

**Student Comprehension Worksheet**

**Directions:** Please read the online *Science News* article "[These chemists cracked the code to long-lasting Roman concrete](#)" and answer the following questions. A version of the article "Chemists Crack the Code to Ancient Roman Concrete" appears in the February 11, 2023 issue of *Science News*.

1. What components are in modern concrete?
2. Why do chemists want to understand how the ancient Romans made concrete?
3. Whose writings did the scientists read to learn how the Romans made concrete? What pieces of information did those early Roman writers provide?
4. What is the chemical name for quicklime, and what element in the chemical name also appears in Roman concrete?
5. How might the presence of calcium-rich rocks improve the quality of Roman concrete? Explain the interaction between the calcium and the concrete that might make the concrete last longer.
6. How did chemist Admir Masic and his team go about making their version of Roman concrete? What is the name of the method they used?
7. How did the team test its version of the Roman concrete?
8. What is the environmental cost of modern concrete manufacturing, and what would be the environmental benefit of making concrete that is more like Roman concrete?