AUTHOR / SCHOOL	Inara Sprindžuka, Education Department , Inese Barkovska, Daugavpils State gymnasium, Latvia
DATE OF CLIL ACTIVITY	19.09.2016
CLASS / NUMBER OF STUDENTS	10, 29 students
SUBJECT	Science, Biology
CLIL LANGUAGE	English
CLIL Activity Topic	Types of cells, plant cell, plant nutrition.
CLIL Activity Time	40 min
Language Objectives	- Acquire the new terms about cells and plants. - To be able to tell about plant nutrition
Language used for communication (BICS)	It contains… It differs from… What do we need to …
Content Language (CALP)	Tissue,stem shoot, roots, petals, stomata, absorb, carbon dioxide.to take in, to expel,starch,layer, unicellular, multicellular
Content Objectives	- To give the idea of variety of cells, according to different classification - To learn about plant nutrition
Materials / Resources used	Handout on cells*, Handouts on the plant** Presentation about plant nutrition***

CLIL Activity - procedure	1.In-class talk. Revision of the properties of living organisms. (The teacher writes „Mrs.Nerg“ on the board or screen. Students have to name one property relevant to each letter of this abbreviation) 2.Work with the handout * Task I.-Fill in the missing letters! . 3. Teacher offers Task II from the handout mentioned above. Students have to find out what is in common and what is different between animal and plant cell. 4.Introducing vocabulary about the plant.(Handout**) 5.Watching the presentation about the plant nutrition.***. (Students make notes, silent reading and writing.) 6.Evaluation of presentation: peer/ teacher) 7*Additional activity-task fro the CD to K.Kelly’s book „Science“by McMillan. 7.Conclusive talk. - What did we find out today?(different cells, difference between animal and plant cell, plant nutrition: minerals, water, carbon dioxide and sunlight for photosynthesis)
Performance Assessment	
TEACHER´S NOTES	

Handout* "Life processes and cells"(The teacher can „paint" some words and students shouls restore them)

Life Processes and Cells

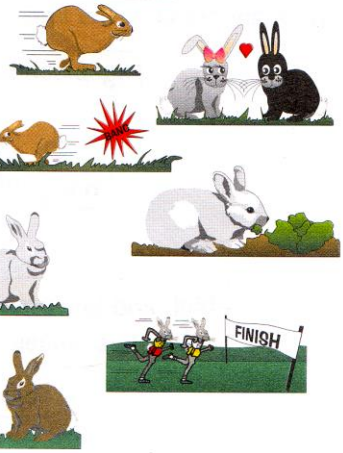
Dead or Alive?

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.



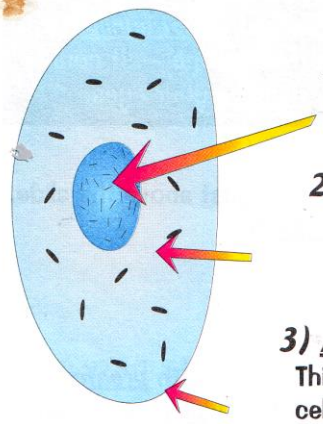
Organisms are just Living Things

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*.

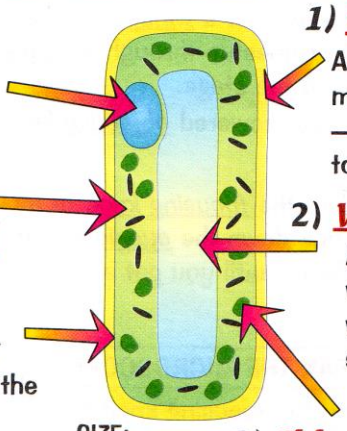
2) *Cytoplasm*:
This is a jelly-like stuff where all the *chemical reactions* happen.

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:



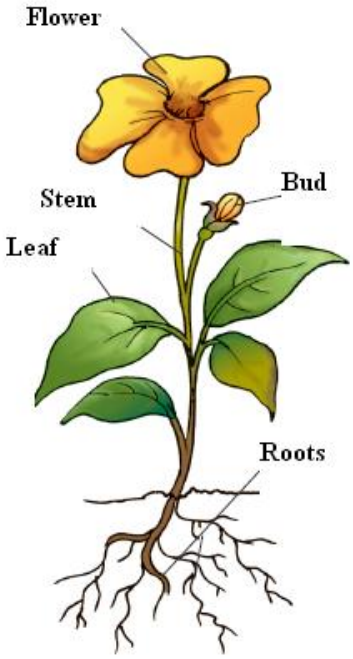
1) *Cell wall*:
A rigid coating made of *cellulose* — it gives *support* to the cell.

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

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

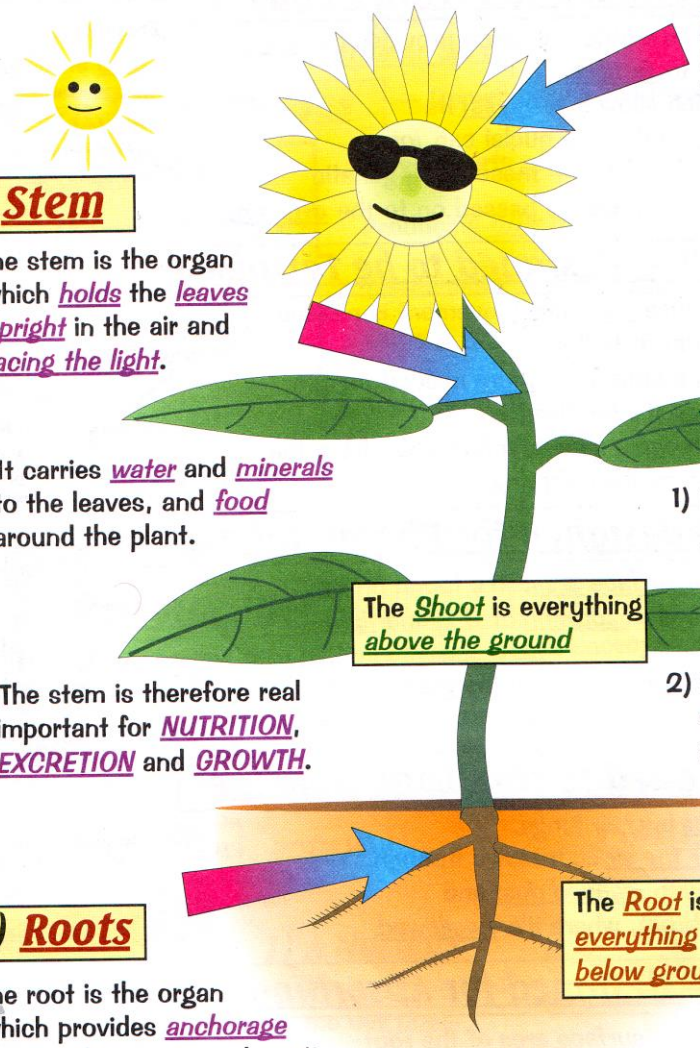
SIZE:
40 times as big as an animal cell.

Handout 2.



Plant Organs

Four Main Plant Organs allow the Life Processes to Take Place



1) Flower

1) The flower contains the organs of plant *sexual reproduction*.
2) It *attracts insects* needed to carry the *pollen* between plants to allow *pollination*.
3) It's therefore real important for *REPRODUCTION*.

2) Stem

1) The stem is the organ which *holds* the *leaves upright* in the air and *facing the light*.
2) It carries *water* and *minerals* to the leaves, and *food* around the plant.
3) The stem is therefore real important for *NUTRITION*, *EXCRETION* and *GROWTH*.

3) Leaves

1) The leaves are the organs of *photosynthesis*. They make *all the FOOD* that the plant needs.
2) Leaves contain *chlorophyll* which uses *light energy* to change CO_2 and water into *glucose*.
3) They have *tiny little pores* which allow essential CO_2 *in*, and waste gases *out* — there are *NO LUNGS*.
4) So leaves are real important for *NUTRITION* and *EXCRETION*.

The *Shoot* is everything *above the ground*

The *Root* is *everything below ground*

4) Roots

1) The root is the organ which provides *anchorage* for the plant — so it doesn't *blow away* or *fall over* by accident.
2) With its *root hairs* it provides a *big surface area* to help take in *water* and *minerals* from the soil — these are both *essential* for *photosynthesis*.
3) The root is therefore real important for *NUTRITION*.

1) All parts will be *SENSITIVE* to the surroundings. The flower may *MOVE* to close at night. The shoot will *GROW* and *MOVE* to find light.
2) Every cell in the plant will *RESPIRE* and change glucose into useful energy.

Handout **(From K.Kelly, Science, Macmillan, CD format tasks).
Choose the correct answers.(Can be either printed out or done on screen-one can click and check answers)
1. Muscle cells : link other cells/cause the body to move by contracting/protect the cells beneath them.
2.Red blood cells : control the body's prcesses/ transport oxygen around the body and help remove waste/ kill bacteria and viruses.
3.White blood cells: store fat/ kill bacteria and viruses/ link other cells.
4.Brain cells: protect the cells beneath them / carry messages around the body / control the body's processes.
5.Nerve cells: cause the body to move by contracting/ carry messages around the body / link other cells.
6.Epithelial cells: cause the body to move by contracting/ protect the cells beneath them/ kill bacteria and viruses.

Handout ***

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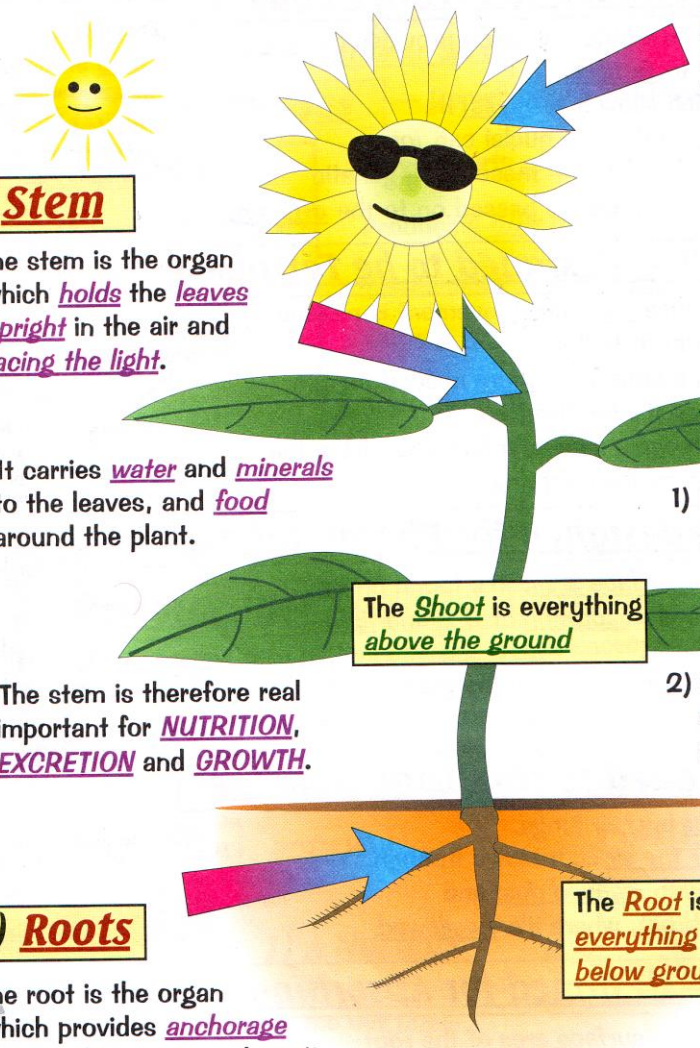

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