## Ancient Roman Aqueducts: Graphic Organizer

In the 8th century BCE, a small civilization along the Tiber River grew to become one of the largest empires in history. Some of ancient Rome's most enduring legacies were practical innovations that allowed the empire to run efficiently for so many years. Explore one of ancient Rome's many engineering achievements, aqueducts.



Aqueducts built above ground became aqueduct bridges! Roberto Ferrari, CC BY-SA 2.0

Overview: What are aqueducts?	Aqueducts are channels, or pipelines, built to transport fresh water to highly populated areas. Aqueduct waterways were built throughout the Roman Empire both above and below ground.
Purpose: Why did the ancient Romans need to build aqueducts?	Many cities did not have access to water for drinking and bathing. Aqueducts transported water from distant rivers and streams to the population centers.
Origin: When did ancient Romans start building aqueducts?	Romans first built aqueducts around 312 BCE, more than 2,300 years ago.
Construction: What materials did ancient Romans use to build aqueducts?	Aqueducts were typically made of stone, brick, and cement.
Secret ingredient: What was <i>pozzolana</i> , and how did it help the cement used for ancient Roman aqueducts and buildings last so long?	Pozzolana was sand created by volcanic ash. Roman builders used pozzolana instead of ordinary sand to make cement. Builders mixed pozzolana volcanic ash with limestone and created a cement paste that was incredibly strong and waterproof.
Design: How did water move through the aqueduct channels?	Water channels were built with a downward slant. So, water flowed through aqueduct pipes using gravity. The steeper the slant, the faster the water flowed.
Famous example: Which aqueduct is the tallest of the Roman aqueduct bridges?	Ancient Rome's tallest aqueduct bridge was the Pont du Gard in southern France.
Fun fact: Add a new piece of information about Roman aqueducts that you found particularly interesting.	Answers will vary.

## Research answers to the questions below.