0

Find average velocity for first 4 seconds, for next 4 seconds?

3. Collect the information of speed changes when direction remains constant, direction of motion changes when speed remains constant and speed, direction simultaneously change.

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEADMASTER

VISITING OFFICER WITH REMARKS