

COL
2011
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COLEGIO SAN AGUSTÍN
NIVEL MEDIO

AGUSTÍN
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TEACHER: Ma. Soledad Guida
YEAR: 1° AÑO
A, B y C

BIOLOGY YEARLY PLAN

GENERAL AIMS:

- To interpret and analyse daily life phenomenon and facts through the sciences that make up the area, enhancing value.
- To foster debate and collaboration among peers.
- To learn concepts through lab practice and investigation.
- To search for different technological tools available.
- To acquire a sound scientific culture, resulting in more responsible citizens.

SKILLS TO BE DEVELOPED:

- Communication (C)
- Critical thought, initiative and creativity (CT, I&C)
- Analysis and comprehension of information (A&CI)
- Problem solving (PS)
- Social interaction, collaborative task (SI&CT)
- Responsible citizens (RC)
- Rating art work (RAW)
- Self care, personal development, independent learning (SC, PD & IL)

UNIT/NÚCLEO	AIMS	CONTENTS	SKILLS/ ACTIVITIES
E N° 1/ NP 1 Y 2 "LIVING	<ul style="list-style-type: none"> Name, describe, analyze and explain the characteristics of living organisms. Define and describe the Binomial 	NÚCLEO 1: The common denominator 1.1.1. Characteristics of	*Simulation of an experiment to determine the organisms' needs (Science bits- Vital processes) *Lab practice with earth worms

ORGANISMS, UNIT AND DIVERSITY"	<p>System.</p> <ul style="list-style-type: none"> ◆ Define, characterize and classify different systems. Link them to human beings ◆ Analyze and classify the different levels of organization. ◆ Understand and explain the cellular theory. ◆ Handle, investigate and classify different cells using the light microscope. 	<p>living organisms. Functions.</p> <p>1.2.1. Cells: structures and functions.</p> <p>1.2.2. Types of cells: Prokaryotes and Eukaryotes, Animal and Vegetal cells</p> <p>1.2.3. Dichotomous Key</p> <hr/> <p>NÚCLEO 2: From unicellular to multicellular.</p> <p>2.1.1. The chemistry of life.</p> <p>2.1.2. The multicellularity.</p> <p>2.1.3. Different cells. Tissues, organs and systems.</p> <p>2.1.4. Common and specific organelles.</p>	<p>*Determining the different cells through Dichotomous keys.</p> <hr/> <p>*Microscope simulator with slides of blood, cheek cells, muscle and plant cells. Sketching of cells. Questionnaire.</p>
Nº 2 NP 1 y 2 REPRODUCTION	<ul style="list-style-type: none"> ◆ Define and compare the sexual reproduction with the asexual one. ◆ Discuss the advantages of sexual and asexual reproduction among 	<p>NÚCLEO 1 Increasing the species diversity</p> <p>2.1.1. Reproduction among living organisms.</p>	<p>*Simulation of Redi experiment on spontaneous generation.</p> <p>*Analysis of videos on asexual reproduction.</p>

	<p>species</p> <ul style="list-style-type: none"> ◆ Describe and compare the female and male reproductive body structures. ◆ Describe the menstrual cycle. ◆ Describe fertilization, the development of the zygote and its implantation. ◆ Know the pregnancy and delivery cares. ◆ Describe the development of primary and secondary sexual characters. ◆ Know, describe and compare different anticonceptive methods. ◆ Compare assisted fertilization methods ◆ Diferenciate and describe sexual transmitted diseases. ◆ Define health according to the OMS. ◆ Know the body changes during adolescence. 	<p>2.1.2. Asexual reproduction. Examples and types of reproduction.</p> <p>2.1.3 Sexual reproduction: gamets and fertilization.</p> <p>2.1.4. Plants reproduction.</p> <hr/> <p>NÚCLEO 2: Human being reproduction. Growth, development and responsibility.</p> <p>2.2.1. Male and female reproductive systems, estructuras and functioning.</p> <p>2.2.2. Embryo development in human beings.</p> <p>2.2.3. Puberty and adolescence: growth and development. Anatomical and physiological changes at different vital stages.</p> <p>2.2.4. Crontraceptive methods.OMS clasification. Effectiveness and usages.</p> <p>2.2.5. Sexual and reproductive health enhancement.Prevention and care of sexually transmitted diseases.</p>	<hr/> <p>*Videos analisys on adolescence changes.</p> <p>*Analysis of advertising camp about different types of prevention.</p> <p>*Comparative charts on sexually transmitted diseases.</p>
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<p>E N° 3/ NP 1 Y 2</p> <p>UNIVERSITY OF LIVING ORGANISMS"</p>	<ul style="list-style-type: none"> ◆ Link the biological diversity to the evolutive changes. ◆ Clasify and give examples of the three main domains. (Archea, Bacteria y Eukaria) ◆ Identify the living organisms diversity at present as a result of a long process deriving from a common ancestor. ◆ Name the main characteristics of viruses. 	<p>NÚCLEO 1: Clasifying organisms.</p> <p>3.1.1. Taxonomy: Binomial classification.</p> <p>3.1.2. Genealogical trees.</p> <p>3.1.3. The five kingdoms</p> <p>NÚCLEO 2:</p> <p>3.2.1. Latest classification in three domains: Archaea, Bacteria y Eukarya.</p> <p>3.2.2. Viruses.</p>	<p>* Classification exercises using different criteria.</p> <p>* Analysis of "Walking with moths" video: main facts according to different geological periods, the passage to pluricellularity, and adaptation and kingdom classification.</p> <p>* Project work among Art, geology and biology</p>

Methodological strategies:

- Following the instructions given by the teacher, students will carry out different activities (in groups or individually). The results of the activities will be shared in class, so they will be able to assess their own productions.
- Complex topics will be explained by the teacher.
- Some theoretical topics will be explained through lab practice.
- Biology material will be required on attending lessons. (books, folders in which classwork will be attached). Materials and articles and lab tasks will be asked for accordingly.

Technological Projects:

Mindomo will be used to build up genealogical trees (1st and 3rd term).
Simulations will be used to recreate different topics.

Interdisciplinary projects:

Geography- Biology project. Eje 3, third term

Evaluation and class promotion

Grades:

Grades will be divided into two parts: Classwork and Tests. The teacher may require the students to hand it in at any time during the term, it must be complete and in good conditions, since they might be checked without previous notification. It will be included in the "attitudinal one"

Lab practice: commitment and behaviour will be graded during lab experiments.

Each group will be assigned a lab- board. This and all the elements used during the task will be the responsibility of each group. The lab report will be evaluated by the teacher.

Tasks fulfilment: If the students fail to accomplish daily tasks, the teacher might ask them to give an oral lesson with the corresponding mark.

Materials: Students must have all the required materials, if not, they won't be able to fulfill their tasks and consequently lose points. Overpoints, lab protocols and other documents must be printed and brought to class if required.

Oral tests: will be done as learning follow-ups between written tests. These might also be taken with or without previous notification.

Written tests: there will be at least 2 written tests per term, announced within two weeks in advance. The passing mark will be 50% of the contents. Those students who are absent to the test and don't bring the corresponding certificate will not have another chance. Those with a certificate will be evaluated during the following week using a different exam. Written tests must be legible. Those students caught cheating, will get a one (1) and will be asked to hand in a written test.

ject the following week.

Attitude's mark: Each student will begin with a grade of 10 and it will be her/his responsibility to maintain it throughout the year. To achieve this the teacher will consider the class materials, correct use of specific language, active involvement as well as the understanding of the topics in a respectful and orderly way. Class participation, oral tests, folders and general behaviour in class will be considered to build up the attitude's mark.

timetable:

Diagnostic time: March

Unit N° 1: March-May

Unit N° 2: June-August

Unit N° 3: September-December

Compulsory book:

Science Bits. Digital Repository: <http://www.science-bits.com/en/>