

Cycle 3



FASSV Science Curriculum

Period 1 - The child's body and health education

Cycle 3 Program	Lessons and activities : some examples	Goals to attain : some examples
<ul style="list-style-type: none"> ❖ How the body moves in sport and work activities ❖ Nutrition ❖ Long and short-term consequences of hygiene practices (good or bad impact of our behavior) ❖ First aid basics 	<p>CE2/3rd grade: Nutrition: the 6 food groups. Oral hygiene (mouth and teeth). Cavities are caused by bacteria.</p> <p>Body and motion : skeleton, bones</p> <p>CM1/4th grade: Nutrition. Digestion: the alimentary canal and the gastric juices. Mechanical and chemical transformations.</p> <p>Excretion: how kidneys work.</p> <p>How sleeping well promotes growth.</p> <p>CM2/5th grade: Nutrition (blood circulation, breathing, hygiene practices related to both systems) How blood works in fighting germ aggressions.</p> <p>First aid basics.</p>	<ul style="list-style-type: none"> -Understand that teeth are living organisms which can be harmed by bacteria. -Understand that the skeleton shapes the body and protects internal organs. Know that bones are living organisms. -Be familiar with anatomy and the way the digestive, respiratory and circulatory systems work. -Understand the importance of excretion and sleep. -Be introduced to the concept of organisms and to the possibility of individual variations in how they work. -Understand elementary defense mechanisms used by the body to fight off germs.

Period 2 - Matter and Energy

Cycle 3 Program	Lessons and activities : some examples	Goals to attain : some examples
<ul style="list-style-type: none"> ❖ Water Boiling, evaporation and freezing; the cycle of water in nature. ❖ Liquid, gaseous and solid states. ❖ Examples of mixes and solutions that can be made in a classroom environment. ❖ Quality of air and water, ❖ Simple examples of what can produce energy; how energy is used and conserved. 	<p>CE2/3rd grade: At what temperature does ice melt? At what temperature does water boil? Evaporation and condensation. Soluble or not? Let's mix liquids.</p> <p>CM1/4th Grade: changes in state (cycle of water in nature, how matter dissolves...) Man and his environment (water quality, waste...) Energy (sources and production)</p> <p>CM2/5th grade: Energy; how it is used and conserved. Air quality (atmosphere, various kinds of gasses, pollution)</p>	<ul style="list-style-type: none"> - know at what temperature water boils and ice melts. - Concept of conservation of matter. - discover a few basic principles about the dissolving process: not all solids are soluble. How non-soluble solids are recovered through settling and soluble solids are recovered through evaporation. -be aware that polluting water or air impacts their quality. Pollution is created by toxic substances that can be chemical or natural. -know what a water treatment plant is. -be familiar with different sources of energy: oil, wind, sunlight. -know that energy is not created, but produced by transformation. - understand why energy must be conserved; learn how it is possible to conserve energy in several areas of our environment. - identify the different elements that air is made of. Identify the main causes of pollution and some of their consequences on health and the environment.

Period 3 - Objects and Materials

Cycle 3 Program	Lessons and activities : some examples	Goals to attain : some examples
<ul style="list-style-type: none"> ❖ Electrical connections : <ul style="list-style-type: none"> - Execution of simple electrical circuits using batteries only. How a battery works; its 2 poles. - Elementary safety principles regarding goods and people when using electricity. ❖ Mecanisms : <ul style="list-style-type: none"> - Levers and scales: how to achieve balance. - Mechanical and electromechanically objects; transmission and transformation of movement. ❖ Objects and products : <ul style="list-style-type: none"> - How to assemble and disassemble simple technical objects. - Technology used to make common objects or models. 	<p>CE2/3rd Grade: Electricity (circuits using batteries or light bulbs, conductors and insulators).</p> <p>CM1/4th Grade: Balance de Roberval and other kinds of scales.</p> <p>-levers Objects in motion (transmission et transformation of movement)</p> <p>CM2/ 5th Grade: Movement : Gears et reduction ratios. Electricity (electromagnets, engines...)</p>	<ul style="list-style-type: none"> -concepts: terminals of a bulb, poles of a battery. -concept: open or closed circuit. - know how a lever works: rotation axis, motive power and gen resistance. -the study of scales helps understand the concept of mass; the gram as a mass unit. -understand how a bicycle works: the chain transmission moves the chain, the chain transmits the movement, etc... -understand the dynamics of a gear system. -assembling serial and parallel circuits. -understand what a magnet is.

Period 4 - The Sky and the Earth

Cycle 3 Program	Lessons and activities : some examples	Goals to attain : some examples
<ul style="list-style-type: none"> ❖ The apparent motion of the Sun: rotation of the Earth upon itself; cardinal points and the use of a compass; the solar system and the Universe; spatial adventure. ❖ Light and shade. ❖ Measuring time: units and principles; a few devices used to measure time: clepsydra, sundial, mechanic and electronic devices. ❖ Earthquakes and volcanic eruptions. 	<p>CE2/ 3rd Grade : Light and shade Earth strata and volcanoes.</p> <p>CM1/4th Grade: Compass and orientation cardinal points). Time and stars (apparent motion of the Sun: rotation of the Earth, sundial...)</p> <p>The solar system and the Universe.</p> <p>CM2/5th Grade: Measuring Time clocks, clepsydras...) Spatial adventure.</p> <p>The earth as an active planet (volcanic eruptions and earthquakes)</p>	<ul style="list-style-type: none"> - Be familiar with the most common instruments which help us to know where we are in time or to measure duration. -Understand that the way each instrument works is related to a pattern based on a repetitive or regular sequence. -Learn about Earth dynamics and some related phenomena, such as volcano activity and earthquakes. - Learn about stars that are visible in the sky (their nature and dimensions). -Be aware of how immense the Universe is and of the considerable distances between its elements. - Know some important landmarks in the conquest of space. -Identify the problems related to human life in space. -Learn about space stations and satellites (their various uses and their maintenance)

Period 5 -

Cycle 3 Program	Lessons and activities : some examples	Goals to attain : some examples
<ul style="list-style-type: none"> ❖ Development of a living organism (animal or vegetal): birth, growth, maturity, old age, death. ❖ Overview of animal reproduction; sexuality and reproduction in humans. ❖ Ecology and conservation in the context of immediate environment: role and place of living organisms, concept of food chains and networks. ❖ Tracing the evolution of living organisms: a few typical fossils. 	<p>CE2/3rd Grade: development of living organisms; review: oviparous et viviparous. Care given to the young. Metamorphosis: butterfly and frog Milieus and organisms (diversity, balance, classification of animals...) CM1/4th Grade: Animal birth: the colt and birds as examples. What do dead leaves turn into? Study of an environment: rainy tropical forest. CM2/5th Grade: Reproduction How a baby develops in the womb. Birth. How living organisms came to exist on the Earth. Fossils.</p>	<ul style="list-style-type: none"> - know that some young creatures need their parents to survive while others survive on their own. - know that some animals change shape as they grow. - be aware that the living organisms belonging to a particular milieu live in harmony in that milieu. - The role of man; considering some animals as harmful should be questioned. - Learn that an animal always comes from an egg and that the egg is a produce of fecundation (ovum and spermatozoid coming together) - understand the importance of the subtle and inconspicuous role of decomposing agents: how living organisms are turned into mineral salts which are needed by plants containing chlorophyll. - Learn the principles of external and internal fecundation. -Learn how the mother provides food to the embryo and then the fetus. -be familiar with the different stages of development in a baby. - understand that living organisms have not always existed. - Know that geologists are able to « make fossils talk » -use them as stepping stones to reconstructing the past.

