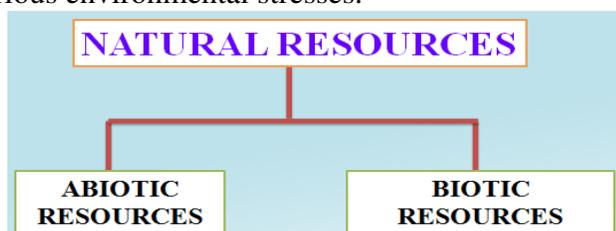


2. ENVIRONMENT AND HUMAN SOCIETY

- Primitive humans interacted with environment for survival
- As humans used environmental resources for making life comfortable and protecting them from various environmental stresses.



- Abiotic resources are physical resources of nature includes land, water, energy, petroleum and natural gas, metals ores or minerals.

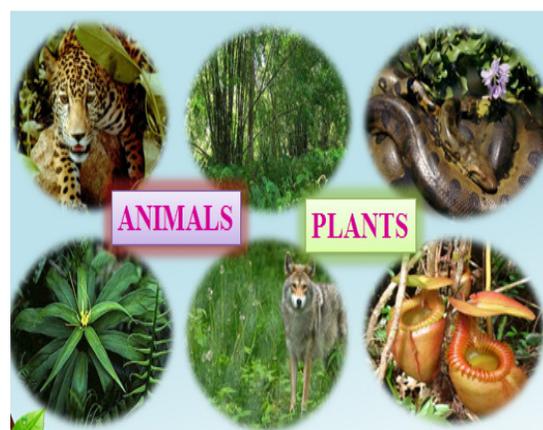


- The need for land usage is steadily growing. To cater the needs of the growing population, urbanization and industrialization, land is being used for building dams, flyovers, subways and factories. Land resources are fast diminishing.
- The natural water bodies include oceans, seas, and surface water bodies such as rivers, lakes, waterfalls and ponds. The primary source of water on land is the rainfall.
- Water is also required for irrigation crops, industries, building construction, aquaculture, drinking, bathing, cleaning, washing, gardening, pottery making etc.
- The prime source of energy is solar radiation. Primitive humans used firewood and cow dung and other animal wastes for heating and cooking. Oil extracted from seeds and fish was used by them to light caves and shelters.
- Coal is used as a fuel for cooking, for running locomotives, furnaces industries and generating electricity. Coal is also used for extraction of metals and minerals and in thermal power generation.
- Petroleum and natural gas are also fossil fuels. Petroleum probably originated from marine animals that lived during past geological periods.

- Petroleum and natural gas are obtained from deep inside the earth and they are non-renewable energy resources.
- Metals ores are chemical compounds found as deposits in earth.

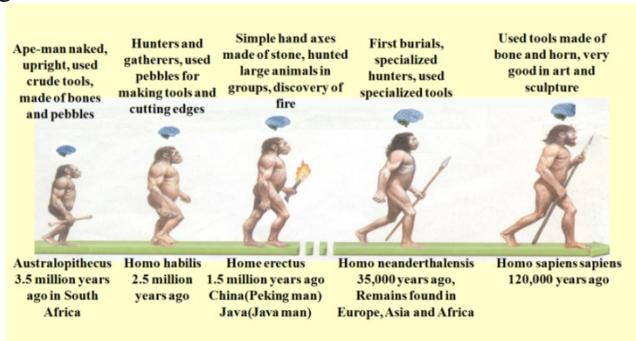
Metals	Uses
Aluminum	Utensils, parts of vehicles, air crafts, and space craft.
Iron and its alloys	Armaments, heavy machinery, railways engines, railway lines.
Copper	Industrial containers, electric wires, electronic and telecommunication industries.
Silver, gold, platinum	Ornaments and treasured by humans.

- Biotic resources include plants, animals and microorganisms.

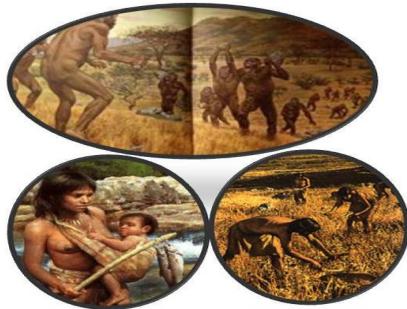


- Plants are natural food resources for living beings included human diet in the form of various cereals, legumes, vegetables and fruits. Plants also give fibers, medicines, and industrial raw material.
- Some animals are the sources of foods, other animals are used as draught animals.
- Microorganism provides antibiotic, helps in fermentation, processing wastes and dead plants and animals.
- The human beings (Homo sapiens sapiens), evolved more than two million years ago. They evolved with a large brain that evolved them to think and use their judgments.

- Evolutionary stages for human being as shown in figure.



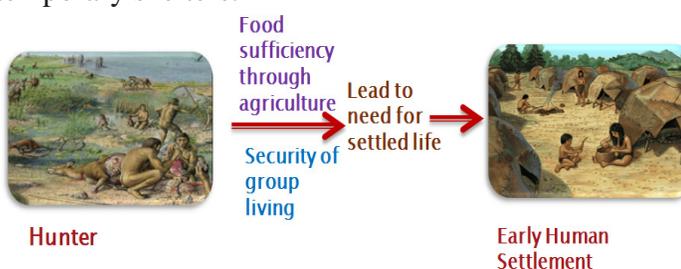
- Primitive humans lived in forest near water bodies located on the edge of forest
- Main preoccupation of primitive humans was to procure food. They were hunters and gatherers, lived in a group of 20-30. They collected plant food and hunted animals with pebble and stone tools. They had no permanent abode and also lived in caves.
- Tools made by primitive humans from stones ushered in the Neolithic or New Stone Age



FROM OLD TO NEW STONE AGE TOOLS

PALEOLITHIC AGE TOOLS	MESOLITHIC AGE TOOLS	NEOLITHIC AGE TOOLS
<ul style="list-style-type: none"> • Simple shaped stone tools e.g. hand axes and sticks, • Tools were 100,000 year old 	<ul style="list-style-type: none"> • Used flint tools • Rods that were used for making tools were quartz, quartzite and other volcanic rocks • Made arrow heads, spears and other tools 	<ul style="list-style-type: none"> • More advanced tools • Used antler, bone, wooden hammer and hammer stone to chip off uniform flakes from the rocks • Made bows and arrows, harpoons, knives, fish hooks, needles etc.

- The primitive human *Homo erectus*, discovered fire more than 200,000 years ago. Fire brought about “cultural evolution” of humans as well as increasing exploitation of natural resources.
- From hunters and gatherers life, they moved and dispersed to many parts of the world and lived in a temporary shelters.



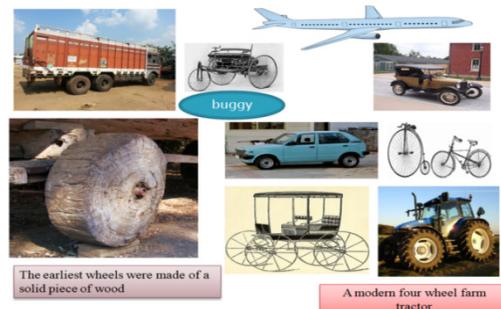
- Once tools were improved, fire discovered and cultivation of fields begun, humans started settling down. They made shelters and lived in groups.
- As humans built temporary shelters and began to stay together for three to four months at a place, they discovered that seeds of fruits and grains thrown in front of their huts sprouted into saplings.

- Around 12,000 years ago human learnt to cultivate crops.
- As time passed, humans learnt to use metal tools for agriculture and used plant and animal residues as manure. They also began irrigation of their cultivated fields. Thus evolved the so-called “agro-horticultural societies.”

- Humans also began domestication of animals and raising cattle. The first domesticated animal was the dog.
- When primitive humans moved from one place to another, they started using bullock carts to transport humans and their wares.

People were using it around 5000 years ago in Iraq, Syria, Turkey etc. The first wheeled vehicle was a chariot which was a two wheeled cart pulled by donkeys and then by horses.

- Greeks and Romans used them when fighting wars.



- Making wheels, constructing buildings, mining ores to make tools and ornaments were a step towards industrialization. Humans discovered that copper, iron, bronze made stronger tools.
- Rapid expansion of industrialization has resulted in (i) depletion of natural resources and (ii) pollution of the environment.

FACTORS THAT LED TO GROWTH OF INDUSTRIALIZATION

Technical development	Economic development
Invention of wheel	Beginning of mining
Agriculture	Bronze age and Iron age
Language	

The vary survival of humans is now threatened because of environmental degradation.



Check Yourself

1. When were Homo sapiens sapiens (Modern man) evolved on this earth?
a. Above 1 billion years ago b. more than 2 million years ago c. 35000 years ago d. 10000 years ago
2. Which one of the primitive humans is known as better tool maker?
a. Homo habilis b. Homo erectus c. Homo sapiens neandertalensis d. Australopithecus
3. Animals those were used for transportation of goods and humans from one place to another place is known as:
a. Mulching animals b. Livestock c. Farm animals d. Draught Animals
4. Name the first wheeled vehicle which was pulled by donkeys.
a. Chariot b. Cart c. Buggi d. Truck
5. Which part of the world had come out Bronze Age and entered into iron era?
a. East Asia b. Latin America c. Western Asia d. Europe Continent

Ans: 1. c. 2. b. 3. d. 4. a. 5. C



Stretch Yourself

1. What is the main occupation of primitive man?
2. Name the factors that led to the growth of industrialization.
3. State the used of tools by primitive humans.
4. What is the main impact on environment from mining?



Test Yourself

1. Agricultural practices improved and human grew enough food for increasing population of primitive man? Explain in brief.
2. How primitive humans do discovered fire?
3. Mention the major impact on environment after industrialization
4. Correlate the relation between urbanization and environment.

