Tripoli Evangelical School

# Curriculum

**Class :** Grade 8
**Subject:** Physics
**Teachers name:** Ziad Mina

**Cycle:** Intermediate
**Textbook :** National Text Book
**Coordinator :** Dr. Jamal Bitar
**HOD:** Mrs. Roula Ghantous

| Unit | Objectives |
|---|---|
| **Unit 1 : Mechanics** | • Define the motion of an object<br>• Define the trajectory of a moving object<br>• Distinguish between instant and duration<br>• Define the average speed<br>• Define the instantaneous speed.<br>• Know that a force represents a mechanical action exerted by a body on another body<br>• Name the mechanical effects of a force<br>• Identify the characteristic elements of a force<br>• Know the SI unit of the force<br>• Represent a force by a vector.<br>• Distinguish between a contact force and a force acting from a distance<br>• Know the usefulness of the force of friction<br>• Define and characterize the weight of a body<br>• Relate the weight of a body to its mass<br>• Distinguish between the weight of a body and its mass. |
| **Unit 2 : Waves** | • Characterize a vibratory motion<br>• Characterize a periodic wave<br>• Know that a wave carries energy<br>• Identify the vibratory nature of sound<br>• Know that sound does not propagate in vacuum<br>• Distinguish between infrasound ,audible sound and ultrasound<br>• Identify the physiological qualities of sound<br>• Know that sound is reflected by obstacles<br>• Know that sound can be harmful<br>• Know that an electromagnetic wave is due to an electric perturbation<br>• Know that light is an electromagnetic wave that propagates in vacuum<br>• Define a transparent medium<br>• Know the value of the speed of light in vacuum<br>• Identify the different parts of electromagnetic spectrum |

| Unit | Objectives |
|---|---|
| **Unit 2: Waves** | • Name some applications of electromagnetic waves.<br>• Define dispersion of white light and show evidence of it<br>• Define the scattering of light<br>• Explain the vision of illuminated object by scattering of light<br>• Relate the color of a body to the light it diffuses<br>• Define the role of a light filter. |
| **Unit 3 : Optics** | • Distinguish between transparent bodies and opaque bodies<br>• State the principle of rectilinear propagation of light<br>• Represent the path of ligh by a light ray<br>• Explain the phenomenon of the shadow<br>• Distinguish between reflection and scattering<br>• State the law of reflection related to the angles of incidence and reflection<br>• Characterize the image of an object given by a plane mirror. |