The Hellenistic World (Greek word Hellas is the original word for Greece, which the word Hellenistic was derived)

- **This era covers overs the period of Mediterranean history between the death of Alexander the Great in 323 BC and the emergence of the Roman Empire.**
- At this time, Greek cultural influence and power was at its peak in Europe, Africa and Asia, experiencing prosperity and progress in the arts, exploration, literature, theatre, architecture, music, mathematics, philosophy, and science.
- Greek culture and language was exported to these new realms, spanning as far as modern-day India. Equally, however, these new kingdoms were influenced by the indigenous cultures, adopting local practices where beneficial, necessary, or convenient. **Hellenistic culture thus represents a fusion of the Ancient Greek world with that of the Near East, Middle East, and Southwest Asia. This mixture gave rise to a common Greek dialect, known as Koine Greek, which was spoken throughout the Hellenistic world.**
- The museum and library of **Alexandria** was where scholars collected, translated, copied, classified and critiqued every book they could find. Most of the great literary figures of the Hellenistic period studied at Alexandria and conducted research there.
- **The spread of Greek influence and language is also shown through Ancient Greek coinage.** Portraits became more realistic, and the obverse of the coin was often used to display a propaganda image, commemorating an event or displaying the image of a favored god.
- Especially important to Hellenistic science was the city of Alexandria in Egypt, which became a major center of scientific research in the 3rd century BC. Hellenistic scholars frequently employed the principles developed in earlier Greek thought: the application of mathematics and deliberate empirical research, in their scientific investigation.

- Euclid (c. 325 – 265 BC), whose *Elements* became the most important textbook in mathematics until the 19th century, built upon the work of the Hellenic era Pythagoreans. Euclid developed proofs for the Pythagorean Theorem.
- Eratosthenes used his knowledge of geometry to measure the circumference of the Earth. His calculation was remarkably accurate. He was also the first to calculate the tilt of the Earth's axis (again with remarkable accuracy). Additionally, he may have accurately calculated the distance from the Earth to the Sun and invented the leap day.
- Known as the "Father of Geography ", Eratosthenes also created the first map of the world incorporating parallels and meridians, based on the available geographical knowledge of the era.
- Astronomers like Hipparchus (c. 190 – c. 120 BC) built upon the measurements of the Babylonian astronomers before him, to measure the precession of the Earth.
- Medicine, which was dominated by the Hippocratic tradition, saw new advances under Praxagoras of Kos, who theorized that blood traveled through the veins. Herophilos (335–280 BC) was the first to base his conclusions on dissection of the human body and animal vivisection, and to provide accurate descriptions of the nervous system, liver and other key organs.
- Technological developments from the Hellenistic period include cogged gears, pulleys, the screw, Archimedes' screw, the screw press, glassblowing, hollow bronze casting, surveying instruments, an odometer, the pantograph, the water clock, a water organ, and the Piston pump.[134]

- **Hellenistic art saw a turn from the idealistic, perfected, calm and composed figures of classical Greek art to a style dominated by realism and the depiction of emotion (pathos) and character (ethos).** The female nude also became more popular.