**Geology SOL Review**

Use the following words to fill in the blanks:

quartz

hematite

sedimentary

hardness

oxygen

solid

streak

non-foliated

chemical

conglomerate

inorganic

graphite

igneous

extrusive

marble

intrusive

silicon

texture

rock cycle

limestone

foliated

metamorphic

minerals

pumice

granite

silicates

clastic

slate

There is a difference between rocks and minerals. Minerals can be identified based on specific chemical and physical properties. Minerals are important to human wealth and welfare.

A *mineral* is a naturally occurring, \_inorganic\_, \_\_solid\_\_\_ substance with a definite chemical composition and structure.

Minerals may be identified by their physical properties, such as \_streak\_, color, luster, and \_hardness\_\_.

Most rocks are made of one or more \_minerals\_. Some major rock-forming minerals are \_\_quartz\_, feldspar, calcite, and mica.

Ore minerals include pyrite, magnetite, \_hematite\_, galena, \_graphite\_\_, and sulfur.

The major elements found in Earth’s crust are \_silicon\_\_, \_\_oxygen\_\_, aluminum, and iron. The most abundant group of minerals is the \_silicates\_\_, which contain silicon and oxygen.

Rocks can be identified on the basis of mineral content and \_texture\_\_. The processes by which rocks are formed define the three major groups of rocks.

The *\_*rock cycle*\_\_* is the process by which all rocks are formed and how basic Earth materials are recycled through time.

Igneous\_ rock forms from molten rock that cools and hardens either below or on Earth’s surface. Sedimentary\_\_ rocks may be formed either by rock fragments or organic matter being bound together or by chemical precipitation. Metamorphic\_\_ rocks form when any rock is changed by the effects of heat, pressure, or chemical action.

\_Extrusive\_ igneous rocks have small or no crystals, resulting in fine-grained or glassy textures. \_Intrusive\_ igneous rocks have larger crystals and a coarser texture. Extrusive igneous rocks include pumice\_, obsidian, and basalt. Intrusive igneous rocks include \_granite\_.

Sedimentary rocks are \_clastic\_ or \_chemical\_\_. Clastic sedimentary rocks are made up of fragments of other rocks and include sandstone, \_conglomerate\_, and shale. Non-clastic sedimentary rocks include \_limestone\_\_ and rock salt.

Metamorphic rocks can be foliated\_\_ or \_non-foliated\_\_. Foliated metamorphic rocks have bands of different minerals. Slate\_\_, schist, and gneiss are foliated metamorphic rocks. Non-foliated metamorphic rocks have little or no banding and are relatively homogenous throughout. Marble and quartzite are non-foliated metamorphic rocks.

**Geology Matching**

D – convection Happens in the mantle, drives plate tectonics a) transform

H – Weathering Process where rocks are broken down b) hot spot

U – Erosion Process where Earth materials are carried c) fault

W – Deposition Process where Earth materials are dropped off d) convection

T – inner core Layer of the earth, solid, made mostly of iron e) mantle

E –Mantle Layer of earth, plastic-like f) mid-ocean ridge

Q – oceanic Crust that is relatively thin, young, and dense g) convergent

F- Mid-ocean ridge Formed along a divergent boundary in ocean h) weathering

R – Continental Crust that is relatively thick, old, and less dense i) karst topography

Y – Subduction When one plate goes under another j) trenches

G – Convergent Type of plate boundary where subduction and k) earthquakes

continental collisions occur

P – Continental Drift A consequence of plate tectonics l) plate boundaries

B – Hot Spot Volcanic activity that is not related to plate boundaries m) folded mountains

X – Divergent Type of plate boundary where sea floor spreading occurs n) volcano

C – Fault A break or crack in Earth’s crust along which movement

has occurred o) strike-slip

A – Transform Type of plate boundary when plates slide past each other p) continental drift

V – Soil Formed from the weathering of rocks and q) oceanic

organic activity, loose rock fragments and clay

L – Plate Boundaries Earthquake activity is most often associated with r) continental

S – Rift Valley Formed along a divergent boundary on land s) rift valley

O – Strike-slip Type of fault along a transform boundary t) inner core

K – Earthquake Happen when movement occurs along a fault u) erosion

\_\_\_\_\_\_\_When rocks are compressed horizontally, their layers v) soil

may be deformed into wave-like forms

J – Trenches Formed at subduction zones w) deposition

\_\_\_\_\_\_\_An opening where magma erupts onto Earth’s surface x) divergent

\_\_\_\_\_\_\_Developed in areas underlain by carbonate rocks, y) subduction

formed when limestone is slowly dissolved away,

includes caves and sinkholes