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الملف أوراق عمل ومراجعة الوحدة الرابعة Resources Earth Using مع الحل

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روابط مواقع التواصل الاجتماعي بحسب الصف الخامس



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المزيد من الملفات بحسب الصف الخامس والمادة علوم في الفصل الأول

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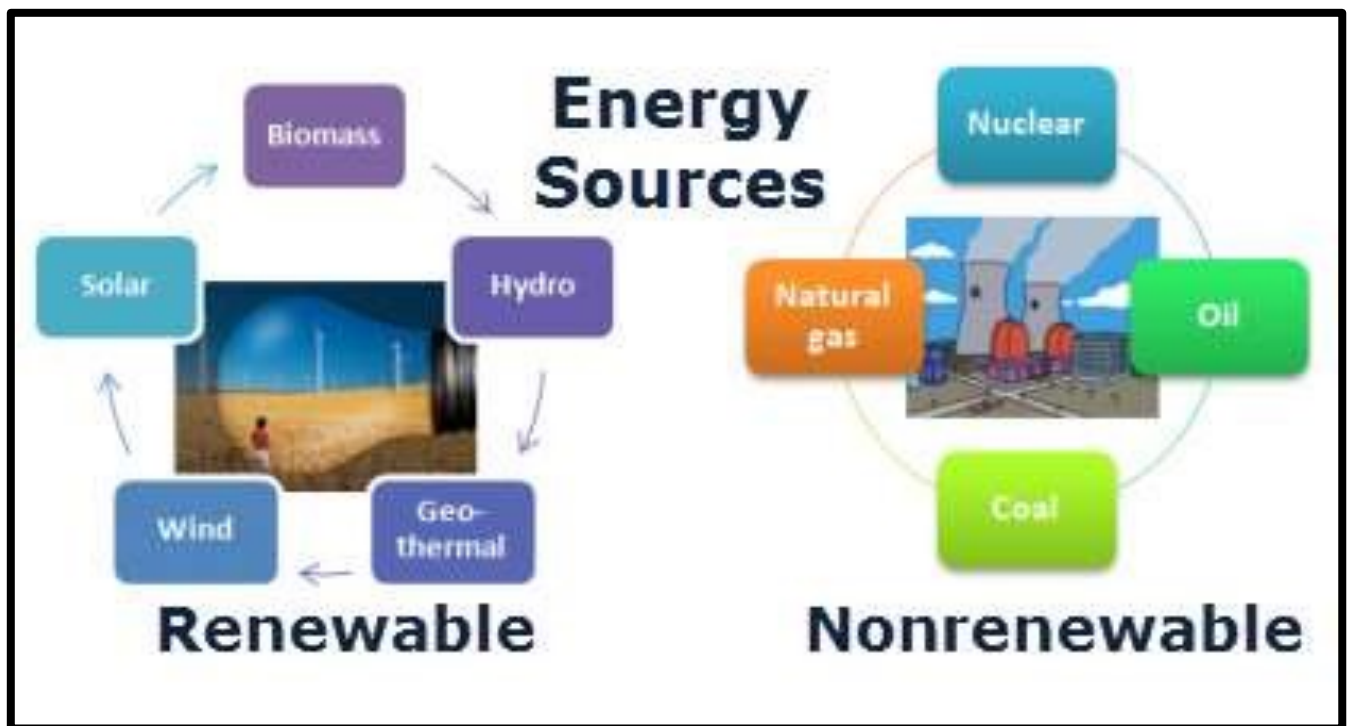
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CHAPTER 4 – USING EARTH'S RESOURCES• **LESSON 1 – NATURAL RESOURCES****Vocabulary:**

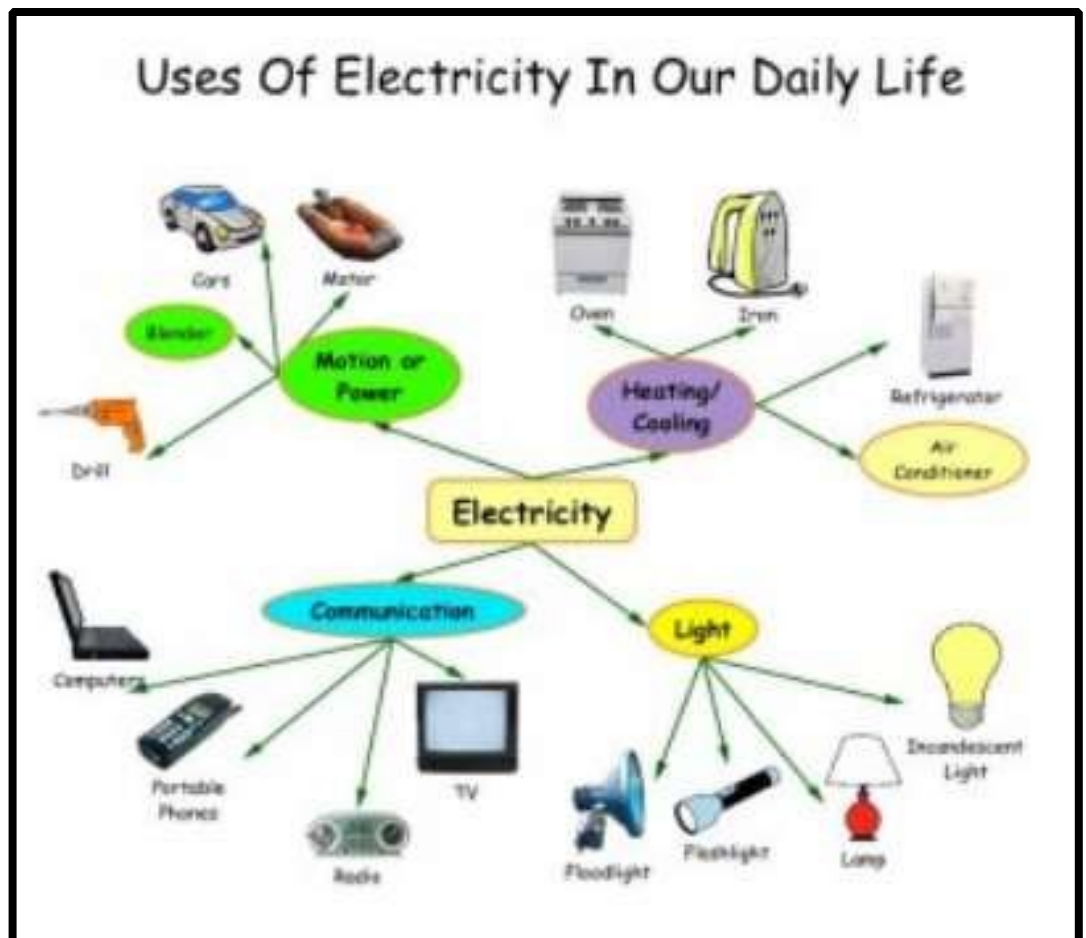
Natural resources	Materials people take from the Earth
Nonrenewable resources	Resources used up more quickly than they can be replaced
Renewable resources	Can be replaced by nature sometimes at the same rate of being used up
Fossil Fuel	Material formed from the decay of ancient organisms used as an energy source.
Alternative energy source	A source of energy other than fossil fuels
Hydroelectric power	Energy generated by falling or running water
Solar Energy	Energy from sunlight
Sustainability	Fulfilling present needs without endangering future generations to fulfill their needs



NATURAL RESOURCES: Almost everything people use comes directly or indirectly from a natural resource.

FOSSIL FUELS: Oil, natural gas and coal. These are used for producing electricity, fuel in vehicles, fuel to keep buildings and people warm and for cooking food amongst other things.

ELECTRICITY: Is produced in coal, gas or oil powered power stations or using renewable resources.



Electricity generation, transmission, and distribution

power plant generates electricity



transformer steps up voltage for transmission



transmission lines carry electricity long distances



distribution lines carry electricity to houses



transformers on poles step down electricity before it enters houses

neighborhood transformer steps down voltage



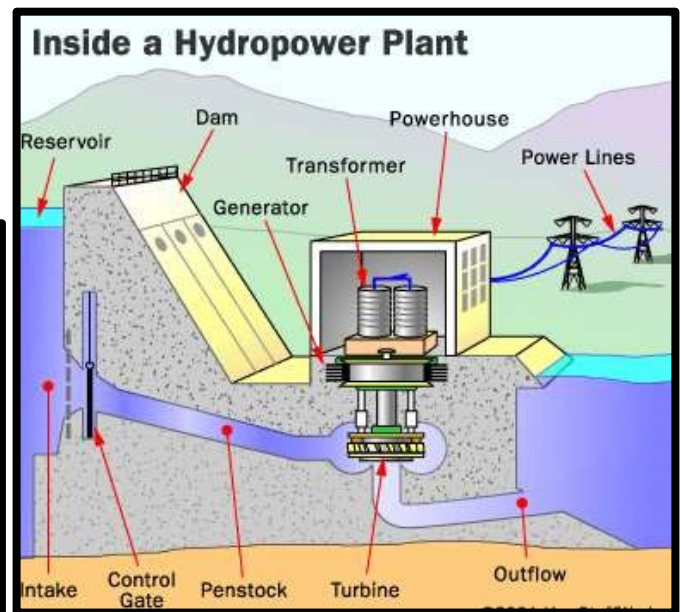
HYDROELECTRIC POWER: Is dependent on the sun's energy. As the sun warms water, the water vapors rise into the atmosphere and later cool and condense. During precipitation (rain) the water is added to rivers, lakes and oceans.

ADVANTAGES
















- Renewable
- Can produce as much energy as a thermal power station
- No greenhouse gases
- No acid rain
- No radioactive waste
- Short start up time

DISADVANTAGES

- Can only be used in mountainous areas
- A large amount of land needs to be flooded
- Expensive to build



CONSERVING ENERGY:

 <p>1 Each CFL or LED bulb you install can save a lot of money over its lifetime</p>	 <p>2 Use daylight as much as possible</p>	 <p>3 Switch off fridge/freezer when empty</p>
 <p>4 Do not put hot or warm food straight into the fridge/freezer</p>	 <p>5 Defrost your freezer regularly to keep it running efficiently</p>	 <p>6 Use fan instead of Air conditioners where possible</p>
 <p>7 Keep doors and windows shut when Air conditioners are in operation</p>	 <p>8 Switch off your air conditioner when you are leaving the room for more than 15 minutes</p>	 <p>9 Use electric kettle to boil water instead of electric cooker</p>
 <p>10 It is cheaper to cook with natural gas than electricity</p>	 <p>11 Use heating appliances with functional thermostats</p>	 <p>12 Do not leave water heaters on for too long</p>
 <p>13 When ironing set the right temperature for the clothing material being ironed</p>	 <p>14 Iron clothing in bulk, not in small quantities at a time</p>	 <p>15 Replace old inefficient appliances with new energy efficient models</p>

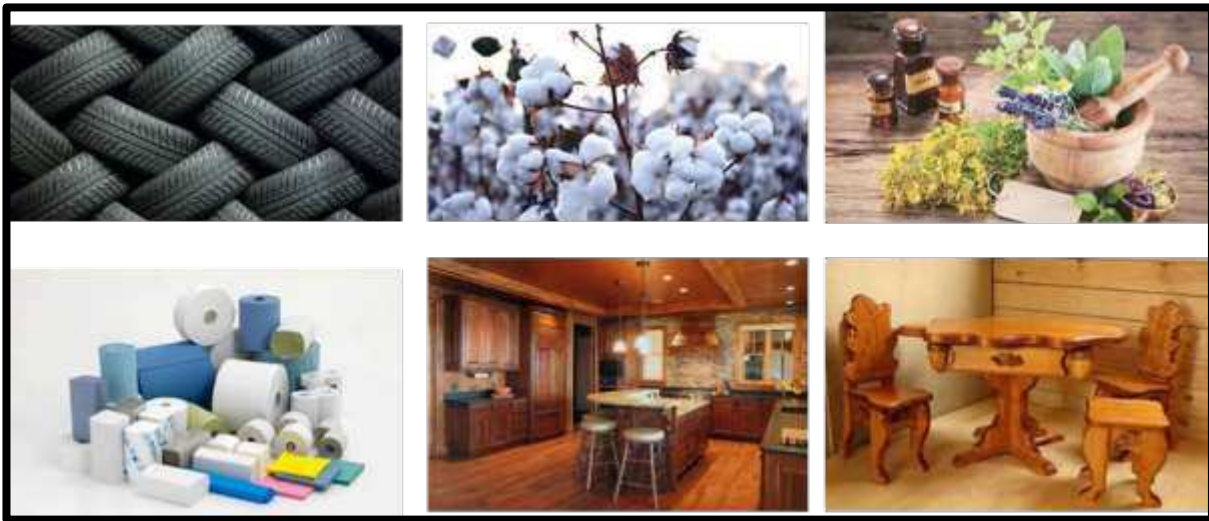
CHAPTER 4 – USING EARTH'S RESOURCES• **LESSON 2 – USES OF RESOURCES****Vocabulary:**

Raw materials	The building blocks of products
Bauxite	A rock containing Aluminium
Smelting	A process which turns Alumina into Aluminium

Gypsum	A type of rock used in making house walls
Synthetic	Man – made
Plastic	A man - made material made from petroleum
Textile	Any type of fabric
Concrete	A mixture of sand ,gravel and pebbles, used in making house foundations
Polyethylene	A man made material made from gas or oil
Shingles	Overlapping roof material
Asphalt	A man - made material made from petroleum, used in Shingle

RAW MATERIALS: These can be used in their original state like wool and wood or processed and converted into a usable form. Bauxite is processed to form alumina which is then smelted into Aluminium. Aluminium can then be shaped into objects.

PLANT PRODUCTS:



ROCKS AND MINERALS PRODUCTS:



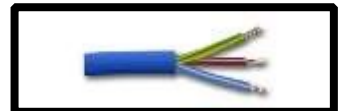
METALS PRODUCTS:



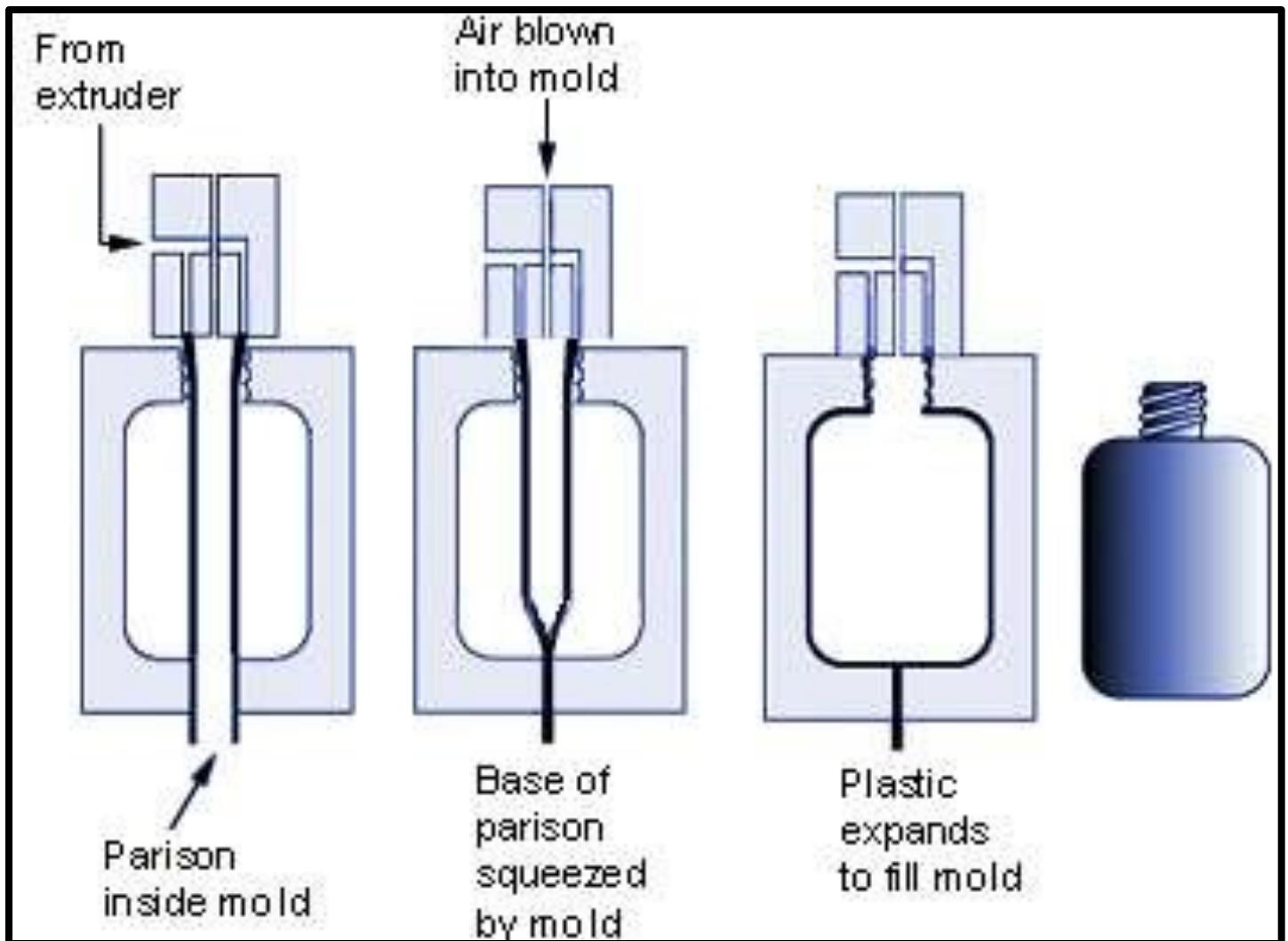
PLASTIC: Can be melted, are flexible, cheap to make, can be hard, are durable.

PLASTIC PRODUCTS:

PLASTIC AS INSULATORS:

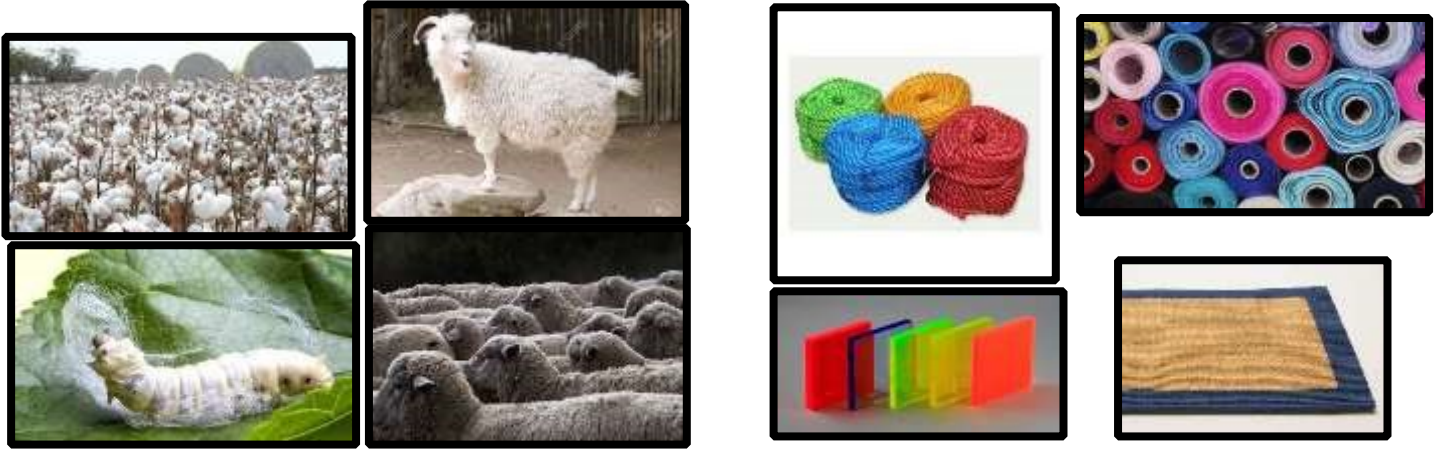


EXTRUSION BLOW-MOLDING PROCESS



TEXTILES ARE MADE FROM:

SYNTHETIC TEXTILES ARE MADE FROM:



TYPES OF NATURAL HOUSES

BUILDING A HOUSE

SOD HOUSES: Made from grass and soil

1. **A foundation has to be set** – Made from Stone or concrete.
2. **Frame of the house** – Made from wood or steel.
3. **Roof of the house** – Shingles are made from Asphalt.
4. **Windows of the house** – Using glass, glass is made from sand.
5. **Doors of the house** – Made from glass, steel and wood.
6. **Siding of the house** – The rest of the house is covered with wood, stone or bricks.
7. **Electric wires** installed inside the house for electricity using cooper wiring
8. **Strong pipes** made using plastic to carry water.
9. **The walls** are covered with drywall which is made from gypsum.
10. **The walls are painted** - Paint is made from petroleum products.



STONE HOUSES: Made from stone insulated using plastic.



FUEL RESOURCES USED TRANSPORTATION

Oil is used to power cars, busses and trains.

Burning fossil fuels releases bad smoke and gases which harms the environment.

Alternative fuels are being developed which are clean and safe for the environment.

Hybrid vehicles use gasoline and electricity. These emit less pollution.

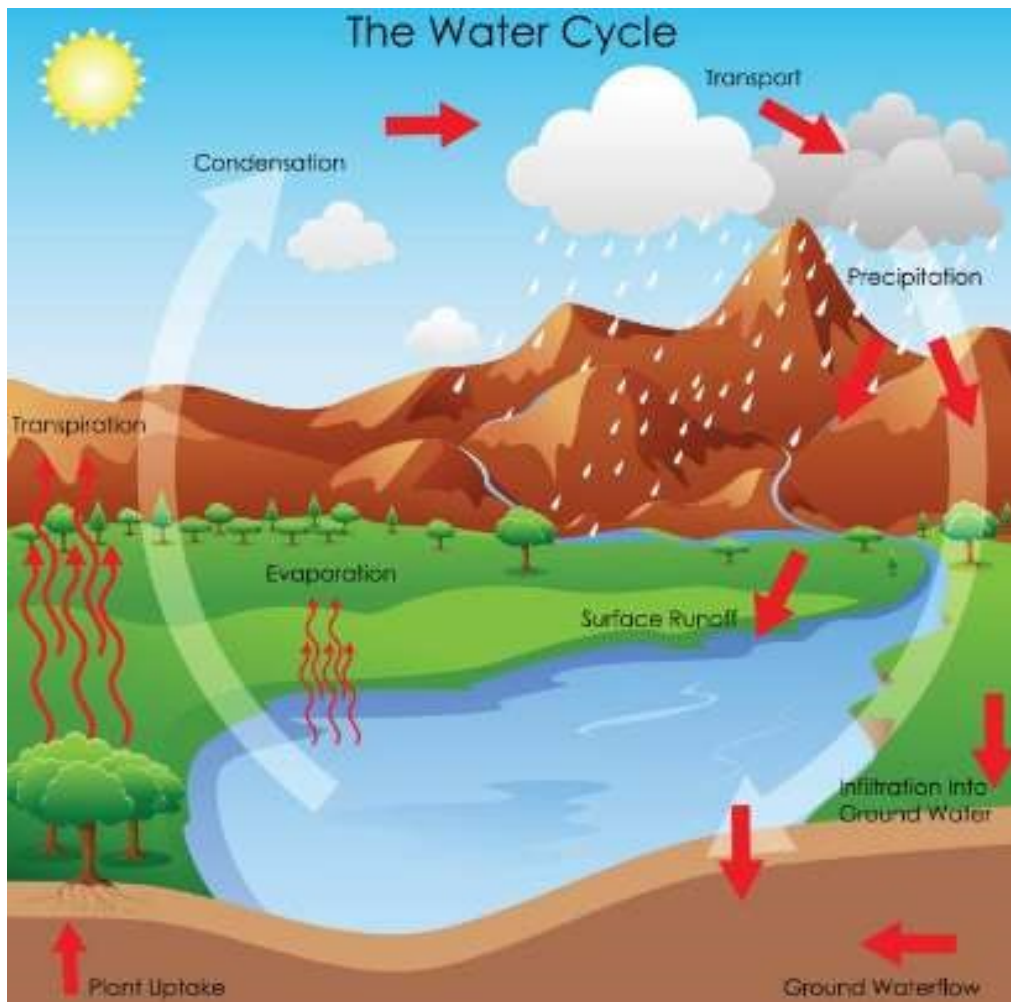
ADOBE HOUSES: Made from mud bricks



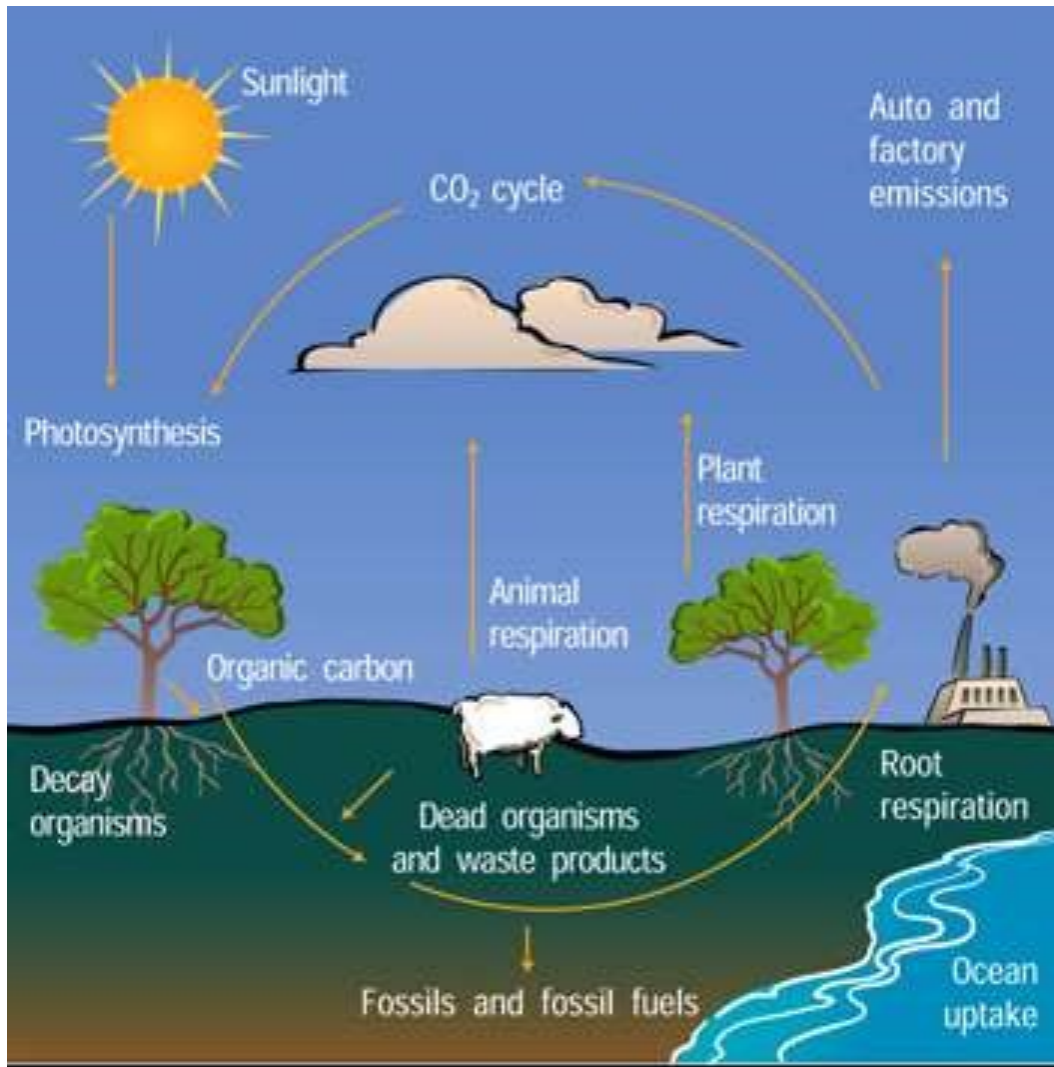
CHAPTER 4 – USING ESARTHS RESOURCES**LESSON 3 – CYCLES IN ECOSYSTEM Vocabulary:**

Water Cycle	The continuous movement of water between the Earth and atmosphere
Evaporation	Changing of liquid to gas
Condensation	Changing of gas to liquid
Precipitation	When water falls from the atmosphere to the ground. – Rain, sleet, snow, hail
Watershed	An area from which water is drained
Runoff	When water is not absorbed by the ground, but travels in rivers and streams
Groundwater	When water settles underground
Carbon cycle	The continuous exchange of carbon among living things
Decomposition	Break down of living matter
Absorption	When something takes in another substance
Nitrogen Cycle	The continual trapping of nitrogen gas in the soil and its return to the air
Nitrogen – fixing bacteria	Bacteria that run nitrogen gas into ammonia
Denitrifying bacteria	Bacteria that run nitrates back into nitrogen gas
Denitrification	The process of turning nitrates into nitrogen gas
Compost	A mixture of dead organic material that's used as fertilizer.

THE WATER CYCLE

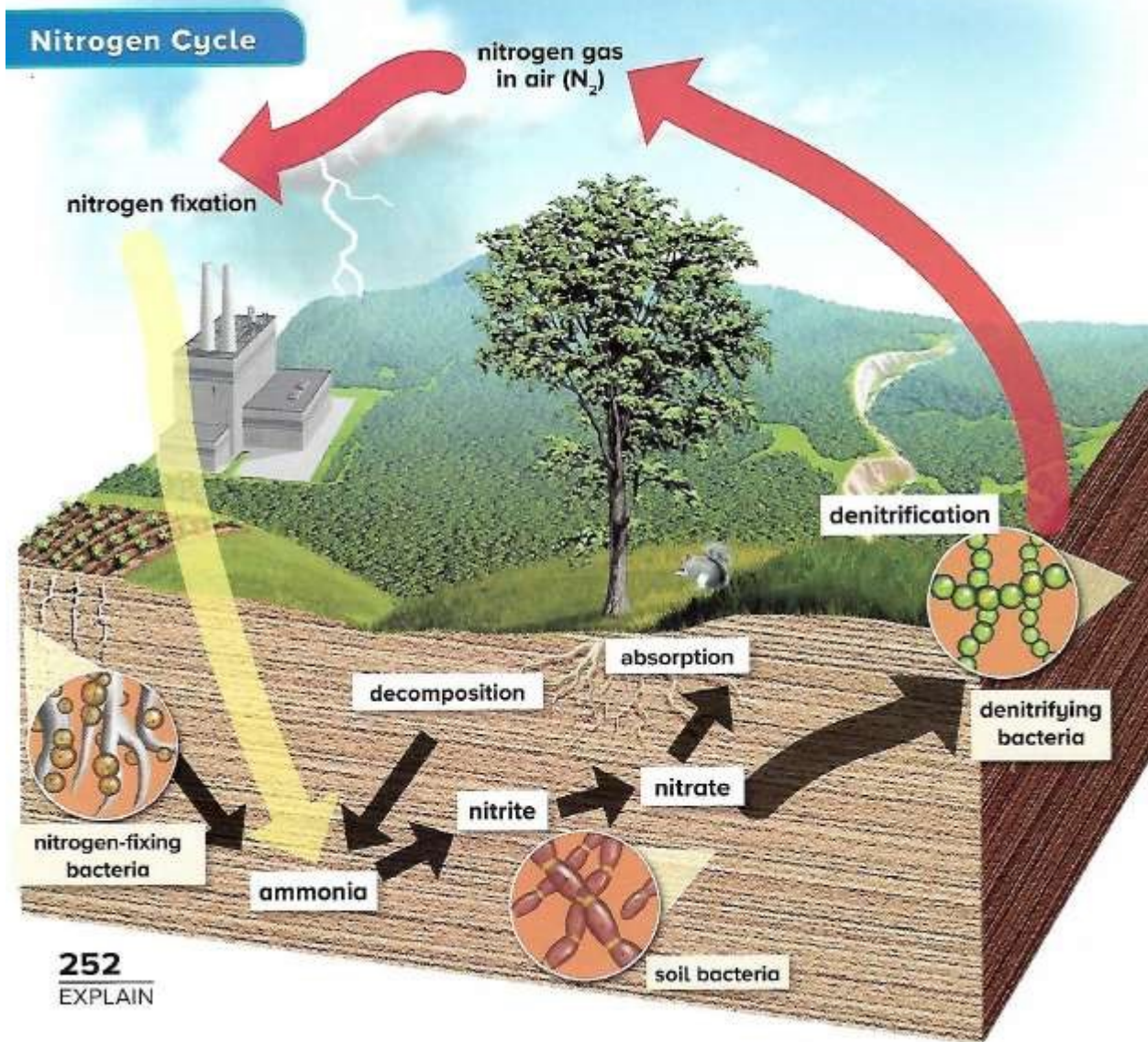


THE CARBON CYCLE



Carbon From Atmosphere	Carbon To Atmosphere
Photosynthesis (Plants)	Combustion by humans through Fossil Fuels
Dissolved in water	Respiration (Humans, Animals, Plants and Bacteria)

THE NITROGEN CYCLE



Nitrogen From Atmosphere	Nitrogen To Atmosphere
Nitrogen – Fixing Bacteria	Denitrifying Bacteria
Lightening	

Nitrogen gas → Ammonia → Nitrite → Nitrate

- Nitrate are used by plants to make Proteins.
- Plants are eaten by animals, so the nitrogen enters the animals.
- Animals produce waste with nitrogen in it and after animals die the nitrogen in them returns to the soil.
- Bacteria turn this backing ammonia.

RECYCLING

- Trees are replanted to conserve the number of trees in the world.
 - This consumes nitrogen for the soil
 - Farmers add more nitrogen to the soil through fertilizers.
-
- Compost is a natural fertilizer which contains fertilizer and reduces the amount of trash that is made.
 - Decomposers breakdown materials in compost producing ammonia.
 - Ammonia then is used to make eventually make nitrates.





Chapter 4 Practice Questions

1. Choose all the renewable sources from the list

- A. Oil D. Gold
B. Wind E. Trees
C. Copper F. solar energy

2. Choose all the non-renewable sources from the list

- A. Oil D. Gold
B. Wind E. Trees
C. Copper F. solar energy

3. Where do fossil fuels come from?

- A. From meteorites
B. From the remains of ancient animals and plants
C. From cooling down of lava

4. Choose the fossil fuels from the list below

- A. Wood
B. Coal
C. Oil
D. Natural Gas

5. Alternative energy sources include

- A. Fossil fuels
B. All the sources, except the fossil fuels
C. All the energy sources, including the fossil fuels

6. What is the difference between renewable and non-renewable resources?

7. Where do natural resources come from

- A. From Earth
B. Made on factories
C. Synthesized in laboratories

8. Sustainability is fulfillment of present needs without

- A. Using science

- B. Using technology
- C. Endangering the ability of future generations to fulfill their needs
- D. Solar energy

9. Minerals, such as copper and gold ores are

- A. Renewable resources
- B. Non-renewable resources

10. Oil and coal are

- A. Renewable resources
- B. Non-renewable resources

11. Topsoil, the top layer of the soil that plants need to grow on can be produced

- A. Very quickly
- B. Slowly

12. Most electricity nowadays is produced using

- A. Renewable sources
- B. Non-renewable sources

13. The picture shows which of the following?



- A. Renewable source
- B. Non-renewable source
- C. Land resource
- D. Fossil fuel

14. Why trees are a renewable source?

- A. Because they depend on fossil fuels
- B. Because they can recover
- C. Because trees take millions of years to form
- D. Because it is not a natural resource

15. What do hydroelectric and solar energy have in common

- A. They depend on fossil fuels
- B. They use energy from the Sun
- C. They recycle dirty water
- D. They are non-renewable sources

16. Use of which resources is better for the future generations?

- A. Renewable
- B. Non-renewable

17. What from the items listed below is an advantage of non-renewable energy?

- A. They can disrupt the environment
- B. They can reduce pollution
- C. They can be used in any location
- D. They can finish

18. Is plastic a synthetic material?

- A. Yes
- B. No

19. Are plastics good heat insulators?

- A. Yes
- B. No

20. Are metals good heat insulators?

- A. Yes
- B. No

21. What is textile?

- A. a metal
- B. a plastic
- C. a type of wood
- D. a fabric or cloth

22. Silk and cotton are used

- A. to make clothes
- B. to make fuel
- C. for food
- D. to make cars

23. Concrete is used to

- A. build houses
- B. build cars
- C. cook food
- D. make computers

24. What is more fuel-efficient

- A. Using public transport
- B. Using your own car
- C. Walking

25. Evaporation is when water

- A. Turns from liquid into gas
- B. Turns from gas into liquid

C. Turns from solid into gas

D. Turns from solid into liquid

26. Condensation is when water

A. Turns from liquid into gas

B. Turns from gas into liquid

C. Turns from solid into gas

D. Turns from solid into liquid

27. Precipitation is when water

A. Turns from liquid into gas

B. Turns from gas into liquid

C. Falls from atmosphere

D. Turns from solid into liquid

28. Who takes carbon from the atmosphere

A. plants

B. animals

C. birds

D. fish

29. Nitrogen can be fixed from atmosphere by the following – more than one correct answer is possible

A. some bacteria

B. lightening

C. volcanic activity

D. animals

30. Compost is _____

31. How does compost enrich the soil?

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Chapter 4 Practice Questions - Answers

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- C. Copper
- D. Gold
- E. Trees
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5. Alternative energy sources include

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6. What is the difference between renewable and non-renewable resources?

Renewable resources can be replaced as they are use up. Non-renewable resources are limited and will finish.

7. Where do natural resources come from

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8. Sustainability is fulfillment of present needs without

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United Arab Emirates Ministry of Education Grade: 5



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Past Exam Paper Question

20. Fossil fuels are used to make:

a. plastic.

b. paper.

c. cotton.

d. bricks.



Past Exam Paper Question Answer

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