

Cycles in Nature

Organic vs Inorganic

Living things rely on both inorganic and organic materials to survive.

Organic: substances which always contain carbon (C) and hydrogen (H) atoms

some may also contain nitrogen (N) and oxygen (O)

compound containing these atoms are very important to life's processes

ex: proteins, sugars, fats,

Inorganic: compounds that never have a combination of hydrogen (H) and carbon (C)

ex: CO₂ H₂O NH₃

these compounds have an equally important role in supporting life on this planet

The Periodic Table of the Elements

																2	He	
1																	10	Ne
3	4															9	F	
5	6	7	8													17	Cl	
11	12															18	Ar	
13	14	15	16													35	Br	
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	
55	56	57	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	
87	88	89	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	
119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	

The Main 4!

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These organic materials and inorganic materials are used and RECYCLED for the continuation of life on our planet.

INTER-RELATIONSHIP

Joseph Priestley

- did experiments to show plant and animal relationships.

His goal was to see if and how plants and animals help each other.

He found out that they do!

Animals - breathe out carbon dioxide CO₂

Plants - use carbon dioxide to help make oxygen O₂

Animals - use this oxygen for survival

Experiment:

- (A) plant only
- (B) mouse only
- (C) plant and mouse together

What were his findings??

<http://www.telegraph.co.uk/culture/tvandradio/bbc/8768763/Scientist-to-stay-in-airtight-box-for-two-days.html>

http://www.youtube.com/watch?v=T1vGBFlw710&safety_mode=true&persist_safety_mode=1&safe=active

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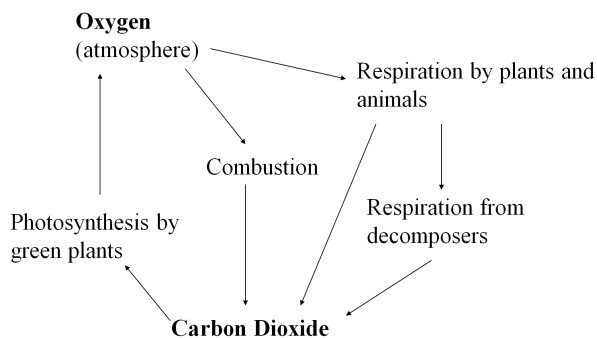
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The Oxygen Cycle

- shows how oxygen is 'recycled' and circulated throughout the planet.
- 2 components:

(1) photosynthesis

(2) respiration



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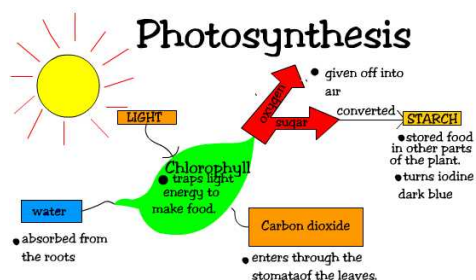
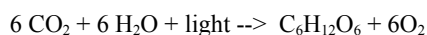
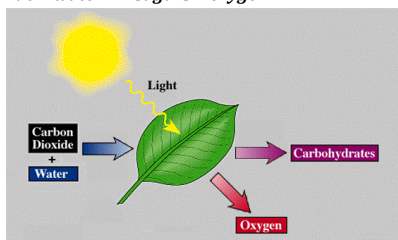
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Photosynthesis

- part where plants play an important role
- plants take in carbon dioxide (CO₂) and they give off oxygen(O₂)

Word equation:

carbon dioxide + water → sugars + oxygen



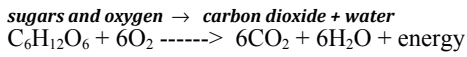
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Respiration

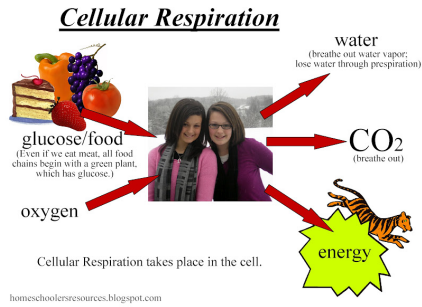
- part where animals use the oxygen made by the plants in order to survive.
- This oxygen is vital for an animal's body to break down sugars and other nutrients in order to live each day.

Word equation:



- A balance must be maintained where the carbon dioxide and the oxygen are produced so that BOTH plants AND animals can survive.

Photosynthesis and respiration are Complementary processes



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