

# #12190 TIME

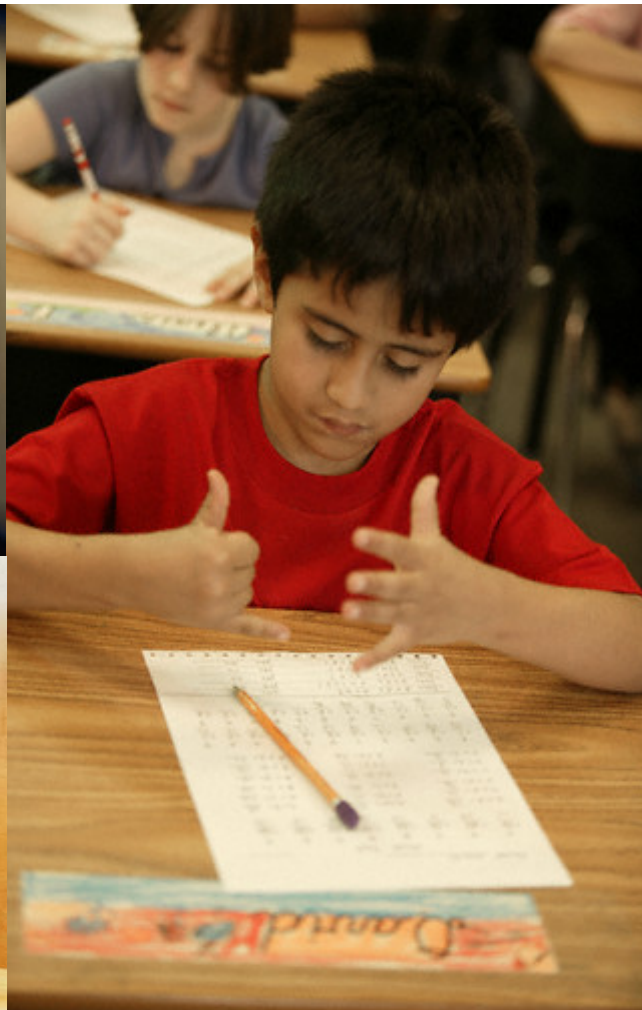
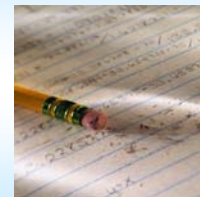
CLEARVUE/SVE, 2004  
Grade Level: 1-6  
13 Minutes

**CLEARVUE & SVE**



## CAPTIONED MEDIA PROGRAM RELATED RESOURCES

[#11791 RATIOS](#)  
[#12186 SCALE](#)  
[#12199 LENGTH](#)  
[#12200 WEIGHT](#)



# MATH CONCEPTS FOR STUDENTS

## Time



### Learning Objectives

After completing the program and participating in discussion, students will be able to:

- Explain why math is needed to tell time;
- Discuss the history and people associated with the concept of time;
- Describe the methods people used to tell time in the past;
- Understand how to measure different fractions of time; and
- Define and discuss atomic time.

### Review Questions

1. Ask students to explain the link between time and math. How do we use math every day to tell time, perhaps without even realizing it?
2. Who was Julius Caesar? How did he contribute to the concept of telling of time?
3. What is atomic time? How does it work and why?
4. What is an hourglass? A water clock? A sundial? How were these methods used to measure time in the past? Which one do you think worked the best? Why?
5. What is a leap year? How often does it occur on our calendar?
6. What contribution did John Harrison make to the telling of time?

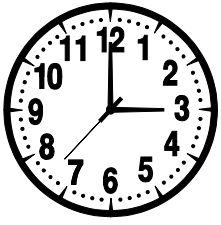
### Target Vocabulary

atomic clock	Babylon	Emperor Caesar Augustus
cesium	year	Pope Gregory
Greenwich, England	hour	Rome
John Harrison	month	astronomy
hourglass	season	Julius Caesar
water clock	calendar	minute
sundial	leap year	second
		week

### Activities

1. Ask students to research ancient ways of measuring time. Check out <http://www.aresearchguide.com/time.html> for ideas. Ask students to focus on one example and research it using books or magazines in the school library. Have each student compose a paragraph (younger students) or brief paper that answers the following questions: When was this type of time measurement used? Who invented it, and from where did it originate? How did/ does it measure time? Is it accurate? Do students think this type of time measurement could be used today? Why or why not? How would it change our day-to-day lives?
2. Break students into groups of four. Assign each group a specific calendar related to one of these cultures: Japanese, Hindu, Islamic, Chinese, or Indian. One student should research when and why this calendar was introduced in the particular culture and if it is still used today. Have another student research how the calendar is arranged. The third student should research three specific events within the calendar and how people of the culture celebrated/celebrate them. The final student should look for specific ways that this calendar is different from the calendar we are accustomed to. With their notes in hand, have students present their culture's calendar to the class, giving each student time to explain his/her answer.



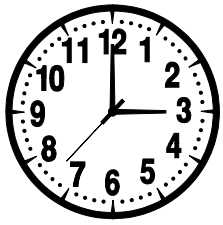


# Time

Name \_\_\_\_\_

*Read the list of words on the left and the definitions on the right. Match each definition to its word by writing the letter in the blank.*

- |                          |  |
|--------------------------|--|
| _____ atomic clock       | A. The ancient city where astronomers first noticed that stars move slowly and regularly across the sky.                         |
| _____ leap year          | B. An ancient ruler of Rome who added an extra day to the calendar every four years.   |
| _____ 1/4                | C. The scientific study of objects and matter in space.  |
| _____ Babylon            | D. When an extra day is added to the calendar every four years.  |
| _____ Greenwich, England | E. Prehistoric people used this as a natural timekeeper.   |
| _____ cesium             | F. One of the first objects that used the sun to tell time.  |
| _____ Julius Caesar      | G. A carpenter who created a clock with a system of weights. He used the clock on his ship to counteract the waves of the ocean. |
| _____ moon               | H. One-quarter of a whole.   |
| _____ Egyptian sundial   | I. A scientific machine built in the 1950s that changed timekeeping.   |
| _____ Pope Gregory       | J. The atomic clock depends on this substance.   |
| _____ John Harrison      | K. This location is considered "standard time."  |
| _____ astronomy          | L. The person who proved that Julius Caesar's calendar was accurate to the hour but not to the minute.                           |



# Time

Name \_\_\_\_\_

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- |   |                    |    |   |
|---|--------------------|----|---|
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| D | leap year          | B. | An ancient ruler of Rome, who added an extra day to the calendar every four years.  |
| H | 1/4                | C. | The scientific study of objects and matter in space.  |
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