

# THE HISTORY CHANNEL CLASSROOM STUDY GUIDES

## Modern Marvels

### Clocks

They govern our life, telling us when to rise, when to eat and when to work. They arrange our meetings, and dictate our leisure time. Clocks have ruled the world since their inception, changing the way humans work and live. But mechanical clocks were not the first attempts by humans to harness time. Each civilization had its own unique way of measuring increments of time. Time keeping devices have evolved from sundials and obelisks to atomic clocks, which are accurate to a second in over a million years. *Clocks* would be useful for classes on World History and World Culture, Maritime History, and Science and Technology. It is appropriate for middle school and high school.

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### Discussion Questions

1. Humans have always tried to measure time. Why?
2. We use the word "time" probably every day of our lives. But, what is "time"? Imagine that someone from another planet had no concept of time. How would you explain the concept of time to him or her?
3. How did clocks change society? Be specific.
4. Each culture or civilization had a method of measuring time. What method did the ancient Egyptians use?
5. Before the invention of the mechanical clock, people used a variety of devices and methods to tell time. What are some of them?
6. What are the origins of the word "clock?"
7. The first pendulum clock appeared in the 17th century. How did the pendulum improve clock accuracy?
8. John Harrison, a clock maker and woodworker in England, solved the longitude problem of the 19th century. How did he accomplish this?
9. Why did the railroads of the 19th century necessitate an accurate and uniform system of time? How did the railroads accomplish this?

### **Extended Activities**

1. Design a public clock, such as Big Ben, for your community.
2. Draw a diagram illustrating how an escapement works.