

CrossTalk

CROSSROADS Language Studio's Newsletter March, 2015

WHO INVENTED THE COMPUTER?

The answer is an Englishman, Charles Babbage, but the most surprising part of the story is *when* he did it.

"The father of the computer" was born in London in 1791. He was a mathematical genius and a talented inventor.

In the 1820's, while teaching mathematics at Cambridge University, he designed his first "difference engine"; a mechanical device that could perform mathematical calculations.

Babbage designed a second "difference engine" between 1846 and 1849 which contained processors (he called them "mills"), control units, a memory (he called it a "store") and an input/output system; all essential parts of a modern computer!

As electricity had not yet become a usable source of power in Babbage's time, he designed his devices based on mechanical systems. As a result, the design of his second "difference engine" was big, very complicated and very expensive. Although he produced complete plans for it, he was not able to build it. Like Babbage, it was way ahead of its time.

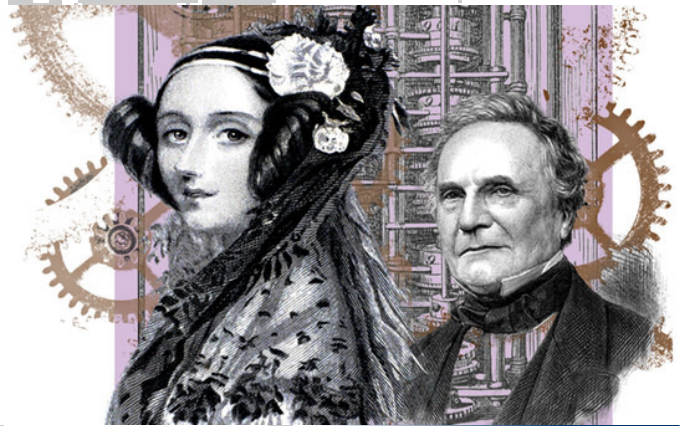
His second "difference engine" was finally built in 1991, almost 160 years after he designed it, by the Science Museum in London!

Between 1833 and 1842 Babbage worked on another, more complex invention he called an "analytical engine"; a device on which his fame as a computer pioneer now largely rests. He designed this machine to perform arithmetical calculations by using punch cards that would deliver instructions. It also had a memory unit to store numbers, and had other functions found in today's computers.

Like his second "difference engine", his "analytical engine" was too far ahead of its time to ever have been constructed in Babbage's lifetime. Indeed, the "analytical engine" was completely groundbreaking; the world's first programmable computer.

But computers, as everyone knows, require software as well as hardware. Babbage's friend Ada Byron (Lovelace) is often credited with creating the first computer program or algorithm. On paper, she went further than anyone else in realizing that an "analytical engine" could go beyond the work of a mere calculator. This was the first ever concept of a modern computer. She understood that anything that could be converted into numbers – music, language (the alphabet), images – could be manipulated by computer algorithms.

At the time, Babbage and Byron had set off a revelation that would soon change how the world works. The rest, as they say, is history!



Net News

NET LESSONS: Too busy to come to CROSSROADS?

.... Try our *lessons through the net!*

SITE OF THE MONTH: You can find an image and a video of Babbage's engine working here:

<http://www.computerhistory.org/babbage/>

Some Thoughts for the Month



Joshua Says: It's time again for our mid-semester survey. There will be a simple questionnaire to fill out that will cover the basics. Then Junko will be asking you about your lessons, your study plans and whether or not you feel like you are progressing. I'd like everyone to support this and to contribute frankly and positively towards helping us fine-tune your lessons and our study programs. And please do not be shy! Clear answers and opinions will go a long way to helping us all improve.

Junko Says: During the winter, we have neglected looking after our flower bed in front of the school building. Now March has come, we are going to plant some new flowers soon. I hope, by April, we'll have a nice little flower garden again that gives many people a little smile when they see it. If you have any recommendation for the kind of flowers we should plant, I'd be very interested to hear your ideas.



Mark Says: Already hay-fever season is upon us. In addition to myself, I seem to be surrounded by sniffing people with red glazed eyes. I've received a lot of advice on natural remedies I should try for my hay-fever, but like most natural remedies I've used over the years they just don't cut the mustard. I'm having to stick to my usual three pronged attack (Claratyne, nasal spray and eye-drops) which are finally working well for me.

Aaron Says: Along with my interests in history and science, I am also interested in wine. During my time at the University of Texas, I worked at a wine shop to make ends meet. I developed a real passion for all sorts of wine and spirits. My favorite wines are all from Europe, but my absolute favorites are from Spain. Do yourself a favor, and try some Spanish wines!



Danielle dit: Chers étudiants et étudiantes de Crossroads, j'ai beaucoup aimé mon expérience d'enseignement à vos côtés. J'ai beaucoup appris de nos conversations concernant vos voyages, l'art, le cinéma, la poésie française. J'espère que je vous aurai inspirés à découvrir d'autres contrées francophones telles le Québec. J'ai été impressionnée par vos efforts en vue d'apprendre la langue française. Je vous remercie pour cela ! Ce n'est qu'un Au revoir. Bon courage et bonne chance!

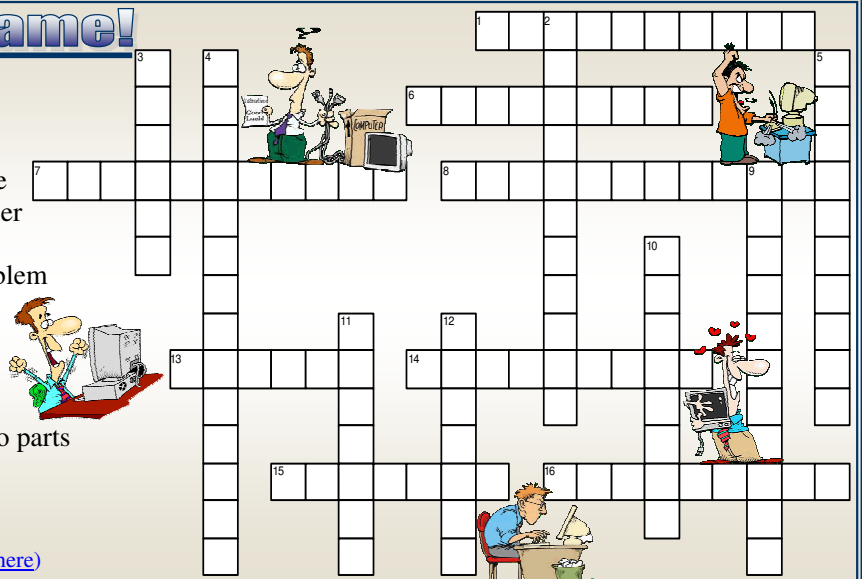
ACROSS

- 1 relating to machines
- 6 absolutely necessary
- 7 to control or influence
- 8 relating to math
- 13 an instrument used for a particular purpose
- 14 changed from one system or state to another
- 15 The first to achieve something
- 16 a precise rule showing how to solve a problem

DOWN

- 2 built
- 3 someone who has exceptional intelligence
- 4 something never done before
- 5 understanding by separating the whole into parts
- 9 not easy or simple
- 10 the first to think-up or make something
- 11 carry out an action
- 12 a theoretical idea

Play A Game!



(print version [here](#))

NOTICE BOARD

Maki from S(A)3 is something of a "glob-trotter". She has visited many countries. Here are some of her impressions from her time in Ireland:

I went to Ireland in 2009. After I got a working holiday visa, I lived there for a year and a half. I lived in Galway, which is on the west side of Ireland.

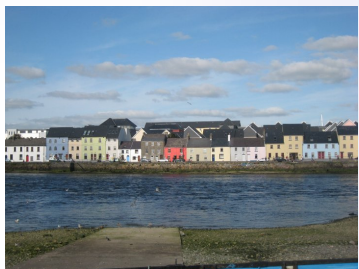
Why did I choose Ireland? Because I like Europe and I wanted to study English. I could have had a working holiday visa to England, but I had been to England before, so I chose Ireland. After I decided to go to Ireland, I looked up information on the Internet and in books. I read it's a safe country and the weather is good. In fact, the weather was usually *not* good with four seasons occurring in a single day. The weather changed very quickly.

In Ireland, I heard an English word which I had never heard before. When I met Irish friends they always said "What's the craic"? When I heard this for the first time, I didn't understand it. When I meet someone, I usually say "How are you?" or "How's it going?" I asked them what "craic" meant. They explained that "craic" means fun. This word comes from Gaelic. "What's the craic?" means "What's new?"! Another phrase I hadn't heard before was, "Thanks a million". Irish people always use it when they thank each other.

Each country has its own way of speaking English. It's interesting to learn about the differences. When you travel to Ireland you will definitely hear those words. Ireland is a great place to learn English and learn unique Irish English words.



Maki and friends in Galway



Galway City across the river

Here is Ren's second installment in series 2 of his stay in China:

In Tanggu: The city of Tanggu is completely different from Beijing and Tianjin. Few tourists visit there, so I could relax. I like such cities. In Tanggu City, I went to an interesting museum. There were many cannons and a fighter jet. In addition, just outside of the museum, there was an old, disused airplane. People could sit on its wings and look inside. There was nothing inside it, but I believe it is not possible to see this in Japan.

As I mentioned before, I visited Tianjin, too. There were many people there, but still less than Beijing. Tianjin has so many interesting spots to write about. I went to a TV tower. It was very high, like Tokyo Tower. I had an unfortunate surprise there! I had lunch there. As I entered, I thought I was asked if I wanted tea, so I answered, yes. The waitress brought me a pot and some snacks. Later, when I finished eating and asked for the check, I got a bill for about ¥4,000! I was shocked. But it was too late as I had already drunk the tea. I pointed out that there was no tea listed on the menu that cost ¥4,000. She said it was written on a board in the café's bar. I actually saw it, but I still think she was unfriendly. I could do nothing so I paid the money. I wished I could have communicated better in Chinese. When I left the café, I saw a Chinese person arguing very angrily with the same waitress. He was so angry that he threw some cups and people around him were trying to calm him down. I guessed she was a very bad waitress!



Cannons at the museum



Disused plane



Inside the plane



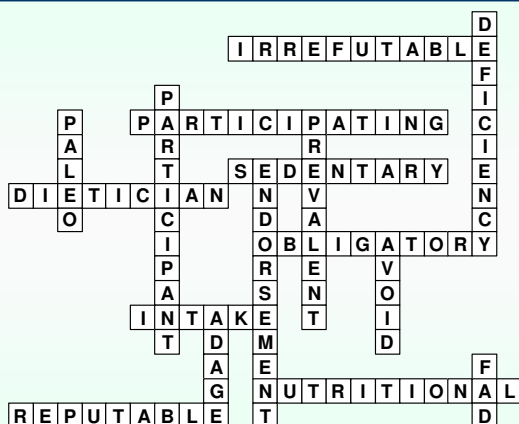
Tianjin Train Station



Tianjin's Unique Train Ticket



Tianjin TV Tower



Last Month's puzzle Solution

ACROSS

- 2 impossible to disprove
- 5 taking part in an activity
- 7 requiring little activity
- 9 a specialist in the study of nutrition
- 10 required by convention
- 12 take in
- 15 relating to a healthy diet
- 16 having a good reputation

DOWN

- 1 lacking or needing something
- 3 someone who takes part in something
- 4 prehistoric, primitive
- 6 most frequent or very common
- 8 promotional statement
- 11 stay clear or keep away from
- 13 short, memorable saying believed to be true
- 14 the latest superficial trend



Don't forget... Our **SPECIAL 1+1 Campaign offer! Up to 50% off!!**

See our notice board, or ask Junko in our office, for the details.