What is the difference between renewable and nonrenewable resources?

Renewable resources can be replenished or replaced.

Non-renewable resources have a onetime use.

Give at least five examples of renewable and nonrenewable resources? (Each)

Renewable: wind, solar, Hydroelectric, geothermal, and tidal.

Nonrenewable: oil, natural gas, coal, Gold, aluminum, silver and other metals.

What is tidal energy and how was it created?

Tidal energy is created by placing a dam in a bay or an estuary in a coastal location.  As the high tide comes in water is trapped behind a dam, when the water flows back out it creates energy.

What is solar energy and how is it Harnessed?

Solar energy (light rays) is trapped using a collector that has a photovoltaic cell. The light is transferred into electricity.

What is geothermal energy?

Water is heated over a magma pocket or volcanically active area and pumped to the surface and trapped, this produces steam which drives a turbine that creates electricity.

What is wind energy and how is it harvested?

Wind energy is harnessed by using a wind turbine. Wind pushes the blades of a turbine around in a spinning motion; this motion turns a turbine which creates electricity.

What is oil shale and tar sand and what are some of the downfalls of this energy resource?

Oil shale is collected from a rock that has absorbed oil and tar sand is a mixture of petroleum and sand and clay. Both are very expensive to extract petroleum products from, it is not cost effective.

What are placer deposits?

Larger pebbles will fall to the bottom of a watery substance; other larger materials will then be collected and washed away. Panning for gold.

How does nuclear fission produce energy?

Uranium Atoms are bombarded with neutrons. The collision strips uranium atoms and releases potential energy that has been stored. This heat a water source which then releases steam that will spin turbines.

Which energy sources are driven by turbines, and how does each one differ?

Nuclear energy, wind energy, geothermal energy, hydroelectric energy, and tidal energy.

Some you steam, others use the falling water, and wind drives another.

What is a future energy resource that might replace the dwindling petroleum supplies one day?   Oil shale and tar sands could possibly replace petroleum

What are problems associated with the increased use of nuclear energy?     The cost of building safe nuclear facilities, concerns over the possibility of a serious nuclear accident, and the major hazards involved in nuclear waste disposal.

How is hydroelectric power produced?   Water gets pushed through then falls onto a turbine spinning at creating energy.

What is geothermal energy?   It is energy produced by drilling down above a thermally active spot in the earth’s surface. Water is then pumped into these holes which gets heated up and produces steam which then spends turbines creating energy.

What is the difference between point source pollution and nonpoint source pollution?   Point source pollution is coming from a known specific location (pipes, ditches, ships, factories smokestacks).   Nonpoint source pollution is caused by excessive rainfall or snowmelt that moves over in through the ground.

How much of earths total water supply is usable freshwater?   Less than 1%

How can mine for mineral resources damage the land?   It can increase soil erosion, contaminate local water supply, and it could cause possible ruptures in the earth’s surface causing sinkholes.

What is balancing in the water cycle mean? It means that the amount of water being precipitated has too equal the amount of water being evaporated.

A streams ability to erode and transport material largely depends on?   It depends on the streams velocity, how fast the water is traveling.  Velocity is affected by the channel size and shape, the stream gradient, and the discharge of stream.

What is the vertical drop of a stream channel over a certain distance called? It is called the stream gradient.

In a typical stream, where the gradient is steep, the discharge will be what? In a typical stream where the gradient is Steep the discharge will be small.

When talking about streams rivers in water that is flowing what is base level?  Base level is the lowest point to which a stream can erode its channel.

Most streams carry the largest part of their load where? It is in suspension in the water column. This load usually consist of fine sand, silt, and clay sized particles.

What is a natural levee? It is a depositional feature parallel to the stream channel.

What is a delta? It is a depositional feature that forms where a stream enters a lake or an ocean.

What is a distributary? It is an occasional depositional feature that causes the main channel of a stream to divide into several smaller channels.

What is a floodplain? It is a flat portion of a valley floor adjacent to a stream channel.

What type of stream valley would form in a mountainous area? It would be a narrow V-shaped valley.

A major cause of flooding is? Rapid spring snow melt, large consecutive amounts of rainfall leading to large amounts of runoff.

What is the zone of saturation? This is where ground water is found underground.

What is an aquifer?  It is permeable rock layers or sediment that transmit groundwater freely.

What is porosity? What is permeability?  The percentage of the total volume of rock or sediment that consist of poor spaces is called porosity. The measure of a materials ability to transmit fluids through interconnected poor spaces is called permeability.

A spring can form where? It can form where the water table intersects the ground surface.

How does a geyser form?  When ground water enters underground fractures or caverns in a hot igneous rocks, where it is heated to a bowling temperature.

What is an artesian well? This is any formation in which ground water rises on its own under pressure.

What is the cone of depression?  This is the depression often produced in the water table, where water is pumped from a well.

A cavern is an underground chamber formed by what and in what type of bed rock do they usually form?   Caverns or form through the process of erosion and they are mostly formed from limestone bedrock.

What does groundwater naturally contain that allows it to dissolve limestone and form sinkholes in caverns?  Rain water contains carbonic acid.

Sinkholes can form a when?   They form when rain water containing carbon dioxide dissolves underground rock.