

Self regulation

I used connection finding by using chemistry to learn about the carbon cycle
I used enquiring when learning about the carbon cycle.

CW

Friday 13th January 2023

Metamorphic Rocks

ACP: Links making
VAA: Enquire

A caterpillar starts as an egg. They then become a young caterpillar then a caterpillar. The caterpillar is then in a pupa, a shell which they metamorphose in. Eventually, when they've grown and developed wings, they break the pupa. Now the caterpillar is a butterfly.

What two factors aid the formation of metamorphic rocks?

Metamorphic rocks form when heat, high pressure, or both change existing rock. Metamorphic rocks form over millions of years. Pressure from rocks above and heat from magma nearby.

Marble is a metamorphic rock. It starts out as limestone, it heats up and the particles rearrange. It's not porous, people like how it looks.

Slate is a metamorphic rock. It starts out as mudstone (a sedimentary rock). Slate forms when high pressure underground squashes the mudstone. This squeezes out water, and makes layers of new crystals. It's not porous, it's made up of layers so it can be split into thin sheets. This

is why it makes good roofing tiles.

CW

Monday 16th January 2023

Recycling

ACP: Connection finding
VAA: Enquiring

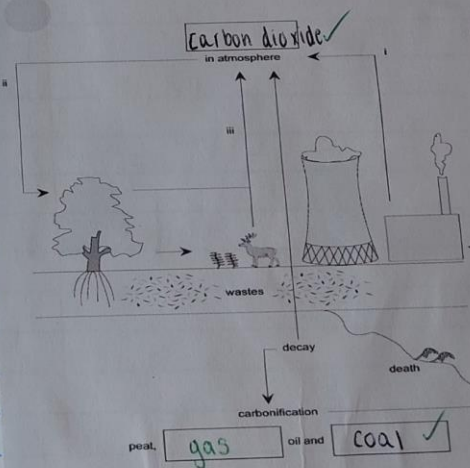
Keywords:

Recycling
Resources
Energy
Materials

Retrieval

The carbon cycle

Look at the diagram of the carbon cycle below.



A Fill in the boxes on the cycle with the correct names.

B What are the following processes called?

- combustion
- photosynthesis
- respiration

C If humans burn more oil (fossil fuel), what is likely to happen to the levels of carbon dioxide?

The levels of carbon dioxide in the air will increase.

CW

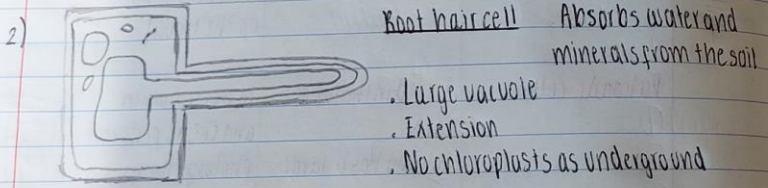
Thursday 11th May 2023

Revision B1

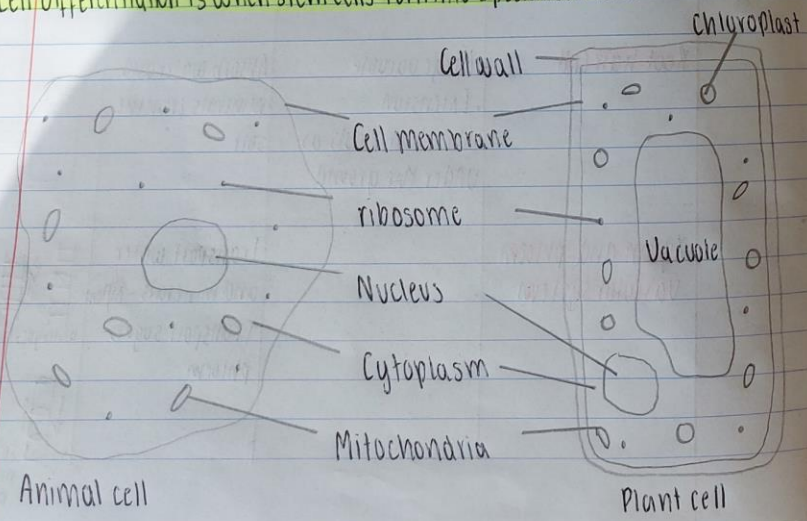
ACP: Connection finding
VAA: Enquiring

Retrieval

- 1) Nucleus - controls the cell
- Mitochondria - where respiration takes place, releases energy
- Cell wall - supports the cell
- Vacuole - stores sap



Cell Differentiation is when stem cells turn into specialised cells



- Cell - 20 μm
- Nucleus - 6 μm
- Chromosome, DNA - 3 μm
- Gene (segment of DNA) - 0.003 μm
- 1cm = 10000 μm

- Ribosomes** - all the proteins needed for the cell are synthesised (made) here
- Cytoplasm** - chemical reactions needed for life occur in this
- Cell membrane** - controls the movement of substances in and out of the cell
- Mitochondria** - this is where oxygen is used and most of the energy is released during respiration
- Vacuole** - large space containing cell sap. Helps to keep cell rigid to support the plant
- Chloroplast** - contains chlorophyll, a green substance that absorbs light energy to make food by photosynthesis
- Cell wall** - made of cellulose and forms a rigid non-living box around the cell to strengthen and provide support
- Nucleus** - controls all activities of the cell. Contains DNA

Eukaryotic cells have organelles. (Plant and animal)

Prokaryotic cells do not have organelles, only ribosomes. (Bacteria)

Compare and contrast plant and animal cells (6)

Both plant and animal cells have cytoplasm, cell membrane, nucleus (where the DNA is stored), ribosomes, and mitochondria. However, in addition to this a plant cell has a vacuole (where sap is stored), a cell wall (which strengthens the cell), and chloroplasts (where photosynthesis takes place). An animal cell is also more circular whereas a plant cell is more rectangular.

(5/6)

Self regulation:
I need to add more key words.

PA - you can successfully use punctuation & grammar in your writing, however next time you could add more knowledge, for example, eukaryotic cells.

Osmosis (Lesson 2)

20/6/23

Acq: Intellectual confidence
Via: Practice
Automaticity

Key Words to Understand Osmosis

When you mix a solid and a liquid, sometimes nothing exciting happens. For example, if you mix sand and water, the sand will fall to the bottom. However, with some solids, something very interesting happens. For example, if you mix salt and water, the salt **dissolves**. This means that it mixes completely with the water, and each particle of salt is surrounded by water (like in the diagram on the right). It looks like the salt has disappeared - you cannot see it in the water.



Solids that dissolve are called **solutes**. The liquid that the solute dissolves in is called a **solvent**. In our example, salt is the solute and water is the solvent. Together, the solute dissolved in the solvent is called a **solution**.

When there is a lot of solute dissolved in a solvent, we say that the solution is very **concentrated**. On the other hand, when there is very little solute dissolved in the solvent, we say that the solution is **dilute**.

Key Word	Definition	Example
Dissolve	When a solid and a liquid mix completely	salt & water ✓
Solute	solids that dissolve ✓	salt sugar ✓
Solvent	Liquid solute dissolves in. ✓	water ✓
Solution	solute dissolved in solvent ✓	salty water
Concentrated solution	a lot of solute dissolved in solvent. ✓	strong ✓ ribena
Dilute solution	very little solute dissolved in solvent	weak ✓ ribena

OSMOSIS - a type of diffusion where only water moves across a partially permeable membrane from a dilute to a concentrated solution. ✓

3M The cell would shrink because the water would move outwards, as it is a higher concentration outside. ✓

0.5M The cell would burst because there is more concentration inside the cell, so the water would move inwards. ✓

Self-regulation

I knew the definition of diffusion already, but I learned the definition of osmosis, and how the water molecules move through a semi-permeable membrane.

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Breathing (2)

ACP: Critical thinking
VAA: Practice

T.A.P. Information P.E.E

Purpose: To describe the way things are

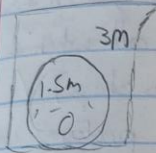
Structure: An opening, general classification
A more technical classification
A description of phenomena
Summarising conclusion

Features: Present tense Impersonal
Non-chronological order
Connectives stress sequence, cause & effect
Comparison

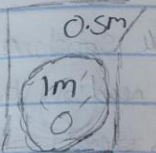
Task : Describe the way how we inhale and exhale .

Air enters your body through your mouth and nose. The air then moves down the trachea (windpipe) which is a large tube. Afterwards it moves down a bronchus, a smaller tube. Then moves through a bronchiole, a tiny tube. Air moves into an alveolus, an air sac. Finally, Oxygen then diffuses into the blood. Carbon dioxide diffuses from the blood. It then moves to the alveolus. Afterwards, it moves through a bronchiole. Carbon dioxide then moves through a bronchus. It then moves up the trachea. Finally, Carbon dioxide leaves your body through your mouth and nose.

Osmosis - a type of diffusion where only water moves across a partially permeable membrane from a dilute to a concentrated solution.



The cell would shrink because the water would move outwards, as it is a higher concentration outside.



The cell would burst because there is more concentration inside the cell, so the water would move inwards.

Self-regulation

I knew the definition of diffusion already, but I learned the definition of osmosis, and how the water molecules move through a semi-permeable membrane.

CW

Monday 20th March 2023

Responding To feedback

Responding To Feedback
Space

Original Success Criteria:

- Name the objects in the solar system
- Compare planets within the solar system
- Describe what occurs during a lunar and solar eclipse

Common Spelling errors X3

- Asteroid
- Umbr
- Eclipse
- Andromeda

General misconceptions/mistakes

- Properties of planets
- The positions of the umbra and penumbra

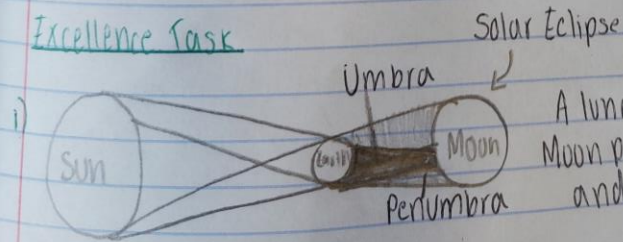
Excellence Task

- Draw a diagram of the solar eclipse including the umbra and penumbra. How does a lunar eclipse differ?
- Order the following in order of size. Include the sun, a comet, Jupiter, the Milky Way, Pluto, the moon, Mars.
- Define a light year.

WWW: I can name the objects in the solar system ✓, compare planets within the solar system ✓ and I can describe what occurs during a lunar and solar eclipse ✓. Now I am able to name all the planets in the solar system in order. ✓

Asteroid, Asteroid, Asteroid
Umbr, umbr, umbr
Eclipse, eclipse, eclipse
Andromeda, Andromeda, Andromeda

Excellence Task



A lunar eclipse is when the Moon passes between the Sun and the Earth. ✓