

DIDACTIC UNIT: TELLING TIME

**Andrea Amaya García
Yésica Méndez Jiménez
Diego Rodríguez-Tembleco Guilabert**

Didactic Unit: Telling time.

Science Story

- The mystery of George Washington's date of birth.

Investigation Type

- Comparative investigation.

Conceptual Progression

- Historical information of George Washington.
- The changes through the history of the Calendar.
- The Calendar as a measuring tool created by humans.
- The time.
- Light as an absolute concept.

Learning Objectives

- To approach to the figure of George Washington.
- To know the history of the Calendar.
- To know the use of the Calendar.
- To understand the concept of time.
- To understand the concept of light.

Language

Relative time VS fixed time, calendar, light, gravity, equation, relativity, bar graph, leap year, to reflex, discoveries, chronometre...

Scientific Skills

Observation, manipulation, measurement, analyzing, comparison, calculation

Lesson 1

Grouping	Students	Teacher	Material/Ap
Plenary 10'		Introducing the topic asking students questions promoting a brainstorming: What is the most common calendar in the world? How many different types of calendars are there/ do you know? Which is the oldest calendar in the world? What is a leap year? What years are different calendars?	Post-its
Plenary 10'		Play the video.	Video "George Washington date of birth" Video Youtube: George Washington Biography (Super kids)
Groups of 4 25'	Scape room. Discover the date if we had continued with the Julian Calendar.		Box with a lock. Riddle in a paper.
Plenary 5'	Final reflexion and share discoveries.	Make them reflex and solve possible questions.	Riddle in a paper.

Lesson 2

Grouping	Students	Teacher	Material/Ap
Plenary 5'	Share the answers of the riddle.		Riddle
Plenary 20'	Play a song with the recorder at different speeds.	Measures the time that we need to play the song.	Recorder Music sheet Chronometre
In pairs 15'	Run 100 meters and measure the time one each other.		Chronometre
Plenary 10'	Collect and write the results down.	Create a bar graph showing the children's results.	Paper Computer

Lesson 3

Grouping	Students	Teacher	Material/Ap
Plenary 5'			Video Youtube: Calculating speed/ forces and motion.
Plenary 15'	<ul style="list-style-type: none"> • Apply the equation and calculate their speed. • Create in real time a bar graph with the teacher of their speed results. 	<ul style="list-style-type: none"> • Introduces the equation of speed. 	
Plenary 5'		Brainstorming: <ul style="list-style-type: none"> - Do you think time is something relative or fixed? - When do you think time goes faster? When you are studying playing? - 	
Plenary 5'	Watch the video.		Video Youtube: Quantum Fracture: relatividad
Plenary 15'	Share their reflexions of the video.	Watch Albert Einstein's video at home and write the most interesting events that you found in his life.	Task: Video Youtube: Albert Einstein draw/my life.

Lesson 4

Grouping	Students	Teacher	Material/Ap
Plenary 5'	Rewatch Albert's Einstein video.		Task: Video Youtube: Albert Einstein draw/my life.
Plenary 10'	Coment about the curiosities found about Einstein's life.		
Plenary 10'		Do an experiment: https://www.youtube.com/watch?v=uBRBSJzFmEs	Video Youtube: Gravity Demo Part 4 Black Holes Elastic mat Balls with different weights
Plenary 10'		Explain the content of light.	
Plenary 10'	Watch a piece of the film "Interstellar" and reflex about it		Film: Interstellar Scene: Miller's planet