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The topic ‘Soil’ is important for IAS Exam – Geography subject that comes under Mains GS-I. This article will brief you about soil, the different types of soils in India and their characteristics, soil erosion and the importance and ways of soil conservation. Classification of Soil in India (UPSC Notes) Download PDF Here What is Soil? The loose material or the upper layer of the mantle rock (regolith – a layer of loose, heterogeneous material covering solid rock) consisting mainly of very small particles and humus which can support the growth of plants is known as “soil”. Soil mainly consists of mineral/rock particles, portions of decayed organic matter, soil water, soil air and living organisms. The major factors that influence the formation of soil are parent material, relief, climate, vegetation, life forms and time. In general, soil is composed of four elements: Inorganic or mineral fractions derived from the parent material Organic matter (decayed and decomposed plants and animals) Air Water Soil is formed under specific natural conditions and each of the elements of the natural environment contributes to this complex process of soil formation known as “pedogenesis”.  Soil Profile  The soil profile is a vertical cross-section of the soil, made of layers parallel to the surface. Each layer of soil has a different texture and is known as the horizon. Horizon A (Topsoil) – It is the topmost layer where the organic materials have got incorporated with the mineral matter, nutrients and water – elements necessary for the growth of plants. Horizon B (Subsoil) – This zone has a greater content of minerals and humus is present in smaller quantities. It represents a transition between Horizon A and Horizon C and contains matter derived from below as well as above. Horizon C (weathered and decomposed rock) – This zone is composed of the loose parent/rock material. This layer is the first stage in the soil formation process and eventually forms the above two layers. Underneath these three horizons is the rock which is known as the parent rock or the bedrock. Different Types of Soil in India In the ancient period, soils were mainly classified into two – Urvara (fertile) and Usara (sterile). The first scientific classification of soil was done by Vasily Dokuchaev.  In India, the Indian Council of Agricultural Research (ICAR) has classified soils into 8 categories. The types of soil in India according to this are: Alluvial Soil Black Cotton Soil Red & Yellow Soil Laterite Soil Mountainous or Forest Soil Arid or Desert Soil Saline and Alkaline Soil Peaty and Marshy Soil As mentioned before, there are eight types of soils categorized by ICAR but some Indian Soils like – Karewa soil, Sub-Montane Soil, Snowfield, Grey/Brown Soil are all sub-types of main Indian Soil. Let’s read about them one by one: Types of Soil in India –  Alluvial Soil Alluvial soils are widespread in the northern plains and river valleys. It covers about 40% of the total land area of the country.  These soils are mainly derived from the debris brought down from the Himalayas. In the Peninsular region, they are found in deltas of the east coast and in the river valleys. The colour of the alluvial soil varies from light grey to ash grey. The alluvial soil varies in nature from sandy loam to clay. They are rich in potash but poor in phosphorus. Two different types of alluvial soils have developed in the Upper and Middle Ganga plains – Khadar and Bhangar. Khadar is the new alluvium and occupies the flood plains of the rivers. Khadar is enriched with fresh silt deposits every year. Bhangar is the old alluvium, deposited away from the flood plains. Both Khadar and Bhangar soils contain concretion (kankars) of impure calcium carbonate. These soils are more loamy and clayey in the lower and middle Ganga plains and the Brahmaputra valley. Alluvial soils are intensely cultivated – wheat, maize, sugarcane, pulses, oilseed, etc. are mainly cultivated. Types of Soil in India – Red & Yellow Soil Also known as the “omnibus group”. It covers about 18.5 % of the total land area of the country. It is found in regions of low rainfall (eastern and southern parts of the Deccan Plateau). Along the piedmont zone of the Western Ghats, a long stretch of area is occupied by red loamy soil. This soil is also present in parts of Odisha and Chattisgarh and in the southern parts of the Middle Ganga Plain. The red colour is due to the presence of iron in crystalline and metamorphic rocks. The soil appears yellow when it is in hydrated form. The fine-grained red and yellow soil is usually fertile while the coarse-grained soil is less fertile. This type of soil is generally deficient in nitrogen, phosphorus and humus. Wheat, cotton, oilseeds, millets, tobacco, and pulses are mainly cultivated in red and yellow soil. Types of Soil in India – Black or Regur Soil Black soil is also known as “Regur Soil” or the “Black Cotton Soil”. It covers about 15% of the total land area of the country. It covers most of the Deccan Plateau – parts of Maharashtra, Madhya Pradesh, Gujarat, Andhra Pradesh and some parts of Tamil Nadu. In the upper reaches of the Godavari and Krishna, and the north-western part of the Deccan Plateau, the black soil is very deep. The colour of these soils varies from deep black to grey. The black soils are generally clayey, deep and impermeable. They swell greatly and become sticky when wet in the rainy season. In the dry season, the moisture evaporates, the soil shrinks and develops wide cracks. Black soils are rich in iron, lime, aluminium, magnesium and also contain potassium. However, these soils are deficient in nitrogen, phosphorus and organic matter. Cotton, pulses, millets, castor, tobacco, sugarcane, citrus fruits, linseed, etc. are mainly cultivated in black soil. Types of Soil in India – Desert Soil Also known as arid soil, it accounts for over 4.42 % of the total land area of the country.  The colour ranges from red to brown. Desert soils are sandy to gravelly in texture, have low moisture content and low water-retaining capacity. These soils are saline in nature and in certain regions, the salt content is so high that common salt is obtained by evaporating water. These soils have normal phosphate content but are deficient in nitrogen. Due to increased calcium content in the lower horizons of the soil, there is the formation of ‘kankar’ layers. These kankar layers restrict the penetration of water and as such when water is made available through irrigation, the soil moisture is readily available for sustainable plant growth. Desert soils are profoundly found in western Rajasthan and contain little humus and organic matter. Types of Soil in India – Laterite Soil The name has been derived from the Latin word “later” which means brick. It accounts for about 3.7% of the total area of the country. These are typical soils of the monsoon climate which is characterised by seasonal rainfall. With rain, lime and silica are leached away, and soil rich in iron oxide and aluminium are left leading to the formation of laterite soil. Laterite soil is deficient in organic matter, nitrogen, phosphate and calcium, however, iron oxide and potash are in abundance. Although low in fertility, they respond well to manures and fertilisers. Laterite soils are found in Karnataka, Tamil Nadu, Kerala, Madhya Pradesh and hilly regions of Assam and Odisha. Red laterite soil in Kerala, Tamil Nadu and Andhra Pradesh are well suited for tree crop cultivation like cashew nuts. Laterite soil hardens rapidly and irreversibly on exposure to the air, a property that leads to its use as building bricks in southern India. Types of Soil in India – Mountain Soil This type of soil is found in forest regions where rainfall is sufficient. The texture of the soil depends on the mountain environment where they are found. These soils are coarse-grained in the upper slopes and loamy and silty on valley sides. In the snowbound areas of the Himalayas, these soils undergo denudation and are acidic with low humus content. The soils found in the lower valleys are fertile. Also called forest soil. Types of Soil in India – Peaty and Marshy Soils These soils are found in regions of heavy rainfall and high humidity, and it supports the good growth of vegetation. Peaty soils are rich in humus and organic matter. These soils are generally heavy and black in colour. In many places, these soils are alkaline. These are found in southern Uttarakhand, the northern part of Bihar, and the coastal areas of West Bengal, Odisha and Tamil Nadu. Types of Soil in India – Saline and Alkaline Soils These soils have high percentages of sodium, magnesium and potassium, and hence are infertile. The high salt content is mainly because of the dry climate and poor drainage. The texture ranges from sandy to loamy.  These soils are found in arid and semi-arid areas, and in waterlogged and swampy regions. These soils are deficient in calcium and nitrogen. These soils are mostly found in western Gujarat, deltas of the eastern coast and in Sundarban areas of West Bengal. In the Rann of Kutch, the south-western monsoon brings salt particles and deposits there as a crust. Seawater near deltas also increases the salinity of the soil.  These soils can be reclaimed by improving drainage, by applying gypsum or lime and by cultivating salt-resistant crops like berseem, dhaincha, etc.  These are also called Reh, Usar, Kallar, Rakar, Thur, and Chopan. These are mainly found in Rajasthan, Haryana, Punjab, Uttar Pradesh, Bihar, and Maharashtra. Sodium chloride and sodium sulphate are present in this soil. It is suitable for leguminous crops. Types of Soil in India – Red and Black Soil These are developed over the granite, gneiss, and quartzite of the Precambrian and Archean eras. This soil performs well if irrigated. Generally, this soil has very little productivity. Types of Soil in India – Grey and Brown Soil These soils are found in Rajasthan and Gujarat. It is formed by the weathering of granite, quartzite and gneiss. These loose, friable soils contain iron oxide (haematite and limonite). Types of Soil in India – Submontane Soil These are formed by the deposition of eroded material from Shiwaliks and the lesser Himalayas. These are found in the Tarai region of the submontane stretching from Jammu and Kashmir to Assam. The soil supports a luxuriant growth of forest and is more prone to soil erosion. Types of Soil in India – Snowfields This soil was found under the snow and glaciers at the highest peak of the greater Himalayas, Karakoram, Ladakh, and Zaskar. This soil is immature and unsuitable for crops. Types of Soil in India – Karewa Soil Karewa soils are the lacustrine deposits in the Kashmir Valley and the Bhadarwah Valley. Fine silt, clay, and boulder gravels are the composition of Karewa soil. They are characterized by fossils. These soils are mainly devoted to the cultivation of saffron, almonds, apple, walnut, etc. Classification of Indian Soil as per USDA The ICAR (Indian Council of Agricultural Research) has classified Indian soil on the basis of its nature and characteristics as per the United States Department of Agriculture (USDA) Soil Taxonomy. S.No Order  Percentage 1. Inceptisols  39.74 2.  Entisols  28.08 3. Alfisols  13.55 4.  Vertisols  8.52  5. Aridisols  4.28 6.  Ultisols  2.51 7.  Mollisols  0.40 8.  Others  2.92  Total  –  100 Soil Erosion  Soil erosion refers to the removal of topsoil. The formation of soil and the erosional processes occur simultaneously and generally, there is a balance between the two processes. However, sometimes the balance gets disturbed leading to faster removal of soil than its formation which results in soil erosion. In areas where the rainfall is heavy, water is the main agent of soil erosion, while in arid and semi-arid regions wind is responsible for soil erosion. Water erosion takes place mainly in the form of sheet and gully erosion. When the topsoil is removed it is known as sheet erosion and takes place on level lands after a heavy shower. When the run-off makes gullies it is known as gully erosion and is common on steep slopes. Gullies deepen with rainfall, cut the agricultural lands into small fragments and make them unfit for cultivation. A region with a large number of deep gullies or ravines is called a “badland topography”. A typical example of gully erosion is provided in the Chambal Valley (Madhya Pradesh). They are also found in Tamil Nadu and West Bengal. Eroded materials due to soil erosion are carried down to rivers and thereby decreasing their water-carrying capacity which leads to frequent floods and damage to agricultural lands.  The tidal waters of the Arabian Sea and the Bay of Bengal cause considerable damage to the soils along the coastal areas. Severe erosion of beaches along the Kerala, Tamil Nadu, Odisha, West Bengal and Gujarat coasts are examples of sea-wave erosion. Deforestation is one of the major causes of soil erosion and its effect is more pronounced in the hilly parts of the country. Intensive agricultural practices that rely heavily on water and chemical fertilisers have caused waterlogging and salinity in many parts of the country, reducing the fertility of the soil in the long run. This problem is common in almost all the areas of the river valley projects, which were the first beneficiaries of the Green Revolution. According to estimates, about half of the total land of India is under some degree of degradation. Every year India loses millions of tonnes of soil and its nutrients to the agents of its degradation, which adversely affects our country’s productivity.  Soil Conservation Soil conservation is a methodology to maintain soil fertility, prevent soil erosion and improve the degraded condition of the soil. Soil conservation practices are those farming operations and management strategies conducted with the goal to control soil erosion by preventing or limiting soil particle detachment and its transport in air or water. Contour bunding, contour terracing, controlled grazing, regulated forestry, cover cropping, mixed farming and crop rotation are some of the remedial measures adopted to reduce soil erosion. Afforestation (planting of trees) helps in reducing soil erosion and it is equally important to check the indiscriminate felling of trees. The problem of soil erosion is closely associated with floods. Floods generally occur during the rainy season. Efforts, therefore, need to be made for the storage of floodwater or the diversion of additional rainwater. The interlinking of rivers like the Ganga-Kaveri Link Canal Project is of immense importance. Reclamation of gullies and ravines is also necessary to overcome the problem of soil erosion. Several such schemes involving plugging of gully mouths, construction of bunds across the gullies, levelling the gullies, and planting cover vegetation are under implementation in the Chambal ravines of Madhya Pradesh. In northeast India and the Western and Eastern Ghats, shifting cultivation (slash and burn) is one of the main causes of soil erosion. Such farmers should be motivated to adopt terraced farming. A scheme to control shifting cultivation has been launched in the seven states of northeast India. This is a beneficiary-oriented programme that aims at the rehabilitation of the families involved in shifting cultivation (Jhumming). This agricultural practice should be replaced by sedentary farming. Get more NCERT Geography Notes for UPSC in the linked article. Classification of Soil in India (UPSC Notes) Download PDF Here Candidates can read other such Geography articles linked in the table below: Types of Soil in India – UPSC Questions 1. Which of the following statements regarding laterite soils of India are correct? (UPSC Civil Services Preliminary Examination- 2013) They are generally red. They are rich in nitrogen and potash. They are well-developed in Rajasthan and UP. Tapioca and cashew nuts grow well on these soils. Select the correct answer using the codes given below. 1, 2 and 3 2, 3 and 4 1 and 4 2 and 3 only Answer: C 2. Salinization occurs when the irrigation water accumulated in the soil evaporates, leaving behind salts and minerals. What are the effects of salinization on the irrigated land? (UPSC Civil Services Preliminary Examination- 2011) It greatly increases the crop production It makes some soils impermeable It raises the water table It fills the air spaces in the soil with water Answer: B Write notes on Inceptisol. (UPSC Civil Services main examination 2007 General studies Paper I) Write a short note on India’s Laterite soils. (UPSC Civil Services main examination 2000 General studies Paper-II) Write a short note on Regus. (UPSC Civil Services main examination 2005 General studies Paper I) Why are the soils of Malwa in Madhya Pradesh black while those of Karnataka red? Discuss the relative fertility of these soils. ( UPSC Civil Services main examination 1994 General studies Paper-II) Relevant Links UPSC Preparation: Enjoy sharper detail, more accurate color, lifelike lighting, believable backgrounds, and more with our new model update. Your generated images will be more polished than ever.See What's NewExplore how consumers want to see climate stories told today, and what that means for your visuals.Download Our Latest VisualGPS ReportData-backed trends. Generative AI demos. Answers to your usage rights questions. 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Access to Toppers' notes gives you an edge in understanding complex concepts. Whether you're a beginner or aiming for advanced proficiency, Learn at a Glance: Types of Soils Notes on EduRev are your ultimate resource for success. The "Learn at a Glance: Types of Soils Class 5 Questions" guide is a valuable resource for all aspiring students preparing for the Class 5 exam. It focuses on providing a wide range of practice questions to help students gauge their understanding of the exam topics. These questions cover the entire syllabus, ensuring comprehensive preparation. The guide includes previous years' question papers for students to familiarize themselves with the exam's format and difficulty level. Additionally, it offers subject-specific question banks, allowing students to focus on weak areas and improve their performance. Students of Class 5 can study Learn at a Glance: Types of Soils alongwith tests & analysis from the EduRev app, which will help them while preparing for their exam. Apart from the Learn at a Glance: Types of Soils, students can also utilize the EduRev App for other study materials such as previous year question papers, syllabus, important questions, etc. The EduRev App will make your learning easier as you can access it from anywhere you want. The content of Learn at a Glance: Types of Soils is prepared as per the latest Class 5 syllabus. The mixture of organic materials and rock fragments that forms on the surface of the ground is known as soil. Relief, parent material, climate, time, biodiversity, and human activities are the main elements influencing soil formation. India is a diversified nation, with a wide range of topographic characteristics, landforms, climatic zones, and flora kinds. These have helped to generate different Types of Soil in India. The majority of the components of soil include mineral/rock particles, fragments of decomposed organic materials, soil water, soil air, and living organisms. Parent material, relief, climate, vegetation, life forms, and time are the main variables that affect how soil is formed. The four components of soil are air, water, organic matter (decayed and decomposed plants and animals), and inorganic or mineral portion derived from the parent material. The complicated process of soil creation known as “pedogenesis” occurs under specific natural conditions, and each component of the environment plays a part in this process. The horizon is the term for each soil layer, each of which has a unique texture: Horizon A (Topsoil): It is the uppermost layer where organic components have combined with the minerals, nutrients, and water elements required for plant growth. Horizon B (Subsoil): Compared to other zones, this one contains a higher concentration of minerals and less humus. It is a transition between Horizon A and Horizon C and contains stuff that was derived both from below and above. Horizon C (weathered and decomposed rock): Loose parent/rock material makes up this zone. The two layers above are eventually formed from this layer, which is the first step in the development of soil. Major Types of Soil in India The Indian Council of Agricultural Research (ICAR) has categorized soils in India into eight types: 1. Alluvial Soil Alluvial soil forms when rivers deposit sediments. Most rivers start in the Himalayas and carry a lot of sediment that settles on the riverbanks. This soil is made up of clay, sand, and silt. It is very fertile because it has the right amounts of potash, lime, and phosphoric acid. Alluvial Soil Most Important Soil found in the country covers 43% of the total land This Soil is poor in Nitrogen and Humus Two Types: Old Alluvium(Bangar) and New Alluvial(Khaddar) found in the northern plains beginning from Punjab to west Bengal and Assam. It is also found in deltas of different rivers such as Krishna, Godavari, Kaveri and Mahanadi in Penninsular India. Crops: Wheat, Rice, Maize, Sugarcane, Puslses, vegetables, fruits, oil seeds etc. 2. Black Soil Black soil, also called “regur” (from the Telugu word “reguda”) is made from volcanic rocks and lava. Cotton is the main crop grown in this soil. It has enough potash, magnesium carbonate, and calcium carbonate to help cotton grow well. Black Soil Also known as Regur or Chernozem soil Third largest soil group in india Made up of Volcanic rocks and lava The Black color is due to the presence of Magnetite titaniferous and humus Ingredients: Calcium Carbonate, potash, Lime and magnesium carbonate but poor in Phosphorous It develops deep crack during hot weather Found in Maharastra, Gujarat and Madhya Pradesh, Andhra Pradesh, Karnataka, and Tamil Nadu, it is 15.20% land cover Crops: Cotton, Oilseeds, Wheat, Linseed, millets and Tobacco 3. Red & Yellow Soil Red and yellow soil also called the “omnibus group,” covers about 18.5% of India’s land. It is found in areas with low rainfall like the eastern and southern parts of the Deccan Plateau. Red Soil Area: 18.5% This soil also covers parts of the Western Ghats, Chattisgarh, Odisha, and the southern Middle Ganga Plain. Red and Yellow soil is used for the production of Bricks The red color comes from iron in the rocks, and the soil turns yellow when wet. Fine-grained red and yellow soil is more fertile than coarse-grained soil. However, it usually lacks humus, nitrogen, and phosphorus. Crops: wheat, cotton, oilseeds, millets, tobacco, and pulses. 4. Desert Soil Desert soil also called arid soil, covers more than 4.42% of India’s land. It ranges in color from red to brown. This soil has a sandy to gravelly texture, low moisture, and does not hold water well. It is naturally salty, and in some places, the salt content is so high that common salt can be made by evaporating water. Desert Soil Also known as Arid soil It is 4.42 % of the total area of the country Color: Read to Brown Desert soil has a normal amount of phosphate but lacks nitrogen. It has layers of kankar (calcium) that stop water from soaking in. When irrigated, the water stays near the surface, making it available for plants. Western Rajasthan has a lot of desert soil, which is low in humus and organic matter Crops: Bajra, Pulses, Guar, Fodder and less water requiring Plants 5. Laterite Soil Laterite soil gets its name from the Latin word “later,” which means brick. It covers about 3.7% of India’s land and forms in areas with seasonal monsoon rains. The rain washes away lime and silica, leaving soil that is rich in iron oxide and aluminum. Laterite soil has a lot of iron oxide and potash but is low in organic matter, nitrogen, phosphate, and calcium. This means it is not very fertile on its own, but it can improve with the addition of manure and fertilizers. Laterite Soil Area Cover: 3.7 % It is found in those area of the country which receive heavy rainfall with alternate dry and wet period. It is rich in Iron oxide and low humus It is formed by Leaching and Oxidation Crops: Rice, Ragi, Sugarcane, Rubber, coconut, Tea, coffee and cashewnut You can find laterite soil in Karnataka, Tamil Nadu, Kerala, Madhya Pradesh, and the hilly areas of Assam and Odisha. 6. Mountain Soil Mountain soil is found in forested areas with enough rainfall. The texture of the soil depends on the mountainous terrain. On the valley sides, the soil is loamy and silty while on the upper slopes, it is coarse-grained. In the snow-covered regions of the Himalayas, the soil is acidic, bare, and has little humus. However, the soil in the lower valleys is very fertile. Mountaine Soil It covers 5.5% of the area of the country Found in Valley and Hill slopes of the Himalayas Crops: Maize, Rice, legumes, Fodder, Orchard and Potato. 7. Alkaline Soils This soil is very infertile and has high levels of sodium, potassium, and magnesium. Due to the dry climate and poor drainage, it contains a lot of salt. Saline or Alkaline soil Saline and Alkaline soil are also called Kallar Salination is caused by excess Irrigation It is found in dry and semi-arid regions and lacks calcium and nitrogen. To make this soil fertile again, you can improve irrigation and drainage, add gypsum, and grow salt-tolerant crops. This type of soil is common in Punjab, Uttar Pradesh, Bihar, Rajasthan, Haryana, and Maharashtra. You can grow leguminous plants in it. 8. Peaty and Marshy Soils Peaty soil forms because of the high amount of organic material that builds up in humid climates. It has low levels of phosphorus and potash. Peaty and marshy soils Peaty soils originate in the areas of heavy rainfall where adequate drainage is not available You can find peaty soil in some districts of Kerala, and marshy soil along the coasts of Tamil Nadu, Bihar, Uttarakhand, and the Sundarbans in West Bengal. Peaty soil is black and very acidic Rich in Organic matter, highly saline, but deficient in Phosphate and Potash Types of Soil in Indian Forest Sr. No. Types of Forest Soils Characteristics 1 Brown Forest Soil It is found between 900-1800m. It is rich in humus. It is slightly acidic. Mostly has deciduous forest. 2 Podzol It is found above an elevation of 1800m. It has thick coniferous forests. It has thick forest cover. 3 Alpine Meadow soil It is found in the Himalayan’s Alpine. It has decomposed plants. It is either sandy-clay or sandy-loam. Classification of Different Types of Soil in India: USDA Soil Taxonomy Sr. No. Order of Soils in India Percentage 1 Inceptisols 39.74 2 Entisols 28.08 3 Alfisols 13.55 4 Vertisols 8.52 5 Aridisols 4.28 6 Ultisols 2.51 7 Mollisols 0.40 8 Other 2.92 What is Soil Erosion? Soil erosion is when the top layer of soil is removed. Basically, soil forms and erodes at the same rate, keeping a balance. But sometimes this balance is disturbed and soil erodes faster than it forms. This is called soil erosion. In dry areas, wind causes soil erosion, while in places with heavy rain, water is the main cause. There are two main types of water erosion: sheet erosion and gully erosion. Sheet erosion happens on flat fields after heavy rain, washing away the topsoil. Gully erosion occurs on steep slopes when runoff water creates deep channels or gullies. These gullies can grow deeper with more rain, cutting farmland into unusable pieces. Areas with many gullies are called “badland topography,” like the Chambal valley in Madhya Pradesh. You can also find them in West Bengal and Tamil Nadu. Soil erosion causes rivers to carry eroded materials downstream reducing their water-carrying capacity and increasing the risk of floods and damage to farmland. Coastal soils are also damaged by tidal waters from the Arabian Sea and the Bay of Bengal, with severe erosion seen on beaches in Gujarat, West Bengal, Odisha, Kerala, and Tamil Nadu. Deforestation is a major cause of soil erosion especially in hilly areas. Intensive farming that uses a lot of water and chemical fertilizers has led to waterlogging and salinity in many parts of the country, reducing soil fertility over time. This problem is common in areas that benefited from the Green Revolution, like the River Valley Projects. It’s estimated that about half of India’s land is degraded to some extent. Soil degradation causes India to lose millions of tonnes of soil and nutrients each year, harming the country’s productivity. Soil Conservation & its Methods Soil conservation is a way to keep soil healthy, stop it from being washed or blown away, and fix damaged soil. It includes farming methods and management techniques to reduce soil erosion. Some methods to prevent soil erosion are: contour bunding, contour terracing, controlled grazing, regulated forestry, cover crops, mixed farming, and crop rotation. Planting trees helps reduce soil erosion, and it is important to avoid cutting down trees unnecessarily. During the rainy season, floods can happen, so it is important to store or divert extra rainwater. One idea is the Ganga-Kaveri link Canal Project. Fixing gullies and ravines is also important to stop soil erosion. In the Chambal ravines in Madhya Pradesh, projects like plugging gully mouths, building bunds, leveling gullies, and planting cover plants are being done. Shifting farming (slash and burn) is a major cause of soil erosion in the Western and Eastern Ghats and northeast India. Farmers should be encouraged to switch to terraced farming. In the seven states of northeast India, a plan has been started to regulate shifting farming. This plan helps families who practice shifting cultivation (Jhumming) to switch to settled farming.  In this article, I will discuss the soil types of India. We all know that soil is the most important layer of the earth. Soil is the uppermost weathered layer of the earth’s crust. The study of soil is known as Pedology. On the other hand, Pedogenesis refers to the formation of soils due to various factors. These factors are relief, parent material, climate, vegetation and other factors. Moreover, the anthropogenic factors (human activities) also involved in the formation of soil. It is a dynamic entity which always undergoes physical, chemical and biological changes.The soil is composed of both organic and inorganic material. For example, the weathering of rocks is an inorganic component of soil which provides the volume and weight to the soil. On the other hand, decayed plants and animals, roots of plants, fungi, bacteria, insects etc. constitute the organic component of the soil.The liquid portion of soil is known as soil solution which is a complex solution necessary for the development of plants. The open spaces (pores) in the soil contains the gases existing in the atmosphere. Thus, the soil is made up of the substances existing in all three states. However, the amount of each component of soil varies according to the type of soil.The vertical cross-section of the soil is called soil horizons. Soil horizons are the different horizontal layers present in the soil profile. These horizons have their own physical and chemical composition. The following are the different types of horizons of soil.It is formed of accumulation of organic matters which are derived from the plants and animals. It also contains surface litters, fallen leaves and partially decomposed organic matter.It is the uppermost mineral horizon of the soil profile. It is rich in both the humus and inorganic minerals. A horizon is also known as the topsoil of the soil profile.It mainly constitutes grains of sand or coarse silt which are left behind due to seeping of water.It is rich in clay, oxides of aluminium and iron. Subsoil receives the aforesaid minerals from the A and E horizons.It consists of weathered parent minerals matter of the soil. C horizon is also known as Saprolite.R horizon composed of the cemented rocks of granite, basalt and limestone.Parent material mainly supplies the bases and nutrients to the soil. The parent material determines the colour, mineral composition and texture of the soil. For instance, calcareous rocks tend to give rise to base-rich soils due to calcification.It is one of the most deciding factors of the types of soil formation in India. For instance, temperature influences the rate of chemical and biological reactions. On the other hand, precipitation decides the amount of moisture, and the rate of leaching of minerals in the soils types.It constitutes both the flora and fauna of a region. For example, vegetation checks the soil erosion by binding the soil into their roots.Topography decides the depth of soil formation. For example, the steep slopes have thinner soil than the gentle slopes.It is also one of the most significant factors of soil formation as time decides the cycle of recycling of soil and weathering of rocks. For instance, it takes hundreds of years to form a thin layer of soil due to breaking of rocks.The Indian Council of Agricultural Research (ICAR) has classified the soil types in India based on their nature and character as per the United States Department of Agriculture (USDA) Soil Taxonomy.Sr. No.Order of Soils in IndiaPercentage1.Inceptisols39.742.Entisols28.083.Alfisols13.554.Vertisols8.525.Aridisols4.286.Ultisols2.517.Mollisols0.408.Other2.92Soils in India as per USDA soil taxonomy.Based on the genesis, colour, composition and location, Indian soils have been classified into the following types.Sr.NoTypes of soils in India1.Alluvial soils2.Black soils3.Red and yellow soils4.Laterite soils5.Arid soils6.Saline soils7.Peaty soils8.Forest soils8 Major soil types in IndiaSoil types of IndiaClimatic regions of IndiaAlluvial soils are widespread in the plains of northern India and the river valleys.They spread over an area of 15 lakh km2 or 40% of the total area of India.They are derived from the sediments deposited by the Indo-Gangetic rivers.In Gangetic plains, these soils are known as riverine alluvium.Along the coastal plains, they are formed by the sea waves and called coastal alluvium.In Deltaic regions of India, it is known as Deltaic alluvium. For instance, the deltas of eastern coasts.Alluvial soils have the properties of both the sandy and loamy soils.Chemically, they are poor in Phosphorous but rich in Potash.They vary from light grey to ash grey.Alluvial plains are intensively cultivated in India.Also, there are three different varies of alluvial soils found in the upper and middle Ganga plains called khaddar, Bhangar and Terai.It is found in the low-lying areas. It is deposited by annual floods and called new alluvium. Moreover, it is rich in fine silt deposits. They are more sandy but deficient in calcium and clay.It is known as the older alluvium soils as found above the flood plains. They are more calcareous and clayey. Bhangar soils are mainly dark in colour.Alluvial soils- Bhangar and KhaddarChemically, it is rich in organic matter and nitrogen but deficient in phosphates. Due to high moisture content, it is suitable for the plantation of rice, sugarcane and jute.Black soil covers most of the Deccan plateau as it is derived from the weathering of Basaltic rock formed due to solidification of lava.They are mostly found in Maharashtra, Madhya Pradesh, Gujrat, Andhra Pradesh and some parts of Tamil Nadu.Black soil is also known as Regur or black cotton soil.The presence of iron provides the black colour to the soil.The concentration of black soil is high in the upper reaches of the Godavari, Krishna and the northwestern parts of Deccan plateau.Geographically, they spread over 16.6% of the total area of India.Due to high clay content, they retain the moisture for a very long time.Black soil has the self-ploughing quality because they swell and become sticky when wet, and shrink when dry.During dry seasons, these soils develop wide cracks.Black soil is intensively cultivated for the cotton cultivation.Generally, they are deficient in Phosphate, Nitrogen and Humus but rich in lime nodules, iron, magnesia and alumina.Laterite soils develop in the areas having high temperature and high rainfall.They typically found in the tropical region which receive abundant seasonal rainfall. Also, the heavy rainfall promotes the leaching of lime and silica in these soils.These soils are rich in oxides of iron and aluminium but poor in organic matter, Nitrogen, Phosphate and calcium.Due to high bacterial action, the humus content of the soil is removed very fast.From the agricultural perspective, they are not suitable for cultivation.They spread over an area of 2.5 lakh km2 of the total land of India.Geographically, they are found in the Eastern Ghats of Orissa, Rajmahal Hills, Vindhyas, Satpura and some southern parts of Western Ghats.However, the red laterite soil of Tamil Nadu and Andhra Pradesh are suitable for the plantation of Cashewnuts.They mainly develop on crystalline igneous rocks in the areas having low rainfall. For instance, Eastern and Southern parts of Deccan plateau.Due to the wide diffusion of iron in crystalline and metamorphic rocks, they are reddish.However, they look yellow in appearance when occurring in hydrated from.They are less leached than laterite soils.They cover about 10.6% of the total geographical area of India.Due to the huge concentration of sand, they are not retentive to moisture.Mainly, they are found in Orrisa and Chhattisgarh, and some southern parts of middle Ganga plains.These soils are rich in Potash but poor in Phosphorous, Humus, Nitrogen and Magnesia.They are mostly cultivated during the rainy season.Moreover, the fine-grained red and yellow soil are fertile however, the coarse-grained soils are poor in fertility.Arid soils are mainly red to brown in appearance.They have a high concentration of sand (95%) but lack of clay (5%).They mainly found in the regions where the rainfall is less than 50cm.In some region of Rajasthan, the salt concentration on these soils are high.It is interesting to note, the high content of salt in some regions make suitable for obtaining common salt from it.They lack in Nitrogen but they are normal in phosphate content.The lower horizons of the soil occupied by kankars which restrict the infiltration of water.Geographically, the high concentration of arid soil is found in Rajasthan.However, Punjab, Haryana and Gujrat also have these types of soil in small patches.Due to the high temperature in the aforesaid regions, arid soils are poor in humus and organic matter.Saline soils are commonly known as Usara soil.The high proportion of Sodium, Potassium and Magnesium in these soils cause infertility.These soils do not support any vegetation.The dry climate and poor drainage make these soils salty.Regionally, they develop in the waterlogged and swampy areas of arid and semi-arid regions.Structurally, they vary from sandy to loamy.Saline soils lack in both Nitrogen and Calcium.Geographically, they are widely spread in Western Gujarat, deltas of eastern coasts and Sunderbans of West Bengal.Nowadays, the alluvial regions of Green revolution are becoming saline due to intensive cultivation.Both intensive irrigation and dry climatic conditions promote the capillary action in these soils and make them salty. For instance, Punjab and Haryana.Peaty soils are found in the regions having heavy rainfall and high humidity.They are rich in Humus and organic matter (40-50%).They are mainly black in appearance.Geographically, they are found in the northern parts of Bihar, southern parts of Uttrakhand and Coastal areas of West Bengal, Odisha and Tamil Nadu.Forest soils are formed in the forest areas having sufficient rainfall.Structurally, they are of three types Brown forest soil, Podzol and Alpine meadow soil.They are both loamy and silty on the valley sides but coarse-grained in the upper slopes.These types of soils have great variety in the Himalayas.Sr. No.Types of forest soilsCharacteristics1.Brown forest soil1. Found between 900-1800m.2. Rich in humus.3. Slightly acidic.4. Mostly has deciduous forest.2.Podzol1. Found above an elevation of 1800m.2. Has thick coniferous forests.3. Has thick forest cover.3.Alpine Meadow soil1. Found in the Himalayan’s Alpine.2. Has decomposed plants.3. Either sandy-clay or sandy-loam.Types of forest soils in India , the free encyclopedia that anyone can edit. 107,590 active editors 7,027,643 articles in English Don Bradman, the Australian captain The Second Test of the 1948 Ashes series was one of five Tests in The Ashes cricket series between Australia and England. The match was played at Lord's in London between 24 and 29 June 1948. Australia won the match by 409 runs to take a 2–0 lead, meaning that England would need to win the remaining three matches to regain The Ashes. The Australian captain Don Bradman (pictured) won the toss and elected to bat. Australia scored 350 in their first innings. England finished their first innings at 215 early on the third morning; the Australian paceman Ray Lindwall took 5/70. Australia reached 460/7 in their second innings before Bradman declared, setting England a target of 596. The hosts reached 106/3 at stumps on the fourth day, but then collapsed on the final morning to be all out for 186, handing Australia a 409-run victory. The leading English batsman Len Hutton was controversially dropped for the following match. The match set a new record for the highest attendance at a Test in England. (Full article...) Recently featured: Daily News Building Hippocampus Red (Taylor Swift album) Archive By email More featured articles About Ophicleide ... that the ophicleide (example pictured) was used in early British brass bands in the 19th century before being replaced by the euphonium? ... that, at the 1964

James Young Simpson discovers the anesthetic properties of chloroform and first uses it, successfully, on a patient, in an obstetric case in Edinburgh.[6] November 10 – The first brew of Carlsberg beer is finished in Copenhagen. November 17 – The Battle of Um Swayya Spring takes place near a spring in Qatar, after a Bahraini force under Shaikh Ali bin Khalifa Deputy Ruler of Bahrain defeats the Al Binali tribe. The chief of the Al Binali, Isa bin Tureef, is slain in battle with over 70 fatalities from his side. December 14 – Emily Brontë and Anne Brontë publish Wuthering Heights and Agnes Grey, respectively, in a 3-volume set under the pen names of Ellis Bell and Acton Bell in England. December 20 – British Royal Navy steam frigate HMS Avenger (1845) is wrecked on the Sorelle Rocks in the Mediterranean Sea with the loss of 246 lives and only eight survivors.[7] December 21 – Emir Abdelkader surrenders to the French in Algeria.[8] The Great Famine continues in Ireland. The North Carolina General Assembly incorporates the railroad town of Goldsborough, and the Wayne county seat is moved to the new town. Welfare in Sweden takes its first step with the introduction of the 1847 års fattigvårdförordning. Cartier, a luxury brand in France, is founded. January 5 – Oku Yasukata, Japanese field marshal, leading figure in the early Imperial Japanese Army (d. 1930) January 7 – Caspar F. Goodrich, American admiral (d. 1925) January 24 – Radomir Putnik, Serbian field marshal (d. 1917) January 28 – Dorus Rijkers, Dutch naval hero (d. 1928) February 3 – Warington Baden-Powell, British admiralty lawyer (d. 1921) February 4 – Remus von Woyrsch, German field marshal (d. 1920) February 5 – João Maria Correia Ayres de Campos, 1st Count of Ameal, Portuguese politician and antiquarian (d. 1920) February 8 – Hugh Price Hughes, Methodist social reformer, first Superintendent of the West London Mission (d. 1902) February 11 – Thomas Alva Edison, American inventor (d. 1931) February 13 – Sir Robert McAlpine, Scottish builder (d. 1930) February 15 – Robert Fuchs, Austrian composer (d. 1927) February 16 – Philipp Scharwenka, Polish-German composer (d. 1917) February 17 – Otto Blehr, Norwegian attorney, Liberal Party politician, 7th Prime Minister of Norway (d. 1927) March 1 – Sir Thomas Brock, English sculptor (d. 1922) March 2 Isaac Barr, Anglican clergyman, promoter of British colonial settlement schemes (d. 1937) Cayetano Arellano, first Chief Justice of the Supreme Court of the Philippines under the American Civil Government (d. 1920) March 3 – Alexander Graham Bell, Scottish-born Canadian inventor (d. 1922) March 4 – Carl Josef Bayer, Austrian chemist (d. 1904) March 11 – Sidney Sonnino, Prime Minister of Italy (d. 1922)[9] March 14 – Castro Alves, Brazilian poet (d. 1871) March 18 – William O'Connell Bradley, American politician from Kentucky (d. 1914) March 23 – Edmund Gurney, British psychologist (d. 1888) March 27 Otto Wallach, German chemist, Nobel Prize laureate (d. 1931) Garret Barry, Irish musician (d. 1899) April 2 – Charles Frederic Moberly Bell, British journalist, editor (d. 1911) April 10 – Joseph Pulitzer, Hungarian-born journalist, newspaper publisher (d. 1911) April 15 – Yehudah Aryeh Leib Alter, Polish Hasidic rabbi (d. 1905) April 27 – Emma Irene Åström, Finnish teacher, Finland's first female university graduate (d. 1934) May 7 – Archibald Primrose, 5th Earl of Rosebery, Prime Minister of the United Kingdom (d. 1929) May 14 – Sir Frederick William Borden, Canadian politician (d. 1917) June 8 Oleksander Barvinsky, Ukrainian politician (d. 1926) Ida Saxton McKinley, First Lady of the United States (d. 1907) June 10 – Gina Krog, Norwegian suffragist (d. 1916) June 11 – Dame Milicent Fawcett, British suffragist (d. 1929) June 16 – Luella Dowd Smith, American educator, author, and reformer (d. 1941) Paul von Hindenburg Bram Stoker July 2 – Marcel Alexandre Bertrand, French geologist (d. 1907) July 9 – Wong Fei-hung, Chinese healer, revolutionary (d. 1925) July 13 – Damian Sawczak, Ukrainian judge (d. 1912) July 19 – Alexander Meyrick Broadley, British historian (d. 1916) July 20 Lord William Beresford, Irish army officer, Victoria Cross recipient (d. 1900) Max Liebermann, German painter, printmaker (d. 1935) July 25 – Paul Langerhans, German pathologist, biologist (d. 1888) August 3 – John Hamilton-Gordon, 1st Marquess of Aberdeen and Temair, Canadian politician, Governor General (d. 1934) August 5 – Andrey Selivanov, Russian general and politician (d. 1917) August 21 – Hale Johnson, American temperance movement leader (d. 1902) September 3 – Charles Stillman Sperry, American admiral (d. 1911) September 5 Jesse James, American outlaw (d. 1882) Joseph Bucklin Bishop, American journalist, publisher (d. 1928) September 17 – John I. Beggs, American businessman (d. 1925) September 22 – Enrique Almaraz y Santos, Spanish Catholic cardinal (d. 1922) September 23 – Anandamohan Bose, Indian politician, academic and social reformer (d. 1906) September 30 – Wilhelmina Drucker, Dutch feminist (d. 1925) Maria Pia of Savoy Thomas F. Porter October 1 – Annie Besant, English women's rights activist, writer and orator (d. 1933)[10] October 2 – Paul von Hindenburg, German field marshal, President of Germany (d. 1934) October 13 Sir Arthur Dyke Acland, 13th Baronet, British politician (d. 1926) Maurice Bailloud, French general (d. 1921) October 14 – Wilgelm Vitgeft, Russian admiral (d. 1904) October 15 – Ralph Albert Blakelock, American romanticist painter (d. 1919) October 16 – Maria Pia of Savoy, Queen consort of Portugal (d. 1911) October 17 – Chiquinha Gonzaga, Brazilian composer (d. 1935) October 19 – Aurilla Furber, American author, editor, and activist (d. 1898) October 20 – Mifflin E. Bell, American architect (d. 1904) October 22 – Koos de la Rey, Boer general (d. 1914) October 30 Charlie Bassett, American sheriff (d. 1896) Thomas F. Porter, American politician, 32nd Mayor of Lynn, Massachusetts (d. 1927) November 1 – Dame Emma Albani, Canadian operatic soprano (d. 1930) November 2 – Georges Sorel, French socialist philosopher (d. 1922) November 6 – Ugo Balzani, Italian historian (d. 1916) November 7 – Lotta Crabtree, American stage actress (d. 1924) November 8 Jean Casimir-Perier, 6th President of France (d. 1907) Bram Stoker, Irish author of the Gothic novel Dracula (d. 1912) November 17 – Carlo Mirabello, Italian admiral and politician (d. 1910)[11] November 26 – Dagmar of Denmark, empress of Tsar Alexander III of Russia (d. 1928) November 30 – Afonso Pena, Brazilian president (d. 1909) December 1 – Agathe Backer-Grøndahl, Norwegian pianist, composer (d. 1907) December 9 – George Grossmith, English comic writer and performer (d. 1912) December 17 Émile Faguet, French writer, critic (d. 1916) Michel-Joseph Maunoury, French general during World War I (d. 1923) December 18 – Augusta Holmès, French composer (d. 1903) December 21 – John Chard, British Officer (d. 1897) December 29 – Alexis-Xyste Bernard, Canadian Catholic bishop (d. 1923) December 30 – John Peter Altgeld, American politician, 20th Governor of Illinois (d. 1902) Fanny Mendelssohn January 19 – Charles Bent, first Governor of New Mexico Territory (b. 1799) (assassinated) February 3 – Marie Duplessis, French courtesan (b. 1824) February 5 – Luis José de Orbegoso, Peruvian general and politician, 11th and 12th President of Peru (b. 1795) March 9 – Mary Anning, British paleontologist (b. 1799) March 3 – Charles Hatchett, English chemist (b. 1765)[12] April 21 – Barbara Spooner Wilberforce, wife of British abolitionist William Wilberforce (b. 1777) April 30 – Archduke Charles of Austria, Austrian general (b. 1771) May 14 – Fanny Mendelssohn, German composer, pianist (b. 1805) May 15 – Daniel O'Connell, Irish politician who promoted the Roman Catholic Relief Act 1829 (b. 1775) May 16 – Vicente Rocafuerte, 2nd President of Ecuador (b. 1783) May 29 – Emmanuel de Grouchy, Marquis de Grouchy, French marshal (b. 1766) June 11 – Afonso, Prince Imperial of Brazil (b. 1845) June 11 – Sir John Franklin, British explorer (b. 1786) Felix Mendelssohn July 7 – Thomas Carpenter, American glassmaker (b. 1752) July 16 – Karl Friedrich Burdach, German physiologist (b. 1776) September 4 – František Vladislav Hek, Czech patriot (b. 1769) September 13 – Nicolas Oudinot, French marshal (b. 1767) October 2 – Vasil Aprilov, Bulgarian educator, merchant and writer (b. 1789)[13] October 22 Henriette Herz, German salonnière (b. 1764) Negus Sahle Selassie of Shewa (b. c. 1795) November 4 – Felix Mendelssohn, German composer (b. 1809) November 18 – Zebulon Crocker, American congregationalist pastor (b. 1802) December 14 Dorothy Ann Thrupp, British psalmist (b. 1779) Manuel José Arce, Central American politician (b. 1787) Barbarita Nieves, Venezuelan mistress of José Antonio Páez (b. 1803) Unknown: Jeanne Geneviève Labrosse, French balloonist and parachutist (b. 1775) ^ The Knickerbocker, or The New York Monthly, March 1847, p. 283. ^ "The History of Birkenhead Park". 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Millennia 2nd millennium Centuries 17th century 18th century 19th century Timelines 17th century 18th century 19th century State leaders 17th century 18th century 19th century Decades 1700s 1710s 1720s 1730s 1740s 1750s 1760s 1770s 1780s 1790s Categories: Births – Deaths Establishments – Disestablishments vte Political boundaries at the beginning of year 1700 Storming of the Bastille, 14 July 1789, an iconic event of the French Revolution. Development of the Watt steam engine in the late 18th century was an important element in the Industrial Revolution in Europe. The American Revolutionary War took place in the late 18th century. The 18th century lasted from 1 January 1701 (represented by the Roman numerals MDCCI) to 31 December 1800 (MDCCC). During the 18th century, elements of Enlightenment thinking culminated in the Atlantic Revolutions. Revolutions began to challenge the legitimacy of monarchical and aristocratic power structures. The Industrial Revolution began mid-century, leading to radical changes in human society and the environment. The European colonization of the Americas and other parts of the world intensified and associated mass migrations of people grew in size as part of the Age of Sail. During the century, slave trading expanded across the shores of the Atlantic Ocean, while declining in Russia[1] and China.[2] Western historians have occasionally defined the 18th century otherwise for the purposes of their work. For example, the "short" 18th century may be defined as 1715–1789, denoting the period of time between the death of Louis XIV of France and the start of the French Revolution, with an emphasis on directly interconnected events.[3][4] To historians who expand the century to include larger historical movements, the "long" 18th century[5] may run from the Glorious Revolution of 1688 to the Battle of Waterloo in 1815[6] or even later.[7] France was the sole world superpower from 1659, after it defeated Spain, until 1815, when it was defeated by Britain and its coalitions following the Napoleonic Wars. In Europe, philosophers ushered in the Age of Enlightenment. This period coincided with the French Revolution of 1789, and was later compromised by the excesses of the Reign of Terror. At first, many monarchies of Europe embraced Enlightenment ideals, but in the wake of the French Revolution they feared loss of power and formed broad coalitions to oppose the French Republic in the French Revolutionary Wars. Various conflicts throughout the century, including the War of the Spanish Succession and the Seven Years' War, saw Great Britain triumph over its rivals to become the preeminent power in Europe. However, Britain's attempts to exert its authority over the Thirteen Colonies became a catalyst for the American Revolution. The 18th century also marked the end of the Polish–Lithuanian Commonwealth as an independent state. Its semi-democratic government system was not robust enough to prevent partition by the neighboring states of Austria, Prussia, and Russia. In West Asia, Nader Shah led Persia in successful military campaigns. The Ottoman Empire experienced a period of peace, taking no part in European wars from 1740 to 1768. As a result, the empire was not exposed to Europe's military improvements during the Seven Years' War. The Ottoman military consequently lagged behind and suffered several defeats against Russia in the second half of the century. In South Asia, the death of Mughal emperor Aurangzeb was followed by the expansion of the Maratha Confederacy and an increasing level of European influence and control in the region. In 1739, Persian emperor Nader Shah invaded and plundered Delhi, the capital of the Mughal Empire. Later, his general Ahmad Shah Durrani scored another victory against the Marathas, the then dominant power in India, in the Third Battle of Panipat in 1761.[8] By the middle of the century, the British East India Company began to conquer eastern India,[9][8] and by the end of the century, the Anglo-Mysore Wars against Tipu Sultan and his father Hyder Ali, led to Company rule over the south.[10][11] In East Asia, the century was marked by the High Qing era, a period characterized by significant cultural and territorial expansion. This period also experienced relative peace and prosperity, allowing for societal growth, increasing literacy rates, flourishing trade, and consolidating imperial power across the vast Qing dynasty's territories. Conversely, the continual seclusion policy of the Tokugawa shogunate also brought a peaceful era called Pax Tokugawa and experienced a flourishment of the arts as well as scientific knowledge and advancements, which were introduced to Japan through the Dutch port of Nagasaki. In Southeast Asia, the Konbaung–Ayutthaya Wars and the Tây Sơn Wars broke out while the Dutch East India Company established increasing levels of control over the Mataram Sultanate. In Africa, the Ethiopian Empire underwent the Zemene Mesafint, a period when the country was ruled by a class of regional noblemen and the emperor was merely a figurehead. The Atlantic slave trade also saw the continued involvement of states such as the Oyo Empire. In Oceania, the European colonization of Australia and New Zealand began during the late half of the century. In the Americas, the United States declared its independence from Great Britain. In 1776, Thomas Jefferson wrote the Declaration of Independence. In 1789, George Washington was inaugurated as the first president. Benjamin Franklin traveled to Europe where he was hailed as an inventor. Examples of his inventions include the lightning rod and bifocal glasses. Túpac Amaru II led an uprising that sought to end Spanish colonial rule in Peru. For a chronological guide, see Timeline of the 18th century. See also: Georgian era Main articles: 1700s, 1710s, 1720s, 1730s, and 1740s Europe at the beginning of the War of the Spanish Succession, 1700 The Battle of Poltava in 1709 turned the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700–1721: Great Northern War between the Russian and Swedish Empires. 1701: Kingdom of Prussia declared under King Frederick I. 1701: The Battle of Feyiase marks the rise of the Ashanti Empire. 1701–1714: The War of the Spanish Succession is fought, involving most of continental Europe.[12] 1702–1715: Camisard rebellion in France. 1703: Saint Petersburg is founded by Peter the Great; it is the Russian capital until 1918. 1703–1711: The Rákóczi uprising against the Habsburg monarchy. 1704: End of Japan's Genroku period. 1704: First Javanese War of Succession.[13] 1706–1713: The War of the Spanish Succession: French troops defeated at the Battle of Ramillies and the Siege of Turin. 1707: Death of Mughal Emperor Aurangzeb leads to the fragmentation of the Mughal Empire. 1707: The Act of Union is passed, merging the Scottish and English Parliaments, thus establishing the Kingdom of Great Britain.[14] 1708: The Company of Merchants of London Trading into the East Indies and English Company Trading to the East Indies merge to form the United Company of Merchants of England Trading to the East Indies. 1708–1709: Famine kills one-third of East Prussia's population. 1709: Foundation of the Hotak Empire. 1709: The Great Frost of 1709 marks the coldest winter in 500 years, contributing to the defeat of Sweden at Poltava. 1710: The world's first copyright legislation, Britain's Statute of Anne, takes effect. 1710–1711: Ottoman Empire fights Russia in the Russo-Turkish War and regains Azov. 1711: Bukhara Khanate dissolves as local begs seize power. 1711–1715: Tuscarora War between British, Dutch, and German settlers and the Tuscarora people of North Carolina. 1713: The Kangxi Emperor acknowledges the full recovery of the Chinese economy since its apex during the Ming. 1714: In Amsterdam, Daniel Gabriel Fahrenheit invents the mercury-in-glass thermometer, which remains the most reliable and accurate thermometer until the electronic era. 1715: The first Jacobite rising breaks out; the British halt the Jacobite advance at the Battle of Sheriffmuir; Battle of Preston. 1716: Establishment of the Sikh Confederacy along the present-day India-Pakistan border. 1716–1718: Austro-Venetian-Turkish War. 1718: The city of New Orleans is founded by the French in North America. 1718–1720: War of the Quadruple Alliance with Spain versus France, Britain, Austria, and the Netherlands. 1718–1730: Tulip period of the Ottoman Empire. 1719: Second Javanese War of Succession.[15] 1720: The South Sea Bubble. 1720–1721: The Great Plague of Marseille. 1720: Qing forces oust Dzungar invaders from Tibet. 1721: The Treaty of Nystad is signed, ending the Great Northern War. 1721: Sack of Shamakhi, massacre of its Shia population by Sunni Lezgins. 1722: Siege of Isfahan results in the handover of Iran to the Hotaki Afghans. 1722–1723: Russo-Persian War. 1722–1725: Controversy over William Wood's halfpence leads to the Drapier's Letters and begins the Irish economic independence from England movement. Mughal emperor Muhammad Shah with the Persian invader Nader Shah. 1723: Slavery is abolished in Russia; Peter the Great converts household slaves into house serfs.[16] 1723–1730: The "Great Disaster", an invasion of Kazakh territories by the Dzungars. 1723–1732: The Qing and the Dzungars fight a series of wars across Qinghai, Dzungaria, and Outer Mongolia, with inconclusive results. 1724: Daniel Gabriel Fahrenheit proposes the Fahrenheit temperature scale. 1725: Austro-Spanish alliance revived. Russia joins in 1726. 1727–1729: Anglo-Spanish War ends inconclusively. 1730: Mahmud I takes over Ottoman Empire after the Patrona Halil revolt, ending the Tulip period. 1730–1760: The First Great Awakening takes place in Great Britain and North America. 1732–1734: Crimean Tatar raids into Russia.[17] 1733–1738: War of the Polish Succession. Qianlong Emperor 1735–1739: Austro-Russo-Turkish War. 1735–1799: The Qianlong Emperor of China oversees a huge expansion in territory. 1738–1756: Famine across the Sahel; half the population of Timbuktu dies.[18] 1737–1738: Hotak Empire ends after the siege of Kandahar by Nader Shah. 1739: Great Britain and Spain fight the War of Jenkins' Ear in the Caribbean. 1739: Nader Shah defeats a pan-Indian army of 300,000 at the Battle of Karnal. Taxation is stopped in Iran for three years. 1739–1740: Nader Shah's Sindh expedition. 1740: George Whitefield brings the First Great Awakening to New England 1740–1741: Famine in Ireland kills 20 percent of the population. 1741–1743: Iran invades Uzbekistan, Khwarazm, Dagestan, and Oman. 1741–1751: Maratha invasions of Bengal. 1740–1748: War of the Austrian Succession. 1742: Marvel's Mill, the first water-powered cotton mill, begins operation in England.[19] 1742: Anders Celsius proposes an inverted form of the centigrade temperature, which is later renamed Celsius in his honor. 1742: Premiere of George Frideric Handel's Messiah. 1743–1746: Another Ottoman-Persian War involves 375,000 men but ultimately ends in a stalemate. The extinction of the Scottish clan system came with the defeat of the clansmen at the Battle of Culloden in 1746.[20] 1744: The First Saudi State is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is fought off the coast of France. 1744–1748: The First Carnatic War is fought between the British, the French, the Marathas, and Mysore in India. 1745: Second Jacobite rising is begun by Charles Edward Stuart in Scotland. 1747: The Durrani Empire is founded by Ahmad Shah Durrani. 1748: The Treaty of Aix-La-Chapelle ends the War of the Austrian Succession and First Carnatic War. 1748–1754: The Second Carnatic War is fought between the British, the French, the Marathas, and Mysore in India. 1750: Peak of the Little Ice Age. Main articles: 1750s, 1760s, 1770s, 1780s, 1790s, and 1800s 1752: The British Empire adopts the Gregorian Calendar, skipping 11 days from 3 September to 13 September. On the calendar, 2 September is followed directly by 14 September. 1754: The Treaty of Pondicherry ends the Second Carnatic War and recognizes Muhammed Ali Khan Wallajah as Nawab of the Carnatic. 1754: King's College is founded by a royal charter of George II of Great Britain.[22] 1754–1763: The French and Indian War, the North American chapter of the Seven Years' War, is fought in colonial North America, mostly by the French and their allies against the English and their allies. 1755: The great Lisbon earthquake destroys most of Portugal's capital and kills up to 100,000. 1755: The Dzungar genocide depopulates much of northern Xinjiang, allowing for Han, Uyghur, Khalkha Mongol, and Manchu colonization. 1755–1763: The Great Upheaval forces transfer of the French Acadian population from Nova Scotia and New Brunswick. 1756–1763: The Seven Years' War is fought among European powers in various theaters around the world. 1756–1763: The Third Carnatic War is fought between the British, the French, and Mysore in India. 1757: British conquest of Bengal. Catherine the Great, Empress of Russia. 1760: George III becomes King of Britain. 1761: Maratha Empire defeated at Battle of Panipat. 1762–1796: Reign of Catherine the Great of Russia. 1763: The Treaty of Paris ends the Seven Years' War and Third Carnatic War. 1764: Dahomey and the Oyo Empire defeat the Ashanti army at the Battle of Atakpamé. 1764: The Mughals are defeated at the Battle of Buxar. 1765: The Stamp Act is introduced into the American colonies by the British Parliament. 1765–1767: The Burmese invade Thailand and utterly destroy Attuthaya. 1765–1769: Burma under Hsinbyushin repels four invasions from Qing China, securing hegemony over the Shan states. 1766: Christian VII becomes king of Denmark. He was king of Denmark to 1808. 1766–1799: Anglo-Mysore Wars. 1767: Taksin expels Burmese invaders and reunites Thailand under an authoritarian regime. 1768–1772: War of the Bar Confederation. 1768–1774: Russo-Turkish War. 1769: Spanish missionaries establish the first of 21 missions in California. 1769–1770: James Cook explores and maps New Zealand and Australia. 1769–1773: The Bengal famine of 1770 kills one-third of the Bengal population. 1769: The French East India Company dissolves, only to be revived in 1785. 1769: French expeditions capture clove plants in Ambon, ending the Dutch East India Company's (VOC) monopoly of the plant.[23] 1770–1771: Famine in Czech lands kills hundreds of thousands. 1771: The Plague Riot in Moscow. 1771: The Kalmyk Khanate dissolves as the territory becomes colonized by Russians. More than a hundred thousand Kalmyks migrate back to Qing Dzungaria. 1772: Gustav III of Sweden stages a coup d'état, becoming almost an absolute monarch. Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers 1772–1779: Maratha Empire fights Britain and Raghunathrao's forces during the First Anglo-Maratha War. 1772–1795: The Partitions of Poland end the Polish–Lithuanian Commonwealth and erase Poland from the map for 123 years. 1773–1775: Pugachev's Rebellion, the largest peasant revolt in Russian history. 1773: East India Company starts operations in Bengal to smuggle opium into China. 1775: Russia imposes a reduction in autonomy on the Zaporizhian Cossacks of Ukraine. 1775–1782: First Anglo-Maratha War. 1775–1783: American Revolutionary War. 1776: Several kongsi republics are founded by Chinese settlers in the island of Borneo. They are some of the first democracies in Asia. 1776–1777: A Spanish-Portuguese War occurs over land in the South American frontiers. 1776: Illuminati founded by Adam Weishaupt. 1776: The United States Declaration of Independence is adopted by the Second Continental Congress in Philadelphia. 1776: Adam Smith publishes The Wealth of Nations. 1778: James Cook becomes the first European to land on the Hawaiian Islands. 1778: Franco-American alliance signed. 1778: Spain acquires its first permanent holding in Africa from the Portuguese, which is administered by the newly-established La Plata Viceroyalty. 1778: Vietnam is reunified for the first time in 200 years by the Tay Son brothers. The Tây Sơn dynasty has been established, terminating the Lê dynasty. 1779–1879: Xhosa Wars between British and Boer settlers and the Xhosas in the South African Republic. 1779–1783: Britain loses several islands and colonial outposts all over the world to the combined Franco-Spanish navy. 1779: Iran enters yet another period of conflict and civil war after the prosperous reign of Karim Khan Zand. 1780: Outbreak of the indigenous rebellion against Spanish colonization led by Túpac Amaru II in Peru. 1781: The city of Los Angeles is founded by Spanish settlers.George Washington 1781–1785: Serfdom is abolished in the Austrian monarchy (first step; second step in 1848). 1782: The Thonburi Kingdom of Thailand is dissolved after a palace coup. 1783: The Treaty of Paris formally ends the American Revolutionary War. 1783: Russian annexation of Crimea. 1785–1791: Imam Sheikh Mansur, a Chechen warrior and Muslim mystic, leads a coalition of Muslim Caucasian tribes from throughout the Caucasus in a holy war against Russian settlers and military bases in the Caucasus, as well as against local traditionalists, who followed the traditional customs and common law (Adat) rather than the theocratic Sharia.[24] 1785–1795: The Northwest Indian War is fought between the United States and Native Americans. 1785–1787: The Maratha–Mysore Wars concludes with an exchange of territories in the Deccan. 1786–1787: Wolfgang Amadeus Mozart premieres The Marriage of Figaro and Don Giovanni. 1787: The Tuareg occupy Timbuktu until the 19th century. 1787–1792: Russo-Turkish War. 1788: First Fleet arrives in Australia 1788–1790: Russo-Swedish War (1788–1790). 1788: Dutch Geert Adriaans Boomgaard (1788–1899) would become the first generally accepted validated case of a supercentenarian on record.[25][26] Declaration of the Rights of Man and of the Citizen 1788–1789: A Qing attempt to reinstall an exiled Vietnamese king in northern Vietnam ends in disaster. 1789: George Washington is elected the first President of the United States; he serves until 1797. 1789: Quang Trung defeats the Qing army. 1789–1799: French Revolution. 1789: The Liège Revolution. 1789: The Brabant Revolution. 1789: The Inconfidência Mineira, an unsuccessful separatist movement in central Brazil led by Tiradentes 1791: Suppression of the Liège Revolution by Austrian forces and re-establishment of the Prince-Bishopric of Liège. 1791–1795: George Vancouver explores the world during the Vancouver Expedition. 1791–1804: The Haitian Revolution. 1791: Mozart premieres The Magic Flute. 1792–1802: The French Revolutionary Wars lead into the Napoleonic Wars, which last from 1803–1815. 1792: The New York Stock & Exchange Board is founded. 1792: Polish–Russian War of 1792. 1792: Margaret Ann Neve (1792–1903) would become the first recorded female supercentenarian to reach the age of 110.[27][28] 1793: Upper Canada bans slavery. 1793: The largest yellow fever epidemic in American history kills as many as 5,000 people in Philadelphia, roughly 10% of the population.[29] 1793–1796: Revolt in the Vendée against the French Republic at the time of the Revolution. 1794–1816: The Hawkesbury and Nepean Wars, which were a series of incidents between settlers and New South Wales Corps and the Aboriginal Australian clans of the Hawkesbury river in Sydney, Australia. 1795: The Marseillaise is officially adopted as the French national anthem.Napoleon at the Bridge of the Arcole 1795: The Battle of Nu'uanu in the final days of King Kamehameha I's wars to unify the Hawaiian Islands. 1795–1796: Iran invades and devastates Georgia, prompting Russia to intervene and march on Tehran. 1796: Edward Jenner administers the first smallpox vaccination; smallpox killed an estimated 400,000 Europeans each year during the 18th century, including five reigning monarchs.[30] 1796: War of the First Coalition: The Battle of Montenotte marks Napoleon Bonaparte's first victory as an army commander. 1796: The British eject the Dutch from Ceylon and South Africa. 1796–1804: The White Lotus Rebellion against the Manchu dynasty in China. 1797: John Adams is elected the second President of the United States; he serves until 1801. 1798: The Irish Rebellion fails to overthrow British rule in Ireland. 1798–1800: The Quasi-War is fought between the United States and France. 1799: Dutch East India Company is dissolved. 1799: Austro-Russian forces under Alexander Suvorov liberates much of Italy and Switzerland from French occupation. 1799: Coup of 18 Brumaire - Napoleon's coup d'etat brings the end of the French Revolution. 1799: Death of the Qianlong Emperor after 60 years of rule over China. His favorite official, Heshen, is ordered to commit suicide. 1800: On 1 January, the bankrupt VOC is formally dissolved and the nationalized Dutch East Indies are established.[31] Main articles: Timeline of historic inventions § 18th century, and Timeline of scientific discoveries § 18th century The spinning jenny 1709: The first piano was built by Bartolomeo Cristofori 1711: Tuning fork was invented by John Shore 1712: Steam engine invented by Thomas Newcomen 1714: Mercury thermometer by Daniel Gabriel Fahrenheit 1717: Diving bell was successfully tested by Edmond Halley, sustainable to a depth of 55 ft c. 1730: Octant navigational tool was developed by John Hadley in England, and Thomas Godfrey in America 1733: Flying shuttle invented by John Kay 1736: Europeans encountered rubber – the discovery was made by Charles Marie de La Condamine while on expedition in South America. It was named in 1770 by Joseph Priestley c. 1740: Modern steel was developed by Benjamin Huntsman 1741: Vitus Bering discovers Alaska 1745: Leyden jar invented by Ewald Georg von Kleist was the first electrical capacitor 1751: Jacques de Vaucanson perfects the first precision lathe 1752: Lightning rod invented by Benjamin Franklin 1753: The first clock to be built in the New World (North America) was invented by Benjamin Banneker. 1755: The tallest wooden Bodhisattva statue in the world is erected at Puning Temple, Chengde, China. 1764: Spinning jenny created by James Hargreaves brought on the Industrial Revolution 1765: James Watt enhances Newcomen's steam engine, allowing new steel technologies 1761: The problem of longitude was finally resolved by the fourth chronometer of John Harrison 1763: Thomas Bayes publishes first version of Bayes' theorem, paving the way for Bayesian probability 1768–1779: James Cook mapped the boundaries of the Pacific Ocean and discovered many Pacific Islands 1774: Joseph Priestley discovers "dephlogisticated air", oxygen The Chinese Putuo Zongcheng Temple of Chengde, completed in 1771, during the reign of the Qianlong Emperor. 1775: Joseph Priestley's first synthesis of "phlogisticated nitrous air", nitrous oxide, "laughing gas" 1776: First improved steam engines installed by James Watt 1776: Steamboat invented by Claude de Jouffroy 1777: Circular saw invented by Samuel Miller 1779: Photosynthesis was first discovered by Jan Ingenhousz 1781: William Herschel announces discovery of Uranus 1784: Bifocals invented by Benjamin Franklin 1784: Argand lamp invented by Aimé Argand[32] 1785: Power loom invented by Edmund Cartwright 1785: Automatic flour mill invented by Oliver Evans 1786: Threshing machine invented by Andrew Meikle 1787: Jacques Charles discovers Charles's law 1789: Antoine Lavoisier discovers the law of conservation of mass, the basis for chemistry, and begins modern chemistry 1798: Edward Jenner publishes a treatise about smallpox vaccination 1798: The Lithographic printing process invented by Alois Senefelder[33] 1799: Rosetta Stone discovered by Napoleon's troops Main articles: 18th century in literature and 18th century in philosophy 1703: The Love Suicides at Sonezaki by Chikamatsu first performed 1704–1717: One Thousand and One Nights translated into French by Antoine Galland. The work becomes immensely popular throughout Europe. 1704: A Tale of a Tub by Jonathan Swift first published 1712: The Rape of the Lock by Alexander Pope (publication of first version) 1719: Robinson Crusoe by Daniel Defoe 1725: The New Science by Giambattista Vico 1726: Gulliver's Travels by Jonathan Swift 1728: The Dunciad by Alexander Pope (publication of first version) 1744: A Little Pretty Pocket-Book becomes one of the first books marketed for children 1748: Chushingura (The Treasury of Loyal Retainers), popular Japanese puppet play, composed 1748: Clarissa; or, The History of a Young Lady by Samuel Richardson 1749: The History of Tom Jones, a Foundling by Henry Fielding 1751: Elegy Written in a Country Churchyard by Thomas Gray published 1751–1785: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: Arithmetika Horvatzka by Mihalj Šilobod Bolšić 1759: Candide by Voltaire 1759: The Theory of Moral Sentiments by Adam Smith 1759–1767: Tristram Shandy by Laurence Sterne 1762: Emile: or, On Education by Jean-Jacques Rousseau 1762: The Social Contract, Or Principles of Political Right by Jean-Jacques Rousseau 1774: The Sorrows of Young Werther by Goethe first published 1776: Ugetsu Monogatari (Tales of Moonlight and Rain) by Ueda Akinari 1776: The Wealth of Nations, foundation of the modern theory of economy, was published by Adam Smith 1776–1789: The History of the Decline and Fall of the Roman Empire was published by Edward Gibbon 1779: Amazing Grace published by John Newton 1779–1782: Lives of the Most Eminent English Poets by Samuel Johnson 1781: Critique of Pure Reason by Immanuel Kant (publication of first edition) 1781: The Robbers by Friedrich Schiller first published 1782: Les Liaisons dangereuses by Pierre Choderlos de Laclos 1786: Poems, Chiefly in the Scottish Dialect by Robert Burns 1787–1788: The Federalist Papers by Alexander Hamilton, James Madison, and John Jay 1788: Critique of Practical Reason by Immanuel Kant 1789: Songs of Innocence by William Blake 1789: The Interesting Narrative of the Life of Olaudah Equiano by Olaudah Equiano 1790: Journey from St. Petersburg to Moscow by Alexander Radishchev 1790: Reflections on the Revolution in France by Edmund Burke 1791: Rights of Man by Thomas Paine 1792: A Vindication of the Rights of Woman by Mary Wollstonecraft 1794: Songs of Experience by William Blake 1798: Lyrical Ballads by William Wordsworth and Samuel Taylor Coleridge 1798: An Essay on the Principle of Population published by Thomas Malthus (mid–18th century): The Dream of the Red Chamber (authorship attributed to Cao Xueqin), one of the most famous Chinese novels 1711: Rinaldo, Handel's first opera for the London stage, premiered 1721: Brandenburg Concertos by J.S. Bach 1723: The Four Seasons, violin concertos by Antonio Vivaldi, composed 1724: St John Passion by J.S. Bach 1727: St Matthew Passion composed by J.S. Bach 1727: Zadok the Priest is composed by Handel for the coronation of George II of Great Britain. It has been performed at every subsequent British coronation. 1733: Hippolyte et Aricie, first opera by Jean-Philippe Rameau 1741: Goldberg Variations for harpsichord published by Bach 1742: Messiah, oratorio by Handel premiered in Dublin 1749: Mass in B minor by J.S. Bach assembled in current form 1751: The Art of Fugue by J.S. Bach 1762: Orfeo ed Euridice, first "reform opera" by Gluck, performed in Vienna 1786: The Marriage of Figaro, opera by Mozart 1787: Don Giovanni, opera by Mozart 1788: Jupiter Symphony (Symphony No. 41) composed by Mozart 1791: The Magic Flute, opera by Mozart 1791–1795: London symphonies by Haydn 1798: The Pathétique, piano sonata by Beethoven 1798: The Creation, oratorio by Haydn first performed ^ Volkov, Sergey. Concise History of Imperial Russia. ^ Rowe, William T. China's Last Empire. ^ Anderson, M. S. (1979). Historians and Eighteenth-Century Europe, 1715–1789. Oxford University Press. ISBN 978-0-19-822548-5. OCLC 185538307. ^ Ribeiro, Aileen (2002). Dress in Eighteenth-Century Europe 1715–1789 (revised ed.). Yale University Press. ISBN 978-0-300-09151-9. OCLC 186413657. ^ Baines, Paul (2004). The Long 18th Century. London: Arnold. ISBN 978-0-340-81372-0. ^ Marshall, P. J., ed. (2001). The Oxford History of the British Empire: Volume II: The Eighteenth Century (Oxford History of the British Empire). Oxford University

you go through a concept, assess your learning by solving the two printable worksheets given at the end of the page. Download the worksheets and check your answers with the worksheet solutions for the concept Types of Soil provided in PDF format. Depending on the composition and size of particles, the soil is classified into the following types: 1. Sandy Soil: Sandy soil mainly comprises sand. The amounts of silt and clay are comparatively low. The air space among the particles of sandy soil is more, making it porous. It has the lowest water-holding capacity. 2. Clayey Soil: 25% of clayey soil comprises clay particles. It has a high density and is compact due to the nature of clay particles. The clay particles closely stick together. Hence, this soil is less porous and filled with less air. The water-holding capacity of this soil is high. 3. Silt: Silt is smooth, porous and has good water-holding capacity because of the silt particles. This soil is generally found near the areas flooded by rivers. Silt is rich in nutrients required for crop production. 4. Loamy Soil: Loamy soil comprises sand, silt and a small amount of clay. The soil is porous and provides enough space to the plant roots for gaseous exchange. It has a considerable amount of organic matter humus, making it highly fertile and suitable for agriculture. Apart from the classification based on the major constituents, soils can also be differentiated based on the mineral content and the topographic area they are found in.Some of the examples of such soils are given below— 1. Red Soil: This soil is rich in iron oxide, giving it the characteristic red colour. It comprises a large amount of clay and hence, is less porous with a high water-holding capacity. Found in the states of Odisha, Andhra Pradesh, Jharkhand and Chattisgarh. 2. Laterite Soil: This soil is considered to be the end product of tropical weathering. It is generally formed by leaching and hence, is less fertile. Laterite soil contains less clay and more gravel and stone particles. This soil is generally found in areas with high temperatures and low rainfall. 3. Mountain Soil: This soil is found in the Himalayan regions and some parts of the Western and Eastern Ghats. This type of soil is rich in humus and is very fertile. 4. Desert Soil: This soil is found in desert areas. Very little humus content is found in desert/arid soil. It is highly porous, which implies low water-holding capacity. It is rich in salts like calcium carbonate. The soil can be used for agriculture if proper irrigation facilities are available as it would require frequent irrigation for crop yield. 5. Alluvial Soil: Alluvial soil gets deposited due to the flow of surface water. This type of soil is mainly found near river beds, flood plains and water streams. This soil is light and porous, allowing the plant roots to breathe properly. It is rich in humus and nutrients like potash and lime with a good water-holding capacity, making it perfect for the cultivation of crops. 6. Black Soil: It is also called regur. Black soil is rich in minerals like calcium, potassium and magnesium. This soil has a high water-holding capacity. This soil develops cracks like clayey soil when dry, which helps in the aeration of the soil. The map below shows the major type of soils and their distribution in our country. Depending on the nature and constituents of soils, different types of crops grow in different types of soils S. no. Type of Soil Crops a. Loamy Soil Wheat, sugarcane, pulses, oilseeds, cotton, jute b. Sandy Soil Potato, pepper, groundnut, corn c. Clayey soil Rice, wheat, lentils, gram, pulses d. Red soil Cotton, wheat, tobacco, potato, millets e. Laterite soil Rice, wheat, tea, coconut, cashews f. Mountain soil Rice, tea, corn, beans, coffee g. Desert soil Bajra, wheat, cherry, watermelon, onion, garlic h. Alluvial soil Rice, wheat, sugarcane, cotton, potato, jute Aeration: Adding air to something. Topographic: Related to the physical features of a particular region. Irrigation: The practice of supplying water to the land and crops by means of proper water channels. Leaching: The seeping down of minerals along with water from the top soil to the lower soil layers. Did You Know? Earthworms are called ‘farmer’s friends’ because they increase the soil's air and water content, thereby increasing its fertility.The layers of soil make up a natural water filtration system. As the water seeps down the soil layers, the unwanted materials and chemicals get filtered and pure water accumulates in the water table below.Every year, World Soil Day is celebrated on 5th December.