

lithos

[LI toss] (LI thoss) stone

lithograph - (graph - write, draw) - picture drawn on stone so the stone can "draw a picture"

monolith - (monos - one, alone) - lone stone

megalith - (me-gas - large) - large stone

lithology - (logos - word, study) - study of rocks or stone

lithosphere - (sphaira - ball, globe) - the rocky crust of the earth

lithic - made of or pertaining to stone

eolithic - (eo - dawn) - earliest stone age

paleolithic - (paleo - old, ancient) - ancient stone age after the eolithic period

neolithic - (neo - new) - new or late stone age

Teaching Notes:

A film or video which shows the process of lithography would be wonderful for the children to see. Lithographs were vastly important in publishing before the age of photography. The two great lithographers, Currier and Ives, were credited with people's enthusiasm for the westward movement in 19th century America. They made it look grand and inviting, so people packed up and went west! Currier and Ives lithographs are used on Christmas cards every year. Perhaps someone could bring one to class.

A monolith is a large, single stone used as a monument or obelisk. A megalith is a really HUGE stone such as the ones used in building Stonehenge. Children will enjoy finding out how the early people moved those megaliths and set them up in place.

The layers of matter which comprise the earth are of great interest to children. The outer crust, the lithosphere, is 50 miles thick! Inside the lithosphere, there is red hot molten rock called MAGMA which erupts from time to time in volcanoes. (See VULCANUS - p.47).

Finding out what early man learned to do in the various stone ages, eolithic, paleolithic, and neolithic, never fails to capture children's interest. A university archeology department might recommend someone who would show the children how stone tools were made.

petros

[PE tross] rock, stone

petrified - (facio, factum - make, do) - made into stone

petrification - process of making into stone

Peter - name which means "reliable, like a rock"

petroleum - (oleum - olive, olive oil) - oil from rocks

petroglyph - (glyphein - carve) - rock carving

petrography - (graph - write, draw) - writing about rocks

petrous - hard, stone-like, rocky

Teaching Notes:

We speak of being petrified when we are frightened into rigidity - made stone-like by fear. Prehistoric trees were literally petrified (turned to stone) as mineral molecules underground gradually replaced the wood molecules, but assumed the same structural grain as the wood. Some petrified wood is beautiful when it is polished. All of it is interesting!

Peter is the name given by Jesus Christ to his disciple, Simon Bar Jonah, because he was so dependable and firm in his faith. Peter was "like a rock"!

The Greeks and Romans both used olive oil. The Romans took their words petra and oleum from the Greek words petros and elaion. Petroleum is really a modern derivative from the Latin words and refers to mineral oil which comes from rocks in the ground rather than from vegetables or olives.

We usually think of petroglyphs as the ancient carvings on rocks done by primitive people. Actually, any rock carving can be a petroglyph, even if you did it today!

The word petrography refers to writing of descriptions of various rocks and classifying them rather than to writing on rocks.

astron

[AHS tron] star

aster - star-shaped flower

astronomer - (onoma - name) - one who names the stars

asteroid - (eidos - form) - in the form of a star

astrologer - (logos - study, knowledge) - one who gets knowledge from stars

astronaut (nauta - sailor) - star sailor

disaster - (dis - separation or parting from) - separation from the good influence of friendly stars

astral - pertaining to stars (astral navigation - navigating by the stars)

astrodome - covered stadium where sports stars perform

Teaching Notes:

Astrodome - The huge domed stadiums being built for sports are marvels of engineering today. In the ancient world there were great buildings which attracted tourists from everywhere. If your library has a copy of Richard Halliburton's *Book of Marvels - The Orient*, you will find a good story about an Athenian boy, Demetrius, who in 250 B.C. sets sail with his father to visit the seven wonders of the ancient world. Reading this aloud is a way of giving your children some knowledge about ancient times from a child's point of view. Demetrius visits 1) The Temple of Zeus at Olympia, 2) The Temple of Diana at Ephesus, 3) The Tomb of Mausolus at Hallicarnassus (the first mausoleum), 4) The Colossos of Rhodes, 5) The Pharos (lighthouse) of Alexandria, 6) The Egyptian Pyramids and Sphinx, and 7) The Palace of King Minos at Knossos. In connection with the last one, you can tell them a story of Theseus and the Minotaur!

Asteroids aren't really star-shaped. They are very small planets which revolve around the sun between the orbits of Mars and Jupiter. In the story, *The Little Prince* by Antoine de Saint Exupéry, the prince lives on an asteroid and takes good care of it.

stella

[STEL lah] star

stellar - pertaining to a star, or stars

constellation - (cum - together) - group of stars

interstellar - (inter - between) - between the stars

stellate - star-shaped

stellascope - (skopeo [Gr.] - look at) - instrument for looking at the stars; astronomical telescope

stellerid - a star fish

stellify - (facio, factum - make) - transform a person or thing into a star or constellation

Stella - girl's name meaning "Star"

Estellita - girl's name meaning "Little Star"

Teaching Notes:

We have just looked at the Greek word for "star" - astron. The Romans adopted it as astrum. Both the Latin stella and the Greek astron came from the ancient Indo-European word ster. The Indo-Europeans tacked an ending on ster, making it ster-la, so it's easy to see how stella developed. The Germanic word which came from ster was sterron, and it is from this old German word that we get the English word star. Some of the ancient Indo-Europeans moved east into the land which is now India where their language developed into Sanskrit. The Sanskrit word for star is "(s)tara" - not very different. Old Sanskrit developed into modern Hindi, spoken in India today. It's wonderful to see how all these languages are related.

Wondering about the stars and trying to learn more about them is something we share with people of all ages in history. The constellations were given Latin names so people everywhere would know which stars or star groups were being discussed. Latin helps draw people together in their search for knowledge.

Incidentally, the motto of the state of Kansas is "Ad astra per aspera", which means "To the stars through difficulties." A pretty good motto to learn!

dendron

[DEN dron] tree

rhododendron - (rhodos - rose, red) - evergreen shrub with large flowers

lepidodendron - (lepidos - scale) - extinct prehistoric tree with scaly bark

dendrophile - (philia - love) - lover of trees

dendrometer - (metron - measure) - instrument for measuring the height and diameter of trees

dendrolite - (lithos - stone) - petrified or fossil trees

dendriform - (forma - form, shape) - having the shape of a tree

Teaching Notes:

Rhododendrons are spectacular shrubs which grow in temperate climates. Even though rhodos means "rose or red", the large multiple flower heads can also be many other colors. A trip to a rhododendron show or nursery in spring would help children see how many and varied the colors are, and how the plants are identified by their Latin botanical names. The rhododendron is the Washington State flower.

Lepidodendrons lived between 400 million and 250 million years ago. They are extinct now, but they are still very important to us. Lepidodendrons grew in what is known as the Carboniferous (carbon bearing) age. The 100-foot high lepidodendrons, with their umbrella-shaped spray of leaves at the top, their scaly bark, and pulpy (rather than truly wooden) trunks, fell by the millions into the mud of the steamy primeval swamps in which they grew. They sank deep down and, under great pressure, formed the vast layers of coal which have been found all over the world. This coal has provided energy for man's use for thousands of years. The forms of the trees and the scaly pattern of the trunks can still be seen in the coal beds. Lepidodendron scales looked so much like reptile scales that early people thought they had found the fossils of huge snakes! If someone can bring some coal to class to be examined with magnifiers, you may find some interesting fossil patterns.

Knowing how much we owe to trees for the well-being of our environment, we can all call ourselves dendrophiles!