



2 Once upon a time... the Eiffel Tower

A 1,000 foot high Tower

Answering the bid launched on the occasion of the 1889 Universal Exhibition (the centenary of the French Revolution) two of Eiffel's engineers, Émile Nouguier and Maurice Koechlin, drew up the project of a 300 metres high pylon shaped tower anchored to the ground by means of four legs. Architect Stephen Sauvestre collaborated with the engineers towards the « aesthetic » appearance of the future Tower.

The foundations

The foundation works started on January 26, 1887 and lasted five months. The excavating works were done by means of shovels and small wagons pulled by horses and steam engines. The deepest foundations did not exceed 15 metres on the spot of the future pillars orientated towards the four cardinal points. Then, 25 metres long and 4 metres thick concrete blocks were cast to serve as basis to the metallic pillars.

Description of the building site

« Une épaisse fumée de goudron et de houille prenait à la gorge, tandis qu'un bruit de ferraille rugissant sous le marteau nous assourdissait. On boulonnait encore par là. Des ouvriers, perchés sur une assise de quelques centimètres, frappaient à tour de rôle de leur massue en fer sur les boulons (en réalité les rivets). On eût dit des forgerons tranquillement occupés à rythmer des mesures sur une enclume,

Raising the Tower

The assembly works of the piers started on July 1, 1887 and ended 21 months later.

The parts were raised using 30 to 45 metres high temporary wooden scaffoldings and small steam cranes. Hydraulic jacks that enabled to install the various pieces at an equal level had to be used to carry out the junction between the pillars and the first floor horizontal beams.

For the second and third floors, the metal parts were lifted using steam cranes that followed the progression of the Tower, using the grooves that had been designed to house the future lifts.

dans quelque forge de village, seulement ceux-ci ne tapaient point de haut en bas, verticalement, mais horizontalement, et comme à chaque coup des étincelles partaient en gerbes, ces hommes noirs, grandis par la perspective du plein ciel, avaient l'air de faucher des éclairs dans les nuées. »

Text written by journalist Emile Goudeau on the occasion of his visit to the building site, beginning of 1889.

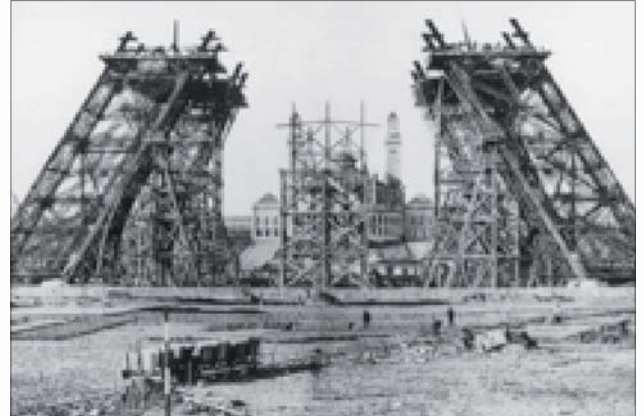


Once upon a time... the Eiffel Tower

Pictures showing the different construction stages of the Tower



August 1887



December 1887



January 1888



March 1888



June 1888



September 1888



December 1888



March 1889



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Exercices
CP - CE1

French / Reading / Spelling

EDUCATIONAL OBJECTIVE

Learning the different pronunciations of the letter « g ».

Un journaliste visitant le grand chantier de la Tour Eiffel pendant sa construction raconte que le bruit rappelait celui des forges dans les villages ou celui de rugissements d'animaux et que les odeurs de goudron le prenaient à la gorge.

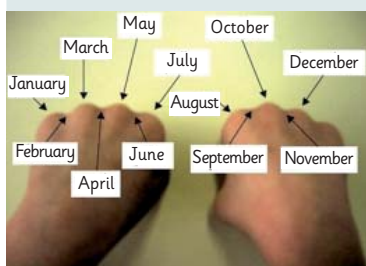
- Have the pupils find the letter « g » after reading the text written by the journalist and ask them to find the different pronunciations : goudron, grand, forges, village, rugissement, goudron, gorge, rugissant, forgerons, forge, gerbes, grands. Find out the rule and look for other words that confirm it: manger, girafe, garage, gigot ; bourgeon, orangeade (add an « e »), guide, vague (add a « u »).

	You hear [g]	You hear [j]
You see g	In front of vowels a, o, u : gâteau, gorille, légume In front of consonants : gratter At the end of a word : zig-zag	In front of vowels : gentil, girafe, gymnastique
You see ge		In front of a and o : rougeâtre, nageoire
You see gu	In front of e, i, y : guépard, guider, Guy	

Discover the world

EDUCATIONAL OBJECTIVE

Learning the seasons, the months of the year.



- Hand the pupils a calendar.
- Have them study the order of the months, the number of days in each month and give them a method by which they will remember the number of days in each month (fist method).
- Have the pupils do this for all the months using a calendar (without the calendar as support, this exercise is adequate for an evaluation of cycle 3 pupils).

- Ask the pupils to circle the correct answer.

How many months are there in one year? 6 12 30
Which is the shortest month? January February March

- Ask the pupils to give the preceding and following months as shown below.

May	June	July
.....	February
.....	April
.....	August
.....	October

- Ask the students to complete the sentences with 30 or 31.

July has days.
There are days in November.
June has days.
There are days in December.

- Ask the pupils to associate the name of a month with a number from 01 to 12.

- Ask them to find the date, first using letters and then using three numbers (01-10-09 for October 1, 2009), then each child should find his/her own birth date.

- The pictures showing the construction of the Eiffel Tower can be used by printing them and handing them to the pupils who will then have to place them in the correct order and explain why they chose that order in particular.

Learning how to put pictures in the right order.



Once upon a time... the Eiffel Tower

Exercises

CE2 - CM1 - CM2

French / Reading / Conjugation

EDUCATIONAL OBJECTIVE

Reading a historical account, a historical text, recognizing the verbs in the imperfect tense and learning the endings of the imperfect tense.

- Read the journalist's text, specifying that the article was written at that time, and that it is an account (historical document), explain the vocabulary related to the work done by the workers and to the surroundings. Then ask the pupils to find all the verbs written in the imperfect tense.

Prenait, assourdissait, boulonnait, frappaient, tapaient, partaient, avaient.

- Clarify the endings according to the persons (personal pronouns) and to the groups to which the verbs belong (find the infinitive mode, the group to which the verb belongs).

- **Extensions** - The text can also be re-written into the present tense, the verbs can be conjugated using other pronouns.

Mathematics / Measuring length

EDUCATIONAL OBJECTIVE

Learning the length measuring units and using a conversion table.

- Circle the correct unit.

The Eiffel Tower measures 3 m dam hm

A scaffolding measures 3 m dam dm

An eraser measures 3 m dm cm

- Circle lengths exceeding 300 metres.

300 dam 30 dam 3 km 3 hm 30 000 mm 30 000 dm 3 000 cm

km	hm	dam	m	dm	cm	mm

History

EDUCATIONAL OBJECTIVE

Identifying and giving the characteristics of the 19th century: setting up of the democracy and the Republic.

- Ask the pupils to cut out the timeline and to arrange it in a chronological order then colour the republics in orange, monarchies in yellow and empires in green.

1852 - 1870 1848 - 1852 1804 - 1814 1830 - 1848 1815 - 1830 1870 ...
 2nd Empire 2nd Repub. 1^{er} Empire July Monarchy Restauration 3rd Repub.