

## CHAPTER 2

### 2. Etymology

**2.1. Definition:** Etymology is the study of the origin of words and the way in which their meanings have changed throughout history.

#### 2.2. Forming Concepts and Strengthening Vocabulary in Earth Sciences through Etymology

Many technical terms used in the Earth sciences are derived from foreign languages such as Greek and Latin. However, knowledge of the root words from which these technical

terms are formed to quickly understand new terms that may be encountered, a genetic treatment of the Earth science vocabulary early on is expected to help the student develop a keen aptitude and an enduring interest in the subject.

Earth science" can be considered a layman's term for "geoscience", various branches and sub-branches of study and also phenomena, e.g., geography, geology, geophysics, geochemistry, geomagnetism, geomorphology, geochronometry, geodesy, geoid, geostrophic, etc.

These terms contain additional affixes of Greek origin e.g., "graphy" (graphein to write) "logy" (logos discussion, study), "morpho" (morphe shape), "chrono" (chronos time)

### 2.3. Geology

#### 1.3.1. Names

Rock and mineral names present a substantive topic requiring an extended study in and of themselves, and are not presented in this paper.

As an example, the element iron is ferrum in Latin and sideros in Greek, resulting in the mineral siderite (iron carbonate). The latter root word is some times misleading as sideris, the Latin root means star (cf., siderial). Haematite (Gr. haima blood), the principal ore of iron gets its name from its color.

#### 1.3.2. Cave Deposits

e.g., stalagmites (Gr. stalagmos a dropping), Stalactites (Gr. stalaktos a dropping) are so called because they are formed from the top out of the falling water drops.

#### 1.3.3. Geologic age terms

divisions of geological ages. Palaeozoic (Gr. palaeo ancient); zoe life), Mesozoic (Gr. mesos middle), Cenozoic, or Cainozoic or Kainozoic (Gr. Kainos new),

#### 1.3.4. Common affixes

##### 1.3.4.1. Lith/lite

The affix lith, or its variant lite occurs extensively in geological terms. Lithos is stone in Greek. Lith and lite occur as suffixes to names of several varieties of rock formations according to their area of genesis, mechanism of formation or shape and composition.

#### **1.3.4.2. Morphe**

Morphe is shape in Greek; morphology is the study of external appearance (i.e., Gr. Morphe shape eg. Amorphous

#### **1.3.4.3. Meta**

(Gr. meta after) refers to a change, in geology referring to rock shape and composition. e.g. (meta)morphism

#### **1.3.4.4. Clase**

Klasis is breaking in Greek; its derivatives clase, clasis, clast and clastic are common affixes of which several terms are formed. Clasts (also klasts) are produced by physical breakdown of a larger (sedimentary) rock mass by different causative agents.

Eg. Root Terms

Gr. Klasis breaking plagioclase

#### **1.3.4.5. Oro**

In Greek, oroes is mountain, giving rise to terms such as orogeny, synorogenic (Gr. Syn together, eg. Syncline)

#### **1.3.4.6. Cline**

In geology, examples of terms based on this affix (Gr. klinein to lean) are; syncline (Gr. syn together), geosyncline, orocline and orogeosyncline. Changing the prefix, we get more terms like aclinal, anaclinal (Gr. ana up, anew), pericline, diaclinal (Gr. dia through, across), anticline (Gr. anti against),

#### **1.3.4.7. Gen**

Gennaine, in Greek is "to produce". This affix is adapted for use in various forms as gene, genesis, genetic/genic, genous and geny. Hydrogen (Gr. hydros water) produces water, Oxygen (Gr. oxys sharp;

### **2.4. Conclusion**

Classical technical terms in Earth sciences derive from about three hundred Greek, followed by Latin and German word roots. More terms continue to be derived as newer concepts develop. Frequently used affixes include: iso, lith (or lite), gen, geo, cline, morphic, hydro, ortho, para, thermo, clase, syn, chrono, strato, pseudo, thermo etc. The knowledge of etymology of technical terms can possibly remove the often intimidating appearance of technical terms and help students to better understand the concepts represented. The work may also catalyze exercises which take stock of the terms with a view towards examining the relevance of some old confusing terms, and in some cases to suggest new appropriate terms that can better explain current knowledge.

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