



SNS COLLEGE OF TECHNOLOGY

Vazhiampalayam, Coimbatore-35

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DEPARTMENT OF CHEMISTRY

**COURSE NAME : 23CHT102- CHEMISTRY OF ENGINEERING
MATERIALS**

I YEAR / II SEMESTER

UNIT : 3. FUELS AND COMBUSTION

TOPIC : 1. INTRODUCTION OF FUELS & ITS TYPES



What do you understand from these images?





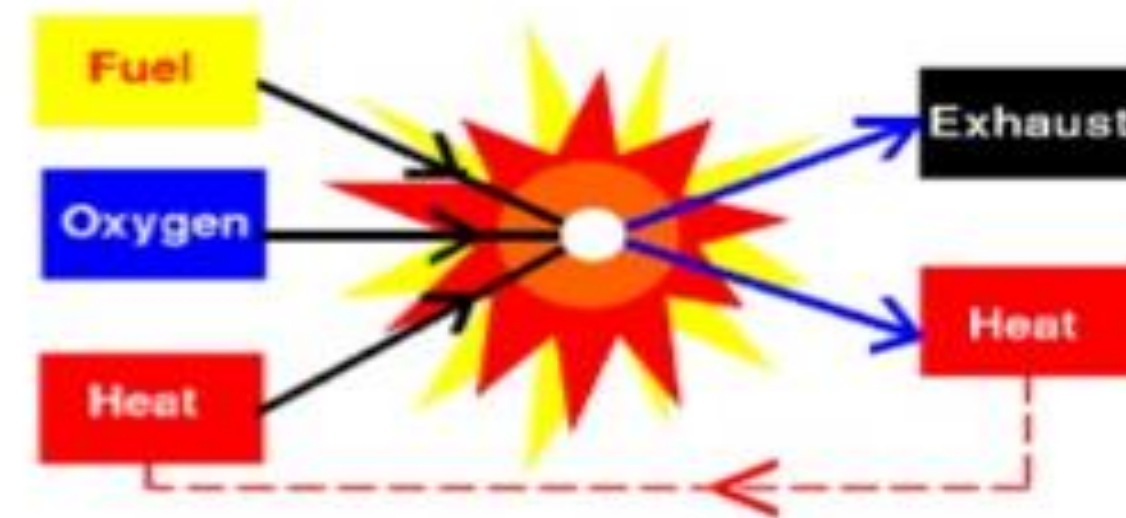
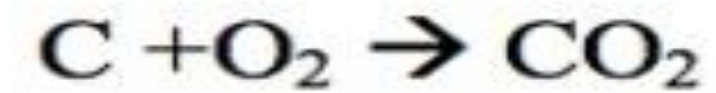
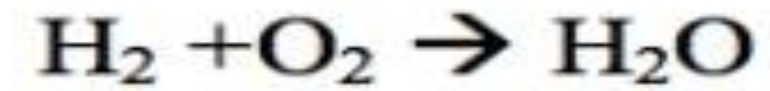
FUELS



Fuel: Anything which burn to give heat in presence of oxygen.



Combustion: The process of burning fuel.

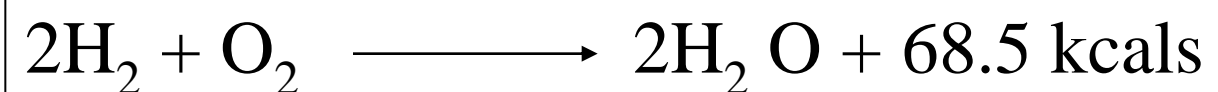
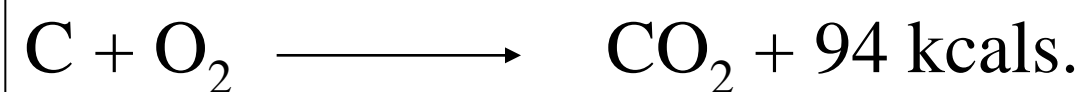




DEFINITION



- A fuel is a combustible substance
- containing C as the main constituent
- which on proper burning gives large amount of heat
- can be used economically for domestic and industrial purposes.
- During combustion of a fuel
- atoms of C, H₂, etc combine with O₂ with simultaneous liberation of heat.





FOSSIL FUELS



- C compounds have been used for many centuries as the source of heat and energy.
- The main source of fuel is coal and petroleum.
- Fossil fuels - fossilized remains of plants and animals.
- Fossil fuels have been used for centuries
- Fossil fuels pollute the environment
- Fossil fuels are non-renewable and unsustainable
- Drilling for fossil fuels is a dangerous process



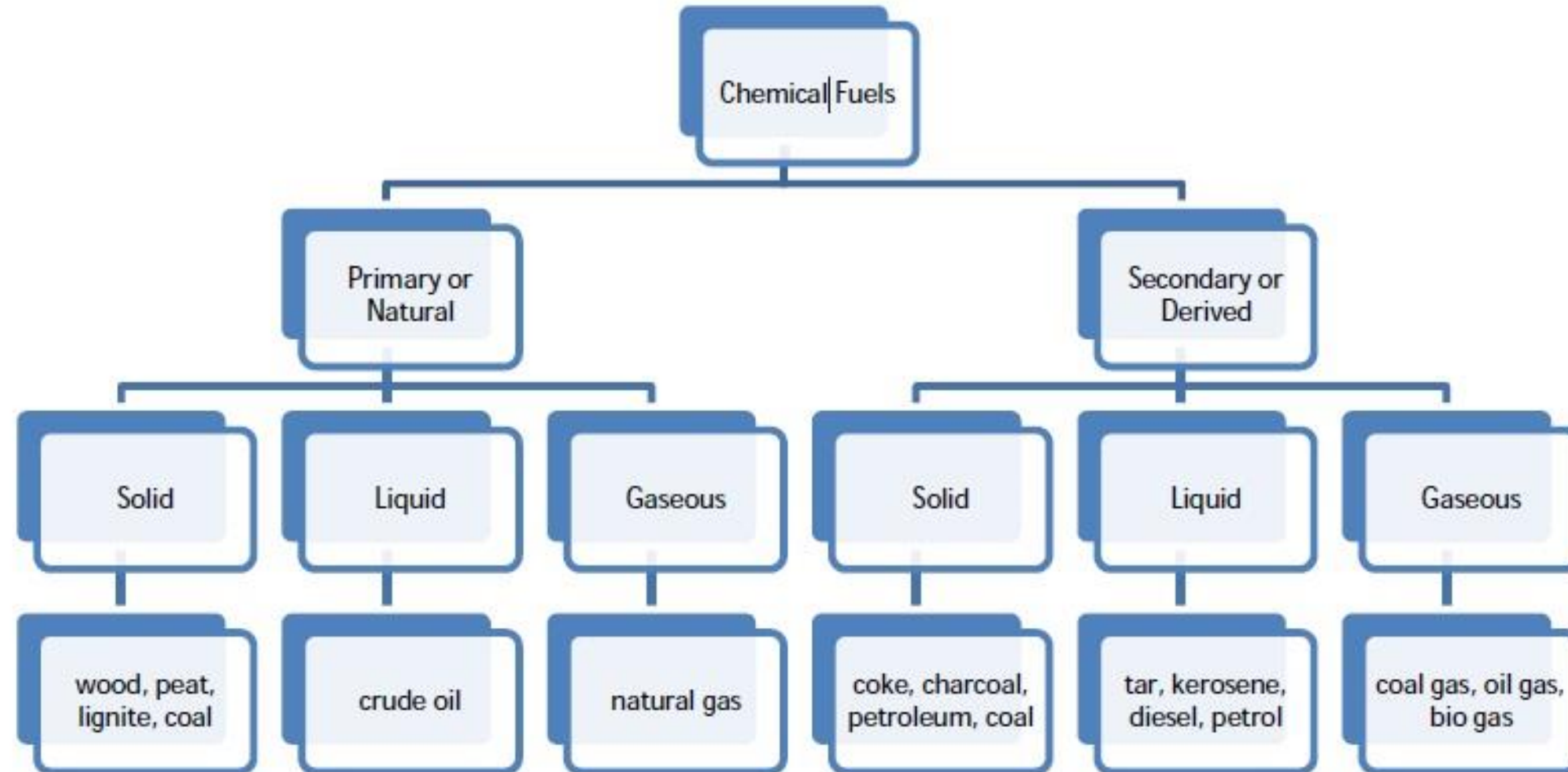


Activity





CLASSIFICATION





ADVANTAGES OF LIQUID FUEL OVER SOLID



- Easy to handling
- Less storage space.
- The combustion is uniform.
- Readily burnt
- Rapidly reach high temperature
- The waste product is very little ash after burning.
- Less smoke
- High calorific value





ASSESSMENT



1. The main constituents of fuel from given options

(a) C & N (b) O₂ & H₂ (c) C & H₂ (d) He & O₂

2. Fuels are classified as primary and secondary fuel based on the _____

(a) available (b) safety (c) composition (d) occurrence

3. Fossil fuels are -----

4. Reason out the importance of green fuels over fossil fuels



SUMMARY



REFERENCES



1. O.G. Palanna, “Engineering Chemistry ”Tata McGraw-Hill Pub. Co. Ltd, New Delhi.2017.
2. Wiley, “Engineering Chemistry”, John Wiley & Sons. InC, USA.
3. P.C.Jain & Monicka Jain, “Engineering Chemistry” , Dhanapat Rai Publising Company Pvt. Ltd. 2017.
4. R. Sivakumar andNSivakumar, “Engineering Chemistry” Tata McGraw-Hill.Pub.Co.Ltd. New Delhi.2009.

THANK YOU