

## Who are you, Mr Eiffel?



## Gustave Eiffel's biography

- 1832 Gustave Eiffel, son of Francois-Alexandre Eiffel and Catherine Melanie Moneuse, was born in Dijon on December 15, 1832.
- **1843-50** He attends the Dijon high school and successfully passes his Baccalaureat.
  - Having failed the Ecole polytechnique entrance exam, he attends the Ecole Centrale in Paris.
  - 1855 Eiffel graduates as an engineer from the Ecole Centrale and turns towards the world of metallurgy, where his mother has connections.
  - 1856 The young engineer is hired as associate by Charles Neveu, manufacturer of steam engines and railway equipment.
- 1857-60 The young 26 year old engineer supervises the construction of the Bordeaux bridge.



Bordeaux Bridge

- 1862 Gustave Eiffel marries Marie Gaudelet, born in 1844. They will have three daughters (Claire, Laure and Valentine) and two sons (Edouard and Albert).
- 1866 He becomes an independent consulting engineer and the following year he sets up his own company.

- 1867-71 The engineer gets an order for the construction of two viaducts for the Commentry-Gramat railway track, located in the Allier Department and in Neuvial.
- 1872-75 Eiffel builds viaducts and bridges in Spain, Portugal, Rumania, Egypt, Chile, Bolivia and Peru.
  - 1875 He builds the western station in Budapest, Hungary.
  - 1876 He uses a new technique (cantilever) for the construction of the viaduct over the Douro in Portugal.

The engineer designs the metallic structure of the Parisian department store Le Bon Marché.

- 1877 Gustave Eiffel's wife Marie dies.
- 1879-80 The bridge designer builds two new metallic bridges in Portugal and one in Hungary.
- 1880-84 He designs the Garabit viaduct in France and perfects a system of portable bridges that can be assembled in just a few days by a group of twelve men.



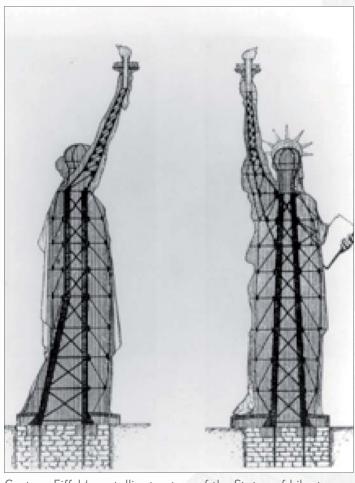
Garabit Viaduct



## Who are you, Mr Eiffel?



Gustave Eiffel designs and builds the framework of Bartholdi's Statue of Liberty. It now stands at the entrance of the harbour of New York, in the United States of America.



Gustave Eiffel 's metallic structure of the Statue of Liberty

1884	The engineer presents a project for the construction
	of the Tower, together with his associates Emile
	Nouguier and Maurice Koechlin.

1885	Gustave Eiffel designs the metallic structure of the							
	mechanism of the dome of the Nice observatory,							
	system that enables frictionless movement.							

1887-89	Gustave Eiffel supervises the works of the Tower,
	which will be completed in about 2 years.

1889-95	The engineer participates to the construction of
	the Panama canal, but he will withdraw as a
	result of the scandals connected to this project.

1894-98	The	designer	of	the	Eiffel	To	wer	under	takes
	scientific experiments,				amor	ng	whic	h the	first
	radio	transmi	ssion	าร					

1903-09	Gustave Eiffel studies aerodynamics and sets up
	a laboratory at the base of the Tower.

1903-04	Gustave Eiffel puts his Tower at the disposal of
	the military force. Captain Ferré will use it for
	the first wireless transmissions.

1912 The scientist builds a wind tunnel in order to pursue his aerodynamic experiments.

# 1918 The eighty year old man designs a monoplane fighter aircraft.

1923 Gustave Eiffel dies in Paris on December 27 at the age of 91.





## French / Spelling

#### **EDUCATIONAL OBJECTIVE**

ullet Ask the pupils to find the sounds [s] and [z] in the sentences written on the board.

Learning the different ways of writing the sound [s] and the sound [z].

Le garçon va en classe à Dijon.

• Then, ask the pupils to look for words that have the same spelling and ask them to classify the words in tables. This can be done either as a class activity or individually.

Eiffel réalise des viaducs et des ponts qui peuvent être assemblés par douze hommes en six jours.

## French / Composition

#### **EDUCATIONAL OBJECTIVE**

Writing a personal text, using « patterns ».

 $\bullet$  Ask the pupils to write their own biography using a pattern that will have previously been drawn-up together.

2002: ...., born in .....

2005: ... attends the ...... kindergarten ...... 2008: starts primary school at.......

- Eventually, add the birth dates of younger brothers or sisters and changes of address.
- At the beginning of CP, it is possible to write the imaginary biography of a hero or fictional character.

## Mathematics / Solving problems

#### **EDUCATIONAL OBJECTIVE**

Solving problems by choosing the correct operations.

• Eiffel was born in 1832 and he built his first bridge at the age of 26. In what year did he build the bridge? Circle the correct operation.

1832 + 26 1832 - 26

• Eiffel died in1923. Knowing that he was born in 1832, how old was he when he died?

1923 + 1832 1832 - 1923

### Discover the world

#### **EDUCATIONAL OBJECTIVE**

Using a computer to find documents getting to know a few countries of the world.

- Ask the pupils to find the various flags listed (Portugal, Spain, Rumania, Hungary, Egypt, Chile, Bolivia, Peru, Panama, the United States of America) either using a digital encyclopaedia or the Internet.
- Then, locate the flags on a world map and name the continents represented by the flags.





## French / Reading / Grammar

#### **EDUCATIONAL OBJECTIVES**

Reading and understanding an informative and documentary text.

Know the nature of the words that form a nominal group (noun, adjective, article).

Know how to use substitutes of nominal groups (synonyms) in order to avoid repeating words.

- Hand the pupils a copy of the biography or display a copy on the board, and ask the pupils to find substitutes to the words « Gustave Eiffel » after having analyzed the nature of the two words (proper nouns). Classify the substitutes in a table (nominal groups, pronouns) and find the nature of the words used, their gender and their number.
- Then ask the pupils to replace the personal pronouns by nominal groups or, according to their level, to write their own biography or the biography of someone they know, using different synonyms.

## Mathematics / Geometry / Symmetry

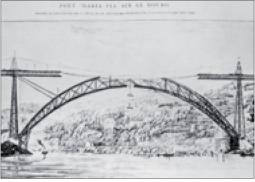
#### **EDUCATIONAL OBJECTIVE**

Studying and tracing symmetry axes.

• Write GUSTAVE EIFFEL in capital letters and ask the pupils to find the symmetry axes of the various letters.

What is (are) the letter (s) that has (have) more than one axis? (I) Find other letters of the alphabet that have more than one symmetry axis (O, X), and shapes that have one symmetry axis (3), two symmetry axes (8, o). Draw the symmetry axis of the bridges built by Eiffel (Garabit, Maria Pia)





Garabit

Maria Pia

### History

#### **EDUCATIONAL OBJECTIVE**

Using a timeline and acquiring chronological notions.

Understanding how dates correspond to centuries.

• Ask the pupils to mark the important dates in Gustave Eiffel's life on the timeline. They must use a blue pen for family related events and a black pen for professional events. With a red pen, draw a line on the date that marks the construction of the Tower.

1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	^
											/

XIX<sup>th</sup> century

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