







Co-funded by the Erasmus+ Programme of the European Union



COMPARATIVE ANALYSIS OF ROCKS

   	HAUTE-PROVENCE GEOPARK DIGNE- LES-BAINS FRANCE	LESBOS GEOPARK GREECE	AROUCA GEOPARK PORTUGAL	LAS LORAS GEOPARK SPAIN
LITHOLOGY	Roches sédimentaires marines du Mésozoïque :calcaires et marnespourl’essentiel. Roches détritiques continentales du Cénozoïque :grés et conglomérats.	The north western area consists of lava rocks , volcanic ashes and pyroclastic materials. The central part is mostly ofiolithes The south eastern part consists of slates (schists) The eastern part is covered by limestones and marbles	The most abundant rocks are: - metamorphics (schists, greywackes, slates with fossils and quartzites – 600-300 Ma); - igneous (granites – 320-290 Ma. Castanheira nodular granite is a unique geological phenomenon in the world)	Sedimentary Rocks from the Mesozoic (215- 65million years) The most important ones are: LIMESTONE, marls, dolomites, sandstone, clay and conglomerate.
GEOMORPHOLOGY	GORGES, CLUSES CUESTAS (clifs and structural surfaces) FOLDING withsurimposeddirections PLATEAU	Volcanoes and Volcanic Rocks in Calderas Caves and Gorges→ Hot Springs and Waterfalls,→ Important Fossil Sites, Fossils of Plants and Animals→ Coastal Geosites and a Long Coastline→	Dominantrelief - mountains and valleys – duetotheexistence of foldsresultingfromseveraltectonicepisodes (regional metamorphism) and totherockserosion.	HANGING SYNCLINES (“LORAS”) KARSTIC RELIEF
USE OF ROCKS	LIMESTONE : monument and houses building, lime kiln for chalk production GYPSUM : plaster furnaces, plaster in mortar and coloured renders in and over old houses’ walls. CLAYS : roof tiles and pottery, Moustiers earthenware and santons SANDSTONES : buildings	Houses→ Temples→ Bridges→ Castles→ Tree benching→ Fortifications→ Aquaducts – Ancient theatre→ Pavings→ Ceramics→ Statues→	The most used rocks are slate and granite. Slate – used for the construction of buildings (either on the roofs or on the walls), on pavements and inhandicraft. Granitic rocks – used for the construction of different types of buildings (homes, monuments), walls and in handicraft.	LIMESTONE: building, soil and drinking water treatment MARL: mother rock of oil DOLOMITE: fertilizer and manufacture of glass SANDSTONE: C, material abrasivo, industria del vidrio CLAY:construcción, cerámica, aislante eléctrico y fabricación de moldes (odontología) CONGLOMERATE: civil construction