AUTHOR / SCHOOL	Inara Sprindžuka, Education Department /Inese Barkovska, Daugavpils State Gymnasium, Latvia
DATE OF CLIL ACTIVITY	12.09.2016
CLASS / NUMBER OF STUDENTS	10, 29
SUBJECT	Biology
CLIL LANGUAGE	English
CLIL Activity Topic	Cell- the basic building block of organisms.
CLIL Activity Time	40 minutes
Language Objectives	- To be able to distinguish living/non-living things using given language tools; - To be able to describe a structure.
Language used for communication (BICS)	It is……., because, It is not …… , because, It has …/It does not have ….
Content Language (CALP)	Cell, movement, respiration, sensitivity, nutrition, excretion, reproduction, growth.
Content Objectives	- To refresh students' prior knowledge in biology about cells.
Materials / Resources used	1. Science Revision Guide, higher level. Penny Johnson, Sue Kearsey, Damian Riddle, Pearson. 2.Key stage three. Science. The revision Guide(Levels 5-7) by Paddyn Gannon, 2007.

CLIL Activity - procedure	1. In-class talk about the properties of living organisms. Answering questions, making notes. - What properties do living organisms have? - How to distinguish them from non-living things? Drawing conclusions. (An organisms can be considered alive if it possesses all properties of living beings: movement, growth, nutrition respiration, excretion, sensitivity and reproduction).(Handout*) - What is the basic building block of organisms? - Can we say that cells possess all properties of living beings?(We have unicellular and multicellular organisms, and they have all these properties). - Can we say that ANY thing that has cell/s is an organism?(Yes). 2. Watching a short video*. https://www.youtube.com/watch?v=gFuEo2ccTPA (Listening and reading activity) - What do you think after watcing this? 3.Presentation about cells. (Students prepare presentation beforehand.) Students watch, make notes. After presentation students ask questions to presenters and evaluate it. 4.Conclusive talk. Teacher asks questions: - What did you get to know today? -Was there anything new for you? - Was the language/content easy/difficiult/too difficult for you?
Performance Assessment	This was na introductory lesson, that is why students were asked to recall what they know and remember. Besides, there were quetsion for creative thinking either.(For insstance- „Why do we not say that atoms are the basic building blocks of organisms?“)
TEACHER´S NOTES	This is the first lesson in biology in senior classes in CLIL. The teacher is the English language teacher.

Handout*for students

Life Processes and Cells

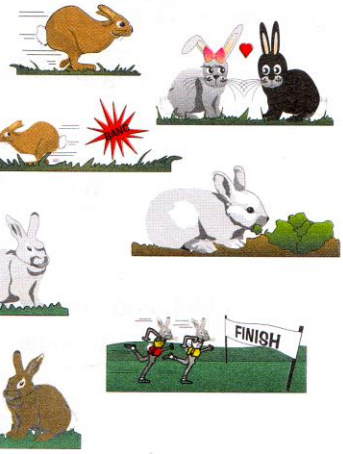
Dead or Alive?

There are seven things that all living organisms do - these are called "*Life Processes*".
An organism is *only alive* if it does *all seven life processes*.

The Seven Life Processes

— Remember by the jollyism: "*MRS NERG*"

M — Movement	*Moving* parts of the body.
R — Reproduction	Producing *offspring*.
S — Sensitivity	*Responding* and *reacting*.
N — Nutrition	Getting *food* to stay alive.
E — Excretion	Getting rid of *waste*.
R — Respiration	Turning *food* into *energy*.
G — Growth	Getting to *adult* size.



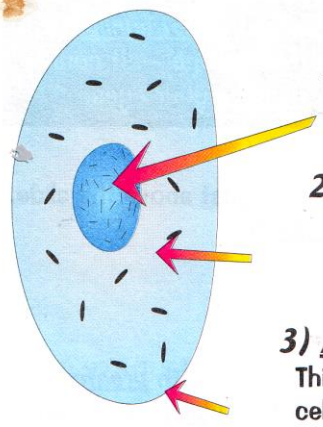
Organisms are just Living Things

1) All living things are made up of *tiny building blocks* known as *cells*.
2) These can be *seen* through a *microscope* — but it helps if you *stain* them first.
3) There are *two* types of cell you need to know about: *ANIMAL* and *PLANT CELLS*.

Animal and Plant Cells have Three Differences

An Animal Cell

BOTH HAVE:



1) A Nucleus:
This *controls* what the cell *does*.

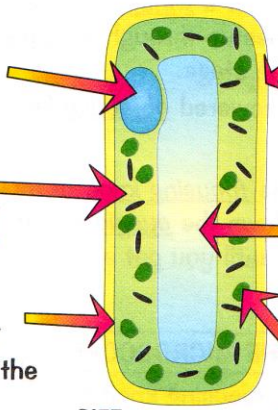
2) Cytoplasm:
This is a jelly-like stuff where all the *chemical reactions* happen.

3) A Cell Membrane:
This is a thin *skin* around the cell — it holds the cell *together* and also *controls* what goes *in and out*.

SIZE: about 1/100mm.

A Plant Cell

ONLY *PLANTS* HAVE:



1) Cell wall:
A rigid coating made of *cellulose* — it gives *support* to the cell.

2) Vacuole:
A large space filled with *cell sap* — a weak solution of sugar and salts.

3) Chloroplasts:
These contain *chlorophyll* used for *photosynthesis*.

SIZE:
40 times as big as an animal cell.

Attachment 1(for teachers and students)

<u>Presentation quality</u> (4 points):

Content
Design
Language
Feedback (Tasks prepared by presenter to the audience)

<u>Presentation skills (4 points)</u>

Language
Posture and Gestures
Contact with the audience
Knowledge of the topic

<u>Questions</u> (2 points)

Language
Response (knowledge of the subject)

10	9	8	7	6	5	4	3	2	1
20	19	17	15	13	12	9	6	4	2

Attachment 2 (For teachers)

The Variety of Life

Biology is the study of living organisms. Living organisms have a number of characteristics that make them different from non-living things. Biologists classify living organisms into groups, to make them easier to study.

Living and non-living things

If you look around you, you can probably see a number of living and non-living things. It is usually easy to tell which are alive and which are not. People, for example, are obviously alive because they move around. Plants are obviously alive because they grow.

Figure 1.1 ■
What can you see here that is alive? What is not alive? How can you tell?

Living things are called **organisms**. Living organisms have seven characteristics that make them different from non-living things:

1 Living organisms **feed**. They need to take in substances from their surroundings. They use these substances for growth, or as a source of energy. Animals and plants feed in very different ways, as you will see in chapters 5 and 6. Another word for feeding is **nutrition**.

2 Living organisms **respire**. This means that they break down food inside their cells, sometimes by combining it with oxygen. This releases energy from the food, and the organisms can use this energy to carry out processes 3 to 7

3 Living organisms **move**. This is very easy to see in most animals, but it is not easy to see a plant moving! Most plants are rooted to the ground, so the whole plant cannot move. But parts of plants may move slowly. Perhaps only the contents of their cells move, so that you can only see the movement under the microscope.

4 Living organisms **excrete**. Chemical reactions take place inside the cells of an organism. Some of the substances made by these reactions are poisonous, so the organism needs to get rid of them. Getting rid of these substances is called excretion.

5 Living organisms **grow**. Some of the food they take in is used to help cells to grow, and to build new cells, so that the organism gets larger.

6 Living organisms **reproduce**. Every kind of living organism is able to make new organisms like itself.

7 Living organisms are **sensitive** to things around them. All living organisms can sense changes in their surroundings, and respond to them. This is sometimes called **irritability**.The changes they sense are of many types, such as changes in temperature, light intensity, sound, day length and the presence of chemicals.

Question

1.1 The engine of a car uses petrol (gasoline). Oxygen from the air combines with the petrol, releasing energy which is used to turn the wheels of the car. Waste gases from the burnt petrol are given off in the exhaust fumes of the car.

a Which characteristics of a car are similar to which characteristics of living organisms?

b Explain why a car is not a living organism.