

| LEVEL | UNIT | APRENDIZAJE ESPERADOS / 2011 | CRITERIA |
|-----------|---|---|----------------------|
| 8th grade | 1 ATOMIC MODELS AND IDEAL GASES | <ul style="list-style-type: none"> Understand the internal structure of matter based on the atomic models developed by scientists through time. Explain the scientific knowledge is temporary and changes as new evidence is found. Describe the usefulness of atomic models and atomic theory to explain physical and chemical changes in matter. Explain, applying atomic models, the basic process of emission and absorption of light. Identify characteristics and property of gases and the variables affecting their behavior. State problems related to the behavior of gases in different real life situations and propose solutions. Establish relationship between volume, pressure, temperature and amount of substance in behavior of gases, according to the ideal gas laws: Boyle's, Guy Lussac's, and Charles'. Describe the usefulness of KMT to explain gas and liquid behavior. Plan and carry out a scientific investigation on the behavior gases. | C, D, E AND F |
| | 2 ELECTRICAL PHENOMENA | <ul style="list-style-type: none"> Explain basic phenomena: electrical and thermal conductivity. Identify the role that electrical forces have on the structure of the atom, molecules as well as electrifying and electrification. Regarding electrical phenomena, describe some of the changes that human knowledge has experienced when new evidence has been gathered. | A B C |
| | 3 DYNAMIC EARTH | <ul style="list-style-type: none"> Describe cyclical rock, fossil, and mineral formation. Identify the transformations that earth has experienced in geological time. Explain, using notions of energy, force, and movement, some natural phenomena such as storms, tides, earthquakes, and volcanic eruption. | A, B, C |
| | 4 CELL STRUCTURE AND NUTRITIONAL REQUIREMENTS | <ul style="list-style-type: none"> Generally describe an animal and plant cell in terms of its organization, structure, and function; and how cells relate to the life processes of the organism. Explain how cells obtain nutrients and get rid of waste and how this relates to an integrated functioning of several organ systems: respiratory, digestive, circulatory, and renal. Understand the basic components of a balanced healthy diet: nutritional requirements of individuals according to their energy spent, state of health, age, etc. Be able to propose a balanced diet considering the complex requirements different people have. Make scientific hypothesis that can be tested in experiments related to an organisms nutritional requirements. | A B C D E F |
| | 5 ORIGIN AND EVOLUTION OF LIFE | <ul style="list-style-type: none"> Describe the main theories and facts that support and refute the origin of life and its impact on the scientific community and society. Describe the progressive emergence of life forms becoming more complex through geological time. Understand that scientific knowledge is constantly changing. | A B C E |