

Victorian Inventors

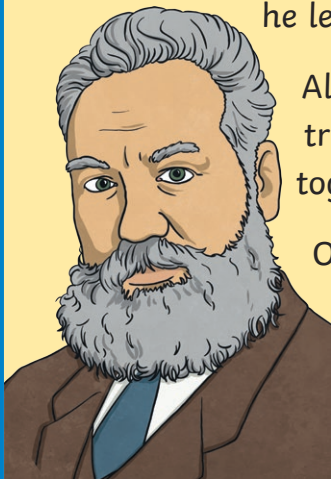
Look inside the history files to find out more about two great Victorian inventors. We still use the things that they invented today!

Name: Alexander Graham Bell

Most Famous Invention: Telephone

Alexander Graham Bell was born in Scotland in 1847.

When he was young, Alexander always wanted to know more about the world around him. He tried to solve problems by inventing new things. When he was 12 years old, Alexander invented a machine to help the local mill owner. The owner of the mill was so happy that he let Alexander have a small workshop to work on his inventions in.



Alexander enjoyed experimenting with the different ways that sound can travel. In 1875, Alexander and a man called Thomas Watson worked together to invent what is now called the telephone.

On 9th October 1876, Alexander and Thomas talked to each other on the telephone for the first time. They were over two miles away from each other. Alexander started his own telephone company in 1877 and the telephone became famous around the world.

Did You Know...?

Alexander Graham Bell was only given his middle name when he was 11 years old! He wanted to be just like his brothers so he begged his dad to let him have one.

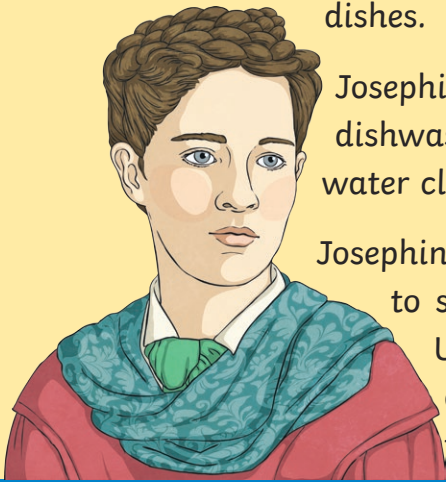
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Name: Josephine Garis Cochrane

Most Famous Invention: Dishwasher

Josephine Garis Cochrane was born in Ohio, USA, on 8th March 1839. She was the daughter of John Garis, an engineer, and Irene Fitch Garis.

Josephine and her husband, William, loved inviting their friends round to their house for dinner. Josephine's expensive dishes were chipped whilst being washed after one of her dinner parties. This made Josephine want to think of a safer way to wash her valuable dishes.



Josephine worked in her tool shed and she invented a hand-powered dishwasher. The dishes were held in a rack whilst a hose of hot, soapy water cleaned them.

Josephine began to win prizes for her invention in 1893. She started to sell her dishwashers to hotels and restaurants across Illinois, USA. Soon, so many people wanted a dishwasher that Josephine opened her own factory in 1897. The dishwasher became famous across the globe.

Did You Know...?

Josephine Cochrane's grandfather was called John Fitch. He invented a new type of steam-powered boat!

Questions

1. In which year was Alexander Graham Bell born? Tick one.

- ☐ 1839
- ☐ 1847
- ☐ 1876
- ☐ 1893

2. What was the name of Josephine Cochrane's father? Tick one.

- ☐ Alexander Bell
- ☐ William Cochrane
- ☐ John Garis
- ☐ Thomas Watson

3. In which year did Josephine Cochrane open her own factory? Tick one.

- ☐ 1839
- ☐ 1877
- ☐ 1893
- ☐ 1897

4. Number the events below to show the order they happened in Alexander Graham Bell's life.
The first one has been done for you.

	Alexander and Thomas talked to each other on the telephone.
1	He was born in Scotland.
	He invented a machine to help a mill owner.
	Alexander started his own telephone company.
	He started working with Thomas Watson.

Questions

5. Find and copy a word from the first **Did You Know...?** box which means the same as **pleaded**.

6. What did Josephine Cochrane's grandfather invent?

7. Which of these inventions do you think is most useful? Explain why.

Answers

1. In which year was Alexander Graham Bell born? Tick one.

☐ 1839

☒ **1847**

☐ 1876

☐ 1893

2. What was the name of Josephine Cochrane's father? Tick one.

☐ Alexander Bell

☐ William Cochrane

☒ **John Garis**

☐ Thomas Watson

3. In which year did Josephine Cochrane open her own factory? Tick one.

☐ 1839

☐ 1877

☐ 1893

☒ **1897**

4. Number the events below to show the order they happened in Alexander Graham Bell's life.
The first one has been done for you.

4	Alexander and Thomas talked to each other on the telephone.
1	He was born in Scotland.
2	He invented a machine to help a mill owner.
5	Alexander started his own telephone company.
3	He started working with Thomas Watson.

Answers

5. Find and copy a word from the first Did You Know...? box which means the same as **pleaded**.

begged

6. What did Josephine Cochrane's grandfather invent?

Josephine Cochrane's grandfather invented a new type of steam-powered boat.

7. Which of these inventions do you think is most useful? Explain why.

Pupils' own responses, such as: I think the telephone is most useful because you could still wash dishes by hand but you couldn't speak to people miles away without a telephone.

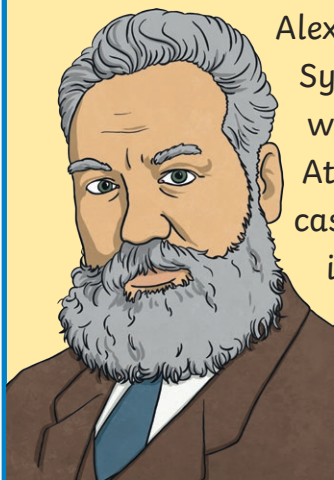
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Open the history files and discover more about two great Victorian inventors who continue to shape our lives today.

Name: Alexander Graham Bell

Most Famous Invention: Telephone

Alexander Graham Bell was born in Scotland on 3rd March 1847. He was a scientist, inventor and **engineer**.



Alexander was the son of Professor Alexander Melville Bell and Eliza Grace Symonds. As a young child, he always wanted to know more about the world around him and tried to solve problems by inventing new things. At just 12 years old, Alexander invented a machine to remove the outer case from grains of wheat. The owner of the mill was so happy with his invention that he let Alexander have a small workshop that he could work on his inventions in.

Alexander spent many years experimenting with the different ways that sound can travel – especially using electricity. In 1875, Alexander found an **assistant** called Thomas Watson. Together, they worked on creating what is now called the telephone.

On 9th October 1876, Alexander and Thomas talked to each other on the telephone for the first time. They were over two miles away from each other. In 1877, Alexander started his own telephone company and his invention became famous around the world.

Name: Josephine Garis Cochrane

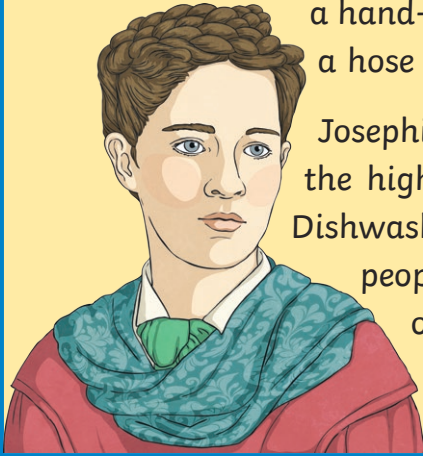
Most Famous Invention: Dishwasher

Josephine Garis Cochrane was born in Ohio, USA, on 8th March 1839. She was the daughter of John Garis, an engineer, and Irene Fitch Garis. Josephine's grandfather John Fitch was an inventor too – he had already invented a new type of steam-powered boat.

After getting married, Josephine and her husband William bought a house and began inviting their friends round for dinner. During one of their dinner parties, Josephine's expensive dishes were chipped whilst being washed. This made Josephine want to think of a safer way of washing her valuable dishes.

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Josephine worked in her tool shed with George Butters, a **mechanic**. Together, they created a hand-powered dishwasher. The dishes were held safely in a rack whilst a hose of hot, soapy water sprayed and cleaned them.



Josephine showed her invention at a world gathering in 1893. She won the highest prize for her new creation and began to sell the Cochrane Dishwasher to hotels and restaurants across Illinois, USA. Soon, so many people wanted a Cochrane Dishwasher that Josephine opened her own factory in 1897. Her invention became famous across the globe.

Glossary

assistant: A person who helps with particular work.

engineer: A person who designs or builds engines or machines.

mechanic: A skilled worker who fixes vehicles, engines and machines.

Questions

1. How old was Alexander Graham Bell when he created his first invention? Tick one.

- ☐ 12
- ☐ 15
- ☐ 20
- ☐ 32

2. Number the events below to show the order they happened in Josephine Cochrane's life. The first one has been done for you.

	She worked in her tool shed to invent the dishwasher.
1	She was born in Ohio, USA.
	She opened her own factory.
	Josephine's expensive dishes became chipped.
	Josephine won a prize for her invention.

3. Join the boxes to match the name of the person to their role.

Eliza Grace Symonds
Thomas Watson
Irene Fitch Garis

Alexander Graham Bell's assistant
Josephine Cochrane's mother
Alexander Graham Bell's mother

4. Find and copy a word from Josephine Cochrane's fact file which means the same as **expensive**.

5. Alexander Graham Bell was an engineer. Explain what is meant by the word **engineer**.

6. Who was George Butters?

Questions

7. Comment on the importance of Alexander Graham Bell's invention.

8. Explain how Josephine Cochrane's invention still impacts life today.

Answers

1. How old was Alexander Graham Bell when he created his first invention? Tick one.

☒ 12

☐ 15

☐ 20

☐ 32

2. Number the events below to show the order they happened in Josephine Cochrane's life. The first one has been done for you.

3	She worked in her tool shed to invent the dishwasher.
1	She was born in Ohio, USA.
5	She opened her own factory.
2	Josephine's expensive dishes became chipped.
4	Josephine won a prize for her invention.

3. Join the boxes to match the name of the person to their role.

Eliza Grace Symonds	Alexander Graham Bell's assistant
Thomas Watson	Josephine Cochrane's mother
Irene Fitch Garis	Alexander Graham Bell's mother

4. Find and copy a word from Josephine Cochrane's fact file which means the same as **expensive**.

valuable

5. Alexander Graham Bell was an engineer. Explain what is meant by the word **engineer**.

An engineer is a person who designs or builds engines or machines.

6. Who was George Butters?

George Butters is a mechanic who helped Josephine Cochrane to invent the dishwasher.

Answers

7. Comment on the importance of Alexander Graham Bell's invention.

Pupils' own responses, such as: Alexander Graham Bell's invention was important because it allowed people from around the world to communicate with each other in a way that they never had been able to before.

8. Explain how Josephine Cochrane's invention still impacts life today.

Pupils' own responses, such as: Josephine Cochrane's invention still impacts life today because millions of homes, restaurants and hotels wash their expensive dishes safely and easily using a dishwasher.

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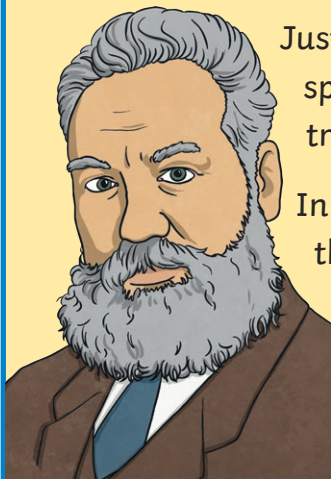
Delve into the history files and discover more about two great Victorian inventors whose creations continue to shape our lives today.

Name: Alexander Graham Bell

Most Famous Invention: Telephone

Born in Scotland on 3rd March 1847, Alexander Graham Bell was a scientist, inventor, **engineer** and **innovator**. He was the son of Professor Alexander Melville Bell and Eliza Grace Symonds.

As a young child, Alexander was curious about the world around him and often tried to solve problems by creating new inventions. At just 12 years old, Alexander invented a machine to remove the outer case from grains of wheat. He made this machine out of paddles and nail brushes. The owner of the mill was so impressed that he let Alexander have a small workshop that he could work on his inventions in.



Just like his father, Alexander became interested in speech and hearing. He spent many years experimenting with the different ways that sound can travel – especially using electricity.

In 1875, Alexander hired an assistant called Thomas Watson. Together, they got to work on creating what is now called the telephone. On 9th October 1876, Alexander and Thomas talked to each other on the telephone for the first time, from over two miles away from each other. A year later, Alexander started his own telephone company and his invention became famous around the world.

Name: Josephine Garis Cochrane

Most Famous Invention: Dishwasher

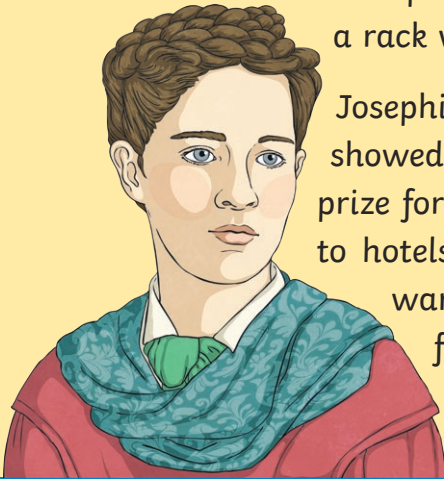
Born in Ohio, USA, on 8th March 1839, Josephine Garis Cochrane was the daughter of John Garis, an engineer, and Irene Fitch Garis. Josephine was born into a very creative family; her grandfather John Fitch had already invented a new type of steam-powered boat.

After getting married, Josephine and her husband William bought a house and began inviting their friends round for dinner. During one of their dinner parties, Josephine's **heirloom** dishes were chipped whilst being washed; this prompted Josephine to start to think of a safer way of washing her valuable dishes. She also wanted to find a quicker and

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less tiring way of cleaning up after dinner parties.

Josephine worked in her tool shed with George Butters, a **mechanic**. Together, they created a hand-powered dishwasher within which the dishes were held safely in a rack whilst a hose of hot, soapy water sprayed and cleaned them.



Josephine was determined to make her dishwasher successful and she showed her invention at a world gathering in 1893. She won the highest prize for her new creation and began to sell the Cochrane Dishwasher to hotels and restaurants across Illinois, USA. Soon, so many people wanted a Cochrane Dishwasher that Josephine opened her own factory in 1897 and her invention became famous across the globe.

Glossary

engineer: A person who designs or builds engines or machines.

innovator: A person who comes up with new methods, ideas or products.

heirloom: A valuable object which has belonged to a family for a long time.

mechanic: A skilled worker who fixes vehicles, engines and machines.

Questions

1. Which of these sentences best defines the word **mechanic**? Tick one.

- ☐ A person who designs or builds engines or machines.
- ☐ A skilled worker who fixes vehicles, engines and machines.
- ☐ A person who comes up with new methods, ideas or products.
- ☐ A valuable object which has belonged to a family for a long time.

2. Draw a line to match the innovator to their invention.

Alexander Graham Bell
Josephine Cochrane
John Fitch

dishwasher
steam-powered boat
telephone

3. On which date did Alexander Graham Bell and Thomas Watson first speak on the telephone?

4. List two items that Alexander Graham Bell used in order to create his first invention.

5. Josephine Cochrane's dishes were described as heirlooms. Briefly explain what is meant by this.

Questions

6. Explain how George Butters helped Josephine Cochrane to become successful.

7. Which of these inventions do you think has had the biggest global impact? Explain your answer.

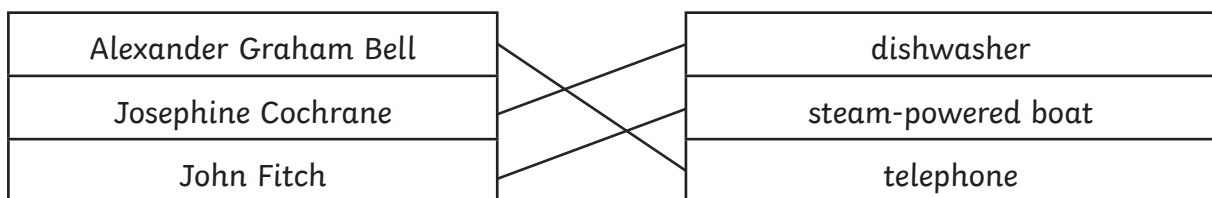
8. Explain your own idea for a new invention in 30 words or less.

Answers

1. Which of these sentences best defines the word **mechanic**? Tick one.

- ☐ A person who designs or builds engines or machines.
- ☒ **A skilled worker who fixes vehicles, engines and machines.**
- ☐ A person who comes up with new methods, ideas or products.
- ☐ A valuable object which has belonged to a family for a long time.

2. Draw a line to match the innovator to their invention.



3. On which date did Alexander Graham Bell and Thomas Watson first speak on the telephone?

Alexander Graham Bell and Thomas Watson first spoke on the telephone on 9th October 1876.

4. List two items that Alexander Graham Bell used in order to create his first invention.

paddles

nail brushes

5. Josephine Cochrane's dishes were described as heirlooms. Briefly explain what is meant by this.

An heirloom is a valuable object which has belonged to a family for a long time.

6. Explain how George Butters helped Josephine Cochrane to become successful.

Answers

Pupils' own responses, such as: George Butters helped Josephine Cochrane to become successful because, as a mechanic, he helped her to build the first dishwasher, which he used to show other people her invention.

7. Which of these inventions do you think has had the biggest global impact? Explain your answer.

Pupils' own responses, such as: I think that the telephone has had the biggest global impact because dishes can still be cleaned without a dishwasher but people cannot talk to people on the other side of the world without a telephone.

8. Explain your own idea for a new invention in 30 words or less.

Pupils' own responses, such as: My idea is to invent a machine which can tell if your toast is cooked perfectly and turns off the toaster before the toast burns.