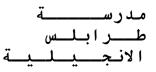
## Tripoli Evangelical School for Girls and Boys

Grade 7 Physics Curriculum 2018-2019





| Title  | Competency         | Learning Objectives   |
|--------|--------------------|---|
| Matter | Solids and Liquids | Identify some of the characteristics of solids<br>Identify some of the characteristics of liquids<br>Distinguish solids from liquids<br>Apply the property of the free surface of a liquid  |
|        | Volume             | Acknowledge that a liquid like a solid has a<br>definite volume<br>Acknowledge that the volume of the liquid<br>displaced is equal to the volume of the immersed<br>solid<br>Acknowledge that the m <sup>3</sup> is the SI unit of volume<br>Convert the m <sup>3</sup> to other commonly used units of<br>volume<br>Use the graduated cylinder<br>Measure the volume of a solid and that of a liquid<br>Calculate the volume of a solid of simple<br>geometric shapes<br>Estimate the volume of an object and express it in<br>a convenient unit of volume |
|        | Mass and Density   | Acknowledge that mass is measured using a<br>balance<br>Acknowledge that the kg is the mass SI unit<br>Convert between the kg and other commonly used<br>units<br>Use a balance<br>Measure the mass of a solid and that of a liquid<br>Calculate the density of a substance<br>Estimate the mass of an object with the<br>appropriate unit  |
| Title  | Competency         | Learning Objectives   |
|        | Gaseous State      | Recognize some characteristics of the gaseous state   |

|       |                           | Define the term fluid<br>Verify some characteristics of gases through<br>experimental evidence<br>Distinguish a gas from a solid and a liquid   |
|-------|---------------------------|---|
|       | Gas Pressure<br>SUSPENDED | Acknowledge that gases exerts pressure<br>Acknowledge that the Pascal is the unit of<br>pressure in SI<br>Convert the Pascal into other commonly used<br>units of pressure<br>Use the barometer to measure atmospheric<br>pressure.<br>Use the manometer to measure the pressure of a<br>confined gas.  |
|       | Constitution of<br>Matter | Acknowledge that matter is made up of small<br>particles in constant motion<br>Acknowledge that between the particles of matter<br>there are empty spaces<br>Compare the distances between the particles of a<br>matter in its different states<br>Explain the phenomenon of diffusion<br>Explain the incompressibility of solids and liquids |
|       | Transfer of Heat          | Acknowledge that heat is the energy exchanged<br>between a body and its surroundings<br>Acknowledge that the different ways of the<br>transfer of heat<br>Recognize the Celsius scale of temperature<br>Acknowledge that heat changes the temperature of<br>a body<br>Use the thermometer correctly   |
| Title | Competency                | Learning Objectives   |
|       | Change of State           | Acknowledge that heat may change the physical state of a body   |

| Title       | Competency               | between two points in an electric circuit<br>Learning Objectives  |
|-------------|--------------------------|---|
|             | Electric<br>Measurements | Acknowledge that the current has a conventional<br>direction<br>Acknowledge that the glow of a lamp increases<br>with the increase of the electric current passing<br>through it<br>Acknowledge that the ampere and the milli-<br>ampere as units of an electric current<br>Acknowledge how to measure the electric current<br>in a circuit<br>Acknowledge how to measure the voltage |
| Electricity | Electric Circuit         | Recognize the constituents of an incandescent<br>lamp<br>Acknowledge the characteristics of a dry cell<br>Distinguish a conductor from an insulator<br>Acknowledge the adaption of a dry cell to a lamp<br>Build and draw a simple electric circuit   |
|             | Expansion                | Determine the melting point of ice and the boiling<br>point of water.<br>Acknowledge that bodies expand differently<br>according to their nature and their physical state<br>Acknowledge that the pressure of a confined gas<br>increases when heated<br>Acknowledge how to graduate a thermometer  |
|             |                          | Define fusion, solidification, boiling and<br>condensation<br>Acknowledge that the change of state takes place<br>at constant temperature<br>Distinguish evaporation from boiling<br>Acknowledge that the boiling point increases with<br>pressure.<br>Acknowledge that the change of state is<br>accompanied by a variation in the volume  |

| SUSPENDED                    | Acknowledge that the voltage resulting from the<br>grouping of many cells in series is the sum of the<br>individual voltages<br>Build a circuit containing many lamps in series<br>Build a circuit containing many lamps in parallel<br>Acknowledge how to group some cells in series                                 |
|------------------------------|---|
| Electric Safety<br>SUSPENDED | Acknowledge how to protect yourself from<br>electrocution<br>Acknowledge how to protect electric installations  |
| Magnets<br>SUSPENDED         | Recognize magnets and magnetic substances<br>Acknowledge that Earth is considered a huge<br>magnet<br>Identify the poles of a magnet<br>Acknowledge that the interactions between<br>magnetic poles   |
| Coils<br>SUSPENDED           | Acknowledge that a coil carrying a current<br>behaves like a magnet<br>Acknowledge that the names of the two faces<br>depend on the direction of the current<br>Recognize the principle of an alternator<br>Recognize the principle of an electric motor<br>Construct an electromagnet<br>Construct an electric motor |