

# Telephones Past and Present

There are billions of telephones in the world today. They have been around for a long time. In fact, not a single person on Earth today was alive when the telephone was first invented.

The word *telephone* is even older than the device. It comes from the ancient Greek words for “far” and “sound.” It first referred to the tin-cans-and-string toys that kids played with. In 1876, however, the word’s meaning changed. That was the year that Alexander Graham Bell patented a new invention, one that allowed people nowhere near each other to have spoken conversations.

All sorts of things have been added to phones over the years, but their basic design has changed very little. Every phone has the following:

- a power source (either electrical or battery-powered)
- a switch hook (the telephone’s “on-off” control)
- a dialer (the means to input the number of the person being called)
- a ringer (a way to signal an incoming call using sound or vibration)
- a transmitter (into which the user speaks)
- a receiver (which the user hears)

The first telephones were large and awkward, and each was powered by its own battery. Battery power couldn’t carry voices very far, however. That problem was solved in the 1890s, when telephone networks began using outside power sources. Electrical impulses transmitted speech over long distances through the wires of a “landline system” using phones that could not be moved from the place where they were installed.

In the beginning, a user began a phone call by speaking to an operator. It was the operator’s job to connect one phone to another. After the early 1920s, though, rotary phones became common. Rotary phones had dials that let users enter number combinations to contact other users. During the 1960s and 1970s, dials were largely replaced by the “touch-tone” keypads that remain standard today.

From the 1980s on, batteries started finding their way back into phones. Before then, an electrical cord had connected the handset (containing the transmitter and receiver) to the rest of the device. This limited how far the user could get from the phone during a conversation. Once manufacturers put batteries in handsets, however, connecting cords were no longer needed. Phones were still linked together in landline systems, but their users were less physically restricted.

Mobile phones powered completely by batteries appeared in the mid-1980s, bypassing landline systems altogether. Conversations were instead transmitted through signals coordinated by satellite-based systems. The earliest mobile phones were big and ugly and cost thousands of dollars. But by the mid-1990s, they had gotten much smaller (and cheaper) and were called cellular (or cell) phones.

Today, phones take pictures, connect us to the Internet, and even enable us to see one another as we converse. Advances continue at a rate that is impossible to keep track of or predict. How will we all be communicating in another 10 years, you might ask? Well . . . just keep watching and listening!

## Questions

### Check for Understanding

1. Why is the word *telephone* a good choice for that device's name?
2. What two types of systems are used to transmit telephone conversations?
3. Why was the use of batteries in telephones discontinued and then resumed years later?
4. How have phones stayed the same over the years? How have they changed? Use details from the text in your response.

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**Vocabulary List**

Each of the vocabulary words below are used in the reading passage. As you read the passage, pay attention to context clues that suggest the word's meaning.

1. device
2. referred
3. patented
4. transmitter
5. impulses
6. rotary
7. bypassing
8. converse

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**Context Clues**

Using context clues from the sentences in the passage, underline the correct meaning of the word in boldface.

1) "The word telephone is even older than the **device**."

- a. idea    b. machine or instrument    c. inventor or creator    d. the knowledge of writing

2) "It first **referred** to the tin-cans-and-string toys that kids played with."

- a. referenced or named    b. was sold    c. was advertised with    d. was adapted

3) "That was the year that Alexander Graham Bell **patented** a new invention"

- a. discarded; threw away    b. got a government license    c. stole    d. sold

4) "a **transmitter** (into which the user speaks)"

- a. electronic tool for sending information    b. wooden box    c. person who interprets    d. round hole

5) "Electrical **impulses** transmitted speech over long distances through the wires of a 'landline system'"

- a. fluid; plasma    b. gamma rays    c. air waves    d. single flow of current; pulses

6) "After the early 1920s, though, **rotary** phones became common."

- a. old-fashioned    b. wired    c. circular motion    d. common; everyday

7) "Mobile phones powered completely by batteries appeared in the mid-1980s, **bypassing** landline systems altogether.

- a. helping    b. sidestepping; going around    c. enhancing; improving    d. destroying

8) "Today, phones take pictures, connect us to the Internet, and even enable us to see one another as we **converse**."

- a. meet    b. invent or create    c. exercise; work    d. talk; discuss