

**LESSON 1 WHAT IS PHYSICS?**

1. Science
2. Scientific Method
3. Physics
4. Physical and Chemical changes
5. Newton & Einstein

LESSON 2 PHYSICAL MAGNITUDES

1. Motion
2. Referent point
3. Trajectory and types of trajectories
4. Quick definition of position, speed and acceleration
5. International System
 - a. Basic Units
 - b. Derived Units
6. Conversion factors
7. Speed and velocity
8. Quizzes
9. Lab activity

LESSON 3 LANGUAGE OF KINEMATICS

1. Vectors and scalars
2. Distance and displacement
3. Average speed and instantaneous speed
4. Acceleration
5. Introduction to the use of data tables, ticker tape diagrams and equations
6. Introduction to Uniform Motion and Uniformly Accelerated Motion
7. Crossword puzzle

LESSON 4 DESCRIBING MOTION

1. Kinematics equations
2. Uniform Motion
3. Uniformly Accelerated Motion
4. Short introduction to Free Fall
5. Numerical Exercises & Graphs' interpretation
6. ICT activity
7. Lab activity

Lesson structure

- PowerPoint

- to introduce the lesson
- to support the lesson

PowerPoint slides are useful because coloured images are always more attractive than black and white ones and even more on a big screen.

- Handout contains both:

- theoretical bases for the students (not too much in order to simplify the subject)
- practical application
 - students' activities related to theory
 - Lab activities
 - Quizzes
 - ICT activity

Students work mainly in pairs to solve tasks and then in plenary to correct and get new ideas.

Internet Sources

Wikipedia

<http://ca.wikipedia.org>

The Physics Classroom

<http://www.physicsclassroom.com/>

The Physics Classroom Tutorial

<http://www.glenbrook.k12.il.us/gbssci/phys/Class/1DKin/1DKinTOC.html>

Physics for beginners

<http://physics.webplasma.com/physicstoc.html>

Science-Class.net

http://www.science-class.net/Physics/force_motion.htm

Interactives – Park Physics

<http://www.learner.org/interactives/parkphysics/>

Fear of Physics

<http://www.fearofphysics.com/>



Feedback

Constructive comments welcome ipont@xtec.cat