



eTwinning project plan :

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Name of the project:	Codes and ciphers
Partners:	Lycée CARRIAT, Bourg-en-Bresse, France Barrutialde BHI, Arratzu (Bizkaia), Spain Colegiul National "Coriolan Brediceanu" Lugoj, Romania
Details:	Age of the pupils: 14-17 Used language: English Duration: 1 year School type: Upper secondary school
Short description:	Students exchange ciphered messages and decipher it. They learn about history of codes. They become familiar with characters using the codes for different purposes. They get to know people who make the contribution to popularising ciphering and coding.
Goals:	Students will practice their English. Students will learn about other European cultures. Students will learn about codes and ciphers with technical, historical, and cultural point of views. Students will learn about maths : frequency analysis, algorithm, binary and hexadecimal systems.
Ressources	http://cryptoclub.math.uic.edu/ Applets for encryption / decryption : substitution, frequency analysis, Vigenere http://russells.freeshell.org/enigma/ enigma applet http://simonsingh.net /information http://en.wikipedia.org /information http://users.telenet.be/d.rijmenants/ http://www.thunk.com/ History of Cryptography http://www.secretcodebreaker.com/ http://www.cimt.plymouth.ac.uk/resources/codes/
ICT tools:	Word, Excel, Power Point, Web, Twinspace, Hotpotatoes Video : if possible (more friendly)

Pedagogical basis:	<p>In groups, collaborating with other country students in English by ICT tools.</p> <p>Cross-curricular and real life connected activities are more interesting for the students</p> <p>Different partner groups will use codes to send ciphered messages and to decipher the received ones, working in collaboration.</p> <p>When messages are deciphered, the original message in video is uploaded.</p>
Working methods:	<p>The students will work in groups (national and international, as they get to know each other) communicating between each other using etwinning chat and pupils corner. Tasks will be done by every group but each group will be in charge of publishing one part of the project. Their will be responsible and editors of their part.</p>
Expected results:	<p>European culture: Presentations about countries, cities, schools, favourite books and films, special school event, stereotypes, etc.</p> <p>Encipher and decipher techniques : Hands-on about : Caesar, substitution, Vigenere cipher, binary, hexadecimal, ascii, steganography</p> <p>Cipher and codes cultural and historical aspects : Presentations about : Julius Caesar, Mary of Scotland, Vigenère, Edgar Allan Poe, Morse, Braille, pigpen cipher, Polybe square, Jefferson cylinder, Alberti, Sherlock Holmes, Zimmerman telegram, Enigma etc.</p> <p>Games about ciphers and codes</p>
Evaluation/self evaluation:	<p>Students can test their knowledge at the end of the project by playing games made by partner schools.</p>



eTwinning project timetable

Time / period	Task description – tools to be used	Responsible person(s)
Aug 2012	Teachers find partners schools and organize the project website (Twinspace)	
Sep 2012	Each class is divided into groups of 3-6 students	
Sep 2012	Students write message 1 : a short presentation about their country, city, school in English powerpoint : text and pictures -> to be encrypted video : to be uploaded after decryption of all messages 1	English teacher
Sep 2012	Students learn about Caesar code and substitution cipher and encipher message 1 using a substitution cipher	Maths teacher
12 Oct 2012	Encrypted messages 1 are uploaded on the project website	
Oct 2012	Students decipher messages 1 from partners schools	Maths teacher
Dec 2012	Students write message 2 : each group chooses a film (subtitled in English) or a book (with English translation available) which is interesting enough to be summed up in English powerpoint : text, pictures, link to trailer of the film or front page of the book, etc. -> to be encrypted video : to be uploaded after decryption of all messages 2	English teacher
Dec 2012	Students learn about Vigenere code and encipher message 2	Maths teacher
14 Dec 2012	Decrypted messages 1, videos of messages 1 and encrypted messages 2 are uploaded on the project website	
Dec 2012	Students decipher message 2 from partner schools	Maths teacher

Jan 2013	Choose a subject for presentations : <i>Julius Caesar, Mary of Scotland, Vigenère, Edgar Allan Poe, Morse, Braille, pigpen cipher, Polybe square, Jefferson cylinder, Alberti, Sherlock Holmes, Jules Verne, Zimmerman telegram, Enigma etc.</i>	
Jan Feb 2013	Prepare the presentation powerpoint : text and pictures video	
8 Feb 2013	Decrypted messages 2, videos of messages 2 and presentations (powerpoint and/or video) are uploaded on the project website	
Feb 2013	Students write message 3: each group describes in English a special school event (outings, visits of places, sporting events, shows, ...) powerpoint : text and pictures -> to be encrypted video : to be uploaded after decryption of all messages 3	English teacher
Mar 2013	Students learn about binary, hexadecimal and ascii code and encipher message 3.	Maths teacher
15 Mar 2013	Encrypted messages 3 are uploaded on the project website	
Mar 2013	Students decipher messages 3 from partner schools.	Maths teacher
Mar 2013	Students write message 4: topic self derision each group writes a short essay about stereotypes of their own country starter : http://www1.odn.ne.jp/kushida/hk_kwb-e/hk_0207e.html powerpoint : text and pictures -> to be encrypted video : to be uploaded after decryption of all messages 4	English teacher
Apr 2013	Students learn about steganography used in sending hidden messages and encipher message 4.	Maths or English teacher
26 Apr 2013	Decrypted messages 3, videos of messages 3 and encrypted messages 4 are uploaded on the project website.	
May 2013	Students decipher messages 4 from partner schools.	Maths or English teacher
May 2013	Students create a game about the project : crosswords, matching game, gap-fill, etc. (hot potatoes)	Maths or English teacher
31 May	Decrypted messages 4, videos of messages 4 and games are uploaded on the project website.	

Jun 2013	Students play games from partner schools.	
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