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ESL ENGLISH LESSON (60-120 mins) – 25th November 2011

The link between Bletchley Park and Google

For nearly half a century Bletchley Park, a Victorian manor house near Milton Keynes in Buckinghamshire, lay neglected and unloved; its dilapidated buildings falling into disrepair. By the 90s, its boarded-up huts at its rear were due to be torn down. Yet for more than 50 years the house was shrouded under a veil of secrecy. Only during the last 20 years was its secret finally revealed. It was the place where the codes of the German Enigma machine were broken by a special-purpose codebreaking machine called Colossus. The secret work at Bletchley Park had, it is believed, shortened the war by up to two years. However, the secrecy came at a cost. Britain lost out to the US in the development of computer technology. So what is the link between Bletchley Park and Google? Simple – there is a desire by some individuals at Google to nurture the past. In fact, Google is helping to spearhead a campaign to save Bletchley Park by restoring it to its former glory. Google has provided the money for the purchase of key papers and is backing the current appeal to restore the derelict block at Bletchley Park.

It all began a year ago when Google executive Simon Meacham in California got a Tweet from Susan Black, who is a computing expert in London about Alan Turing – the maths genius who was the key to much of the wartime codebreaking work. It was about papers Turing wrote that were for sale and in danger of being lost to Bletchley. The papers included work from 1936 on 'computable numbers'. Turing had described an automatic machine which would be able to read and manipulate symbols on a tape through algorithms. These concepts would be put into practice in the war when the first electronic programmable computer was built at Bletchley in order to crack codes. While codebreaking was an important part of Turin's work, what he conceived has gone on to change the world. It was the central foundation for all computing technology including the algorithms that underpin Google's internet search engine and the page ranking technology.

Google employees have so far raised more than US$100,000 to buy the papers for Bletchley to keep. The house and huts will now be restored after receiving a £4.6m grant in October 2011. Bletchley Park will be preserved for future generations to visit.

Category: History / Bletchley Park / Google
Level: Intermediate / Upper intermediate

EXERCISES

1. Bletchley Park: Briefly, what three things do you know about Bletchley Park? Go round the room swapping details.

2. Google: Briefly, what three things do you know about Google? Go round the room swapping details.

3. Dictation: The teacher will read four to six lines of the article slowly and clearly. Students will write down what they hear. The teacher will repeat the passage slowly again. Self-correct your work from page one - filling in spaces and correcting mistakes. Be honest with yourself on the number of errors. Advise the teacher of your total number of errors. Less than five is very good. Ten is acceptable. Any more is room for improvement! More than twenty - you need to do some work!

4. Reading: The students should now read the article aloud, swapping readers every paragraph.

5. Vocabulary: Students should now look through the article and underline any vocabulary they do not know. Look in dictionaries. Discuss and help each other out. The teacher will go through and explain any unknown words or phrases.

6. The article: Students should look through the article with the teacher.
   a)   What is the article about?
   b)   What do you think about the article?

7. Geography: Where is Milton Keynes, Buckinghamshire? Draw a map on the board then **look on Google maps** to help you.

8. Bletchley Park/Google: Think of five things you know about Bletchley Park/Google. Write them below. Explain to your partner why you chose these.

Bletchley Park	Google
1	1
2	2
3	3
4	4
5	5

The teacher will choose some pairs to discuss their findings in front of the class.

9. Colossus: In pairs, think of four things you know about the famous codebreaking machine Colossus. What did it do? Discuss in pairs/small groups.

10. Let's think! In pairs. On the board write as many words as you can to do with **Bletchley Park / Google**. *One-two minutes.* Compare with other teams. Using your words compile a short dialogue together.

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11. Let's roleplay 1: BBC World: In pairs/groups. One of you is the interviewer. The others are one of the following people. You are in the *BBC World* TV studio in London. Today's interview is about: *The link between Bletchley Park and Google. 5-10 minutes.*

1	Alan Turing	3	Simon Meacham
2	Susan Black	4	Yourself

The teacher will choose some pairs to roleplay their interview in front of the class.

12. Presentation: In pairs, groups or individually: Prepare in class or at home a two minute presentation on: ***Colossus/Bletchley Park/Enigma machines***. Stand at the front of the class to give your presentation to the class. The class can vote on the best presentation.

13. Let's do 'The Article Quiz': Have the students quiz each other in pairs. They score a point for each correct answer and half a point each time they have to look at the article for help. See who can get the highest score!

Student A
1) Name the manor house.
2) What county is the manor house in?
3) What happened in the 90s?
4) What was for sale?
5) Who is Simon Meacham?

Student B
1) What did Colossus do?
2) Who is raising money?
3) How much money has been raised?
4) What happened in October?
5) Who was Alan Turing?

14. Let's roleplay 2: In a pub/coffee shop: In pairs/groups. You are in a pub/coffee shop. Start a conversation on *Bletchley Park and Google*. *5 minutes.*

15. Famous machines: In pairs, think of four famous machines. Write them below. What do you know about them?

1 _____		3 _____	
2 _____		4 _____	

The teacher will choose some pairs to roleplay their interview in front of the class.

16. Let's write an e-mail: Write and send a 200 word e-mail to your teacher about: **'Bletchley Park'.**

17. Sentence starters: Finish these sentence starters. Correct your mistakes. Compare what other people have written.

a) Google _____

b) Bletchley Park _____

c) The link _____

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DISCUSSION

Student A questions
1) Did the headline make you want to read the article?
2) Had you heard of Bletchley Park before today's English lesson?
3) Why do you think Bletchley Park was kept secret for 50 years?
4) Why is Google interested in Bletchley Park?
5) Would you like to visit Bletchley Park? Explain.
6) Why is Bletchley Park so important for the computer industry?
7) What do you know about the Enigma machines?
8) Would you like to have worked as a codebreaker in one of the huts during the Second World War?
9) Could you keep a secret for 50 years?
10) Are you good at Maths?

Student B questions
1) What do you think about what you've read?
2) Have you learned anything from today's English lesson?
3) Was Alan Turing a genius?
4) Are you good at cracking codes?
5) Would you like to be a code breaker?
6) Have you ever helped restore anything? If yes, what?
7) What does the future hold for Bletchley Park?
8) Is Google right to support the restoration of Bletchley Park and the Alan Turing papers on computing?
9) Would you (or do you!) like to work for a secret organisation?
10) Did you like this discussion?

SPEAKING

Let's discuss! Bletchley Park and Google
Allow 10-15 minutes – As a class / small groups / pairs / 1 to 1

Discuss the following:

10 things about Bletchley Park - 10 things about Google

The teacher can moderate the session.

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GAP FILL: READING:

Put the words into the gaps in the text.

The link between Bletchley Park and Google

For nearly half a century Bletchley Park, a Victorian manor house near Milton Keynes in Buckinghamshire, lay neglected and unloved; its dilapidated buildings falling into (1)_____. By the 90s, its boarded-up huts at its rear were due to be torn down. Yet for more than 50 years the house was shrouded under a veil of secrecy. Only during the last 20 years was its (2)_____ finally revealed. It was the place where the (3)_____ of the German Enigma machine were broken by a special-purpose codebreaking machine called Colossus. The secret work at Bletchley Park had, it is believed, shortened the war by up to two years. However, the secrecy came at a cost. Britain lost out to the US in the development of computer technology. So what is the link between Bletchley Park and Google? Simple – there is a (4)_____ by some individuals at Google to (5)_____ the past. In fact, Google is helping to (6)_____ a (7)_____ to save Bletchley Park by restoring it to its former glory. Google has provided the money for the purchase of key papers and is backing the current appeal to (8)_____ the derelict block at Bletchley Park.

restore

nurture

spearhead

campaign

secret

desire

codes

disrepair

It all began a year ago when Google (1)_____ Simon Meacham in California got a (2)_____ from Susan Black, who is a computing expert in London about Alan Turing – the maths genius who was the key to much of the wartime codebreaking work. It was about papers Turing wrote that were for sale and in danger of being lost to Bletchley. The papers included work from 1936 on 'computable (3)_____'. Turing had described an automatic (4)_____ which would be able to read and manipulate symbols on a tape through (5)_____. These concepts would be put into practice in the war when the first electronic programmable computer was built at Bletchley in order to (6)_____ codes. While codebreaking was an important part of Turin's work, what he conceived has gone on to change the world. It was the central foundation for all computing technology including the algorithms that (7)_____ Google's internet search engine and the page ranking (8)_____.

crack

machine

underpin

numbers

executive

Tweet

technology

algorithms

GAP FILL: LISTENING

Listen and fill in the spaces.

The link between Bletchley Park and Google

For nearly _____ Bletchley Park, a Victorian manor house near Milton Keynes in Buckinghamshire, _____ unloved; its dilapidated buildings falling into disrepair. By the 90s, its _____ at its rear were due to be torn down. Yet for more than 50 years the house was shrouded under _____. Only during the last 20 years was its secret finally revealed. It was the place where the codes of the German Enigma machine were broken by a special-purpose codebreaking machine called Colossus. The secret work at Bletchley Park had, it is believed, shortened the war _____. However, the secrecy came at a cost. Britain lost out to the US in the development of computer technology. So what is the link between Bletchley Park and Google? Simple – there is a desire by some individuals at Google to nurture the past. In fact, Google is helping to spearhead a campaign to save Bletchley Park by restoring it to its former glory. Google has provided the money for the purchase _____ is backing the current appeal to restore the derelict block at Bletchley Park.

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GRAMMAR

Put the words into the gaps in the text.

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SPELLING TEST

The teacher will ask the class individually to spell the following words that are in the article. Afterwards, check your answers with your teacher, using the following ratings:
Pass = 12, Good = 15, Very good = 18, Excellent = 20

1	dilapidated	11	forerunner
2	disrepair	12	nurture
3	Bletchley Park	13	secrecy
4	technology	14	Buckinghamshire
5	spearhead	15	Milton Keynes
6	executive	16	boarded-up
7	genius	17	algorithms
8	individuals	18	manipulate
9	huts	19	codebreaking
10	revealed	20	employees

LINKS

http://www.bbc.co.uk/news/magazine-15739984
http://www.bletchleypark.org/
http://en.wikipedia.org/wiki/Bletchley_Park
http://news.cnet.com/8301-13772_3-20076578-52/at-bletchley-park-breaking-enigma-codes-and-winning-ww-ii/
http://en.wikipedia.org/wiki/Enigma_machine

Note: **Algorithms -** A finite set of unambiguous instructions performed in a prescribed sequence to achieve a goal, especially a mathematical rule or procedure used to compute a desired result. Algorithms are the basis for most computer programming. **OR** A set of instructions for solving a problem, especially on a computer. An algorithm for finding your total grocery bill, for example, would direct you to add up the costs of individual items to find the total.

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