



Pakistan School
Kingdom of Bahrain

LAND POLLUTION

CLASS: 10TH

RULES OF THE CLASS!!

- ❖ Be on **time**
- ❖ Enter the class with your **name** and **CPR number**
- ❖ **Respect** all participants
- ❖ Do **not** create any disturbance
- ❖ **Raise your hands** for questions (the teacher will respond when the time is suitable)
- ❖ Pay **attention** to the teacher
- ❖ Follow the **time table**

Lesson Objectives

At the end of this lesson, students will be able to:

- ❖ Describe major sources of land pollution
- ❖ List different methods to control land pollution
- ❖ Identify the cause and effects of land pollution
- ❖ Describe the formation of coal and petroleum
- ❖ List the ways to conserve renewable and non-renewable resources





The background of the image shows a silhouette of an industrial facility with several smokestacks. A large, billowing plume of smoke or steam rises from the center. The entire image is overlaid with a semi-transparent orange filter. The text 'FOSSIL FUELS' is centered in white, bold, sans-serif font.

FOSSIL FUELS

Fossil Fuels

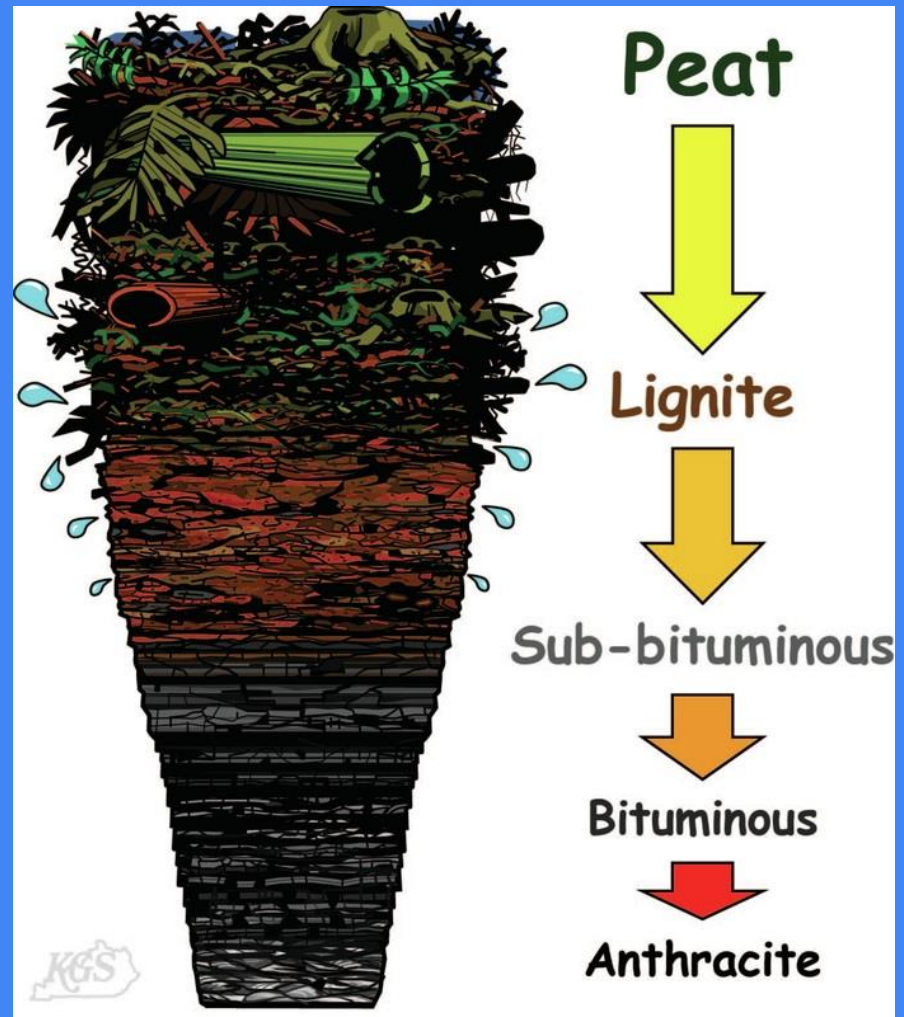
- ❖ Fossils are formed naturally **over millions of years** from the remains of buried plants and animals
- ❖ **Fossils fuels** are hydrocarbons, primarily coal, fuel oil or natural gas
- ❖ These are formed from the remains of **dead animals**
- ❖ The formation of fossil fuels is a **very slow** process

NATURAL RESOURCES

COAL

- ❖ A **black** colored mineral
- ❖ Found in **different depths** under the surface of the Earth
- ❖ Formation of coal began **millions** of years ago:

Decaying plants formed a soft brownish material called **peat**, which changed under the pressure and heat into a soft coal called **lignite**. With continued pressure and heat, it changed into **bituminous coal**. This is harder and brownish black in color. Under more pressure, bituminous coal turned into a hard and black form called **anthracite** (has highest number of carbon and top quality coal).



Fractional Distillation

- ❖ Crude oil cannot be used unless **refined**
- ❖ It is heated up to 400°C to form different **fractions**, which get collected separately
- ❖ This process is called **fractional distillation**
- ❖ **Products formed during this process include:**
 1. Refinery gases (domestic and industrial purposes)
 2. Petrol (cars, motorcycle)
 3. Kerosene oil (domestic purposes and air crafts)
 4. Diesel oil (buses, truck)
 5. Waxes (candle making)
 6. Residue (carpeting roads)



An illustration on an orange background featuring three stylized figures in business attire. A woman on the left stands with her back to the viewer, holding a large pencil. A man in the center stands with his back to the viewer, holding a large magnifying glass. A man on the right is kneeling, looking at a small potted plant. Behind them are large, interlocking gears. The word "ACTIVITIES" is written in large, white, bold, sans-serif capital letters across the center of the image.

ACTIVITIES

Choose The Correct Answer

1. Coal that contains the highest percentage of carbon is:
 - A. Lignite
 - B. Bituminous
 - C. Sub-bituminous
 - D. Anthracite
2. Which fraction or product of petroleum is used in car as fuel?
 - A. Petrol
 - B. Kerosene oil
 - C. Diesel oil
 - D. Lubricating oil
3. It is the top quality coal.
 - A. Peat
 - B. Lignite
 - C. Bituminous
 - D. Anthracite

Continued

4. This oil is heated up to 400°C in an electric furnace.

- A. Petrol
- B. Kerosene oil
- C. Diesel oil
- D. Crude oil

5. These things are formed naturally over millions of years from remains of dead plants and animals.

- A. Fossils
- B. Vitamins
- C. Minerals
- D. All of the above

Fill In The Blanks

1. _____ is the top quality coal.
2. _____ oil is heated in an electric furnace to be refined.
3. _____ are formed from remains of buried plants and animals.
4. Dead plants buried under the Earth crust from soft material called _____.
5. Natural gas has _____, _____, propane, butane and toxic gases.

Q & A

Short answers:

Q1. Name fossil fuels.

Q2. Name the four types of coals.

Q3. Name the products of petroleum.



ALMOST THERE...

Plenary

Q1. Name the methods to control renewable resources.

Q2. Name the methods to control non-renewable resources.

Homework

Q1. Mention the important air pollutants.

Q2. Describe how coal is formed. Explain its different types.

Q3. Describe how the natural and mineral resources in Pakistan can be conserved.



As-salamu Alaikum

MAY ALLAH SWT BLESS YOU ALL