Name: _____ Date: _____

Hello, Mr. Watson

Circle group

In the 1870s, the fastest way to send a message far was the telegraph. A telegraph sent short clicks over a wire. A trained worker turned the clicks into words. It was fast, but it could not send a voice.

Alexander Graham Bell taught deaf students. He wanted to change that. He loved to learn about sound. For years he studied how a voice makes the air shake. This shaking is called vibration. Bell worked in a shop in Boston with his helper, Thomas Watson. They tried to build a machine to turn the shaking of a voice into an electric signal.

On March 10, 1876, the two men were in different rooms. Bell spilled something on his clothes and called out, "Mr. Watson, come here, I want to see you." In the next room, Watson heard the words come through the wire. It was the first sentence ever said over a telephone.

In a few years, phones spread to homes and shops in many cities. People could talk to someone far away as if they were in the same room. Now a phone fits in a pocket. It can send video as well as voices. But the main idea is the one Bell and Watson proved that day. A voice can be turned into a signal, sent along, and turned back into a voice.

Questions

1. How did a telegraph send messages?

_____

_____

2. What did Bell and Watson want to build?

_____

_____

3. What were the first words said over a telephone?

_____

_____

4. Why was the telephone better than the telegraph?

_____

_____

5. The last part says the main idea is the same today. What does that mean?

_____

_____

Words to know

telegraph: an old machine that sent messages as clicks over a wire
signal: a message sent by electricity, light, or sound

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Hello, Mr. Watson

Triangle group

In the 1870s, the fastest way to send a message a long way was the telegraph. A telegraph sent short clicks over a wire. A trained operator turned the clicks into words. It was fast, but it could not carry a human voice.

Alexander Graham Bell, a teacher of deaf students, wanted to change that. He was fascinated by sound. He spent years studying how voices make the air vibrate. With his assistant, Thomas Watson, he worked in a Boston workshop. They tried to build a machine that could turn the vibrations of a voice into an electric signal.

On March 10, 1876, the two men were working in separate rooms. Bell spilled something on his clothes and called out, "Mr. Watson, come here, I want to see you." In the next room, Watson heard the words come through the wire. It was the first sentence ever spoken over a telephone.

Within a few years, telephones were spreading to homes and businesses in many cities. People could speak to someone far away as easily as to someone across the room. Today a phone fits in a pocket and can carry video as well as voices. But the main idea is the one Bell and Watson proved that day in Boston. A voice can be changed into a signal, sent along, and changed back into a voice.

Questions

1. How did a telegraph send messages?

_____

_____

2. What did Alexander Graham Bell and Thomas Watson want to build?

_____

_____

3. What were the first words spoken over a telephone?

_____

_____

4. Why was the telephone a big step beyond the telegraph?

_____

_____

5. What does the last sentence mean by the main idea being the same today?

_____

_____

Words to know

telegraph: an old machine that sent messages as clicks over a wire
vibrate: to shake back and forth very fast
signal: a message sent by electricity, light, or sound
fascinated: very interested in something
operator: a person who works a machine

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Hello, Mr. Watson

Square group

During the 1870s, the most rapid method of sending a message over a long distance was the telegraph. A telegraph transmitted short clicks along a wire, and a trained operator translated those clicks into words. Although the system was fast, it was incapable of carrying a human voice.

Alexander Graham Bell, an instructor of deaf students, was determined to change that. Fascinated by sound, he devoted years to investigating how voices cause the air to vibrate. Together with his assistant, Thomas Watson, he labored in a Boston workshop, attempting to construct a machine that could convert the vibrations of a voice into an electric signal.

On March 10, 1876, the two men were working in separate rooms. Bell accidentally spilled something on his clothing and called out, "Mr. Watson, come here, I want to see you." In the adjoining room, Watson heard the words travel through the wire. It was the first sentence ever spoken over a telephone.

Within a few years, telephones were spreading to homes and businesses in numerous cities. People could communicate with someone far away as effortlessly as with someone across the room. Today, a phone fits comfortably in a pocket and can transmit video in addition to voices. Nevertheless, its fundamental principle is the one Bell and Watson demonstrated that day in Boston: a voice can be converted into a signal, transmitted, and then converted back into a voice.

Questions

1. Describe how the telegraph transmitted messages.

_____

_____

2. What were Bell and Watson attempting to construct?

_____

_____

3. What was the first sentence ever spoken over a telephone?

_____

_____

4. Why was the telephone a significant advance beyond the telegraph?

_____

_____

5. What does the passage mean when it says a modern phone uses the same fundamental principle?

_____

_____

Words to know

telegraph: an old machine that sent messages as clicks over a wire
vibrate: to shake back and forth very fast
signal: a message sent by electricity, light, or sound
fascinated: very interested in something
operator: a person who works a machine

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Hello, Mr. Watson

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Hello, Mr. Watson

Easier · 223 words · Flesch-Kincaid grade 3.4

1. It sent short clicks over a wire. A worker turned the clicks into words.
2. A machine to turn the shaking of a voice into an electric signal.
3. "Mr. Watson, come here, I want to see you."
4. A telegraph could not send a voice. A telephone could, so people could talk from far away.
5. Phones today still turn a voice into a signal, send it, and turn it back into a voice, like Bell and Watson did.

Triangle: Hello, Mr. Watson

This passage · 224 words · Flesch-Kincaid grade 5.5

1. It sent short clicks over a wire, and an operator turned the clicks into words.
2. A machine that could turn the vibrations of a voice into an electric signal.
3. "Mr. Watson, come here, I want to see you."
4. A telegraph could not carry a human voice. The telephone could, so people could speak to each other from far away.
5. Modern phones still change a voice into a signal, send it along, and change it back into a voice, as Bell and Watson did.

Square: Hello, Mr. Watson

Harder · 232 words · Flesch-Kincaid grade 10.1

1. It transmitted short clicks along a wire, and a trained operator translated the clicks into words.
2. A machine that could convert the vibrations of a voice into an electric signal.
3. "Mr. Watson, come here, I want to see you."
4. The telegraph could not carry a human voice. The telephone could, so people could speak to each other across great distances.
5. Phones today still convert a voice into a signal, transmit it, and convert it back into a voice, as Bell and Watson did.