Combustion (Level 1) exam tips

Many questions on combustion ask you to compare and contrast.

First, use a double/bubble to write down your thoughts as you prepare your answer

To achieve with Excellence

When composing your compare/contrast (similarities/differences) answer, you MUST use linking words

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sentence starter** | **linking words** |  | **Sentence starter** | **linking words** |
| A similarity is….  Another similarity is… | similarly  as with  in the same way  likewise  equally |  | A difference is…  Another difference is… | whereas  alternatively  otherwise  conversely  however  on the other hand  although |

|  |  |
| --- | --- |
| **Complete combustion** | **Incomplete combustion** |
| plenty of oxygen present | limited oxygen present |
| invisible flame | yellow flame, **black residue from flame** |
| CO2 and H2O produced | **CO and C and H2O produced** |
| **a lot of energy released** | **little energy released** |

|  |  |  |
| --- | --- | --- |
|  | **Health** | **Environmental** |
| **carbon particles**  **or**  **soot**  **or**  **C** | • can cause respiratory problems, particles irritate the lungs, particularly bronchioles and alveoli  *eg asthma and lung cancer*  • can cause cardiovascular problems, particles get into the arteries and clog them  *eg heart disease* | • can coat buildings with a black residue  • can scatter and block solar radiation, reducing the efficiency of photosynthesis |
| **carbon monoxide**  **or**  **CO** | • toxic gas which combines with haemoglobin in the blood, prevents oxygen being carried around the body, resulting in death | CO is quickly converted to CO2 in the atmosphere which contributes to climate change, *see below* |
| **carbon dioxide**  **or**  **CO2** |  | • a greenhouse gas, causes heat energy to be trapped on Earth, resulting in climate change, melting of ice caps, sinking of Pacific islands  • an acidic gas which increases the acidity of the oceans resulting in damage to coral *eg at the Great Barrier Reef* |

**Also…”don’t be daft”**

Hydrocarbons contain....believe it or not...HYDROGEN + CARBON only

Ozone depletion is a completely DIFFERENT thing to the greenhouse effect, different!

please… DON'T EVEN MENTION the Ozone hole in your Level 1 Chemistry exam

Bear in mind that the relatively new term for global warming is “CLIMATE CHANGE”

Carbon DIOXIDE is NOT poisonous

Most rainwater is carbonic acid (the same acid that’s in soft drinks). NO carbonic acid is NOT harmful

The process of photosynthesis is very, very DIFFERENT to respiration

DON'T FORGET your observations alongside your chemical test information

One observation is no good, you must provide both initial AND final observations

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