

CAN YOU HEAR ME?

Purpose Of The Activity:

To explain the importance of technological devices in communication and to make your own phone.

Theme Beyond Disciplines:

Where we are in place and time
How the world works



INQUIRY CYCLE

TUNING IN

Let's arouse
curiosity!



FINDING OUT

What Should Little
Science People
Discover?



SORTING OUT

Let's Start
Discovering!,
Scientific
Explanation For
The Curious,
Video



GOING FURTHER

What else can
we do? ?



TAKING ACTION

Question Of The Day
?



MAKING CONCLUSIONS

Activity Pages,
Exit Card



CAN YOU HEAR ME?



Let's arouse curiosity

To spark students' curiosity, an old-fashioned wired telephone is brought to the classroom, and a demonstration of talking on the phone is performed. Students are asked the following questions:
What am I doing right now?

- How do we communicate with each other when we are far away?

"People in distant places use various tools to communicate with each other. For example; telephone, telegraph, computer, radio, walkie-talkie, clock, etc. Which of these tools do you think is the most commonly used? Yes, the telephone. In times when the telephone was not as smart as it is today, it was used fixedly at home (if an old-fashioned telephone is brought to the class, an example of a fixed telephone is shown). In fact, not everyone had it. To communicate with the desired person while outside, telephone booths with coin-operated phones were used on the streets. Nowadays, we can communicate with anyone, anytime, even with watches 😊 Of course, with the smart ones. Let's see what technology will offer us as it advances," it is said. Students are then asked to take out and examine the activity materials.

Let's start to discover!

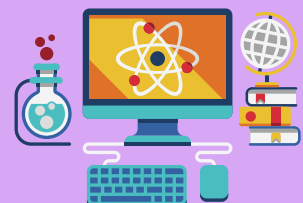
The activity video is watched by pausing. Before proceeding with the activity, the content of the set will be checked. All the lid and package opening steps are done at the same time with students.



Content of The Set

- | | |
|---|--|
| <input type="checkbox"/> Two telephone cylinders | <input type="checkbox"/> Two phone cover labels |
| <input type="checkbox"/> Two communication wires | <input type="checkbox"/> "Draw What You Want to Tell!" |
| <input type="checkbox"/> Two caps | activity page |
| <input type="checkbox"/> Two telephone labels (green) | |
| | |

Watch the video by pausing!



How Do We Do It?

NOTE

- For sound transmission in this test, the phone wire must be tight. The student listening should put one ear to the phone and tightly cover the other ear with his/her hand.

1. Take the telephone cylinder.
2. Open the phone label.
3. Place the cylinder on the end of the label and stick the label around the cylinder.
 1. Repeat the same process for the other cylinder.
 2. Pass the communication wire through the holes in the caps and tie a knot. (Under teacher supervision)
 3. Stick green phone labels on the knot points of the wire.
 4. Attach the caps to the cylinders.
 5. Move on to the application phase. In the application, two students use one phone.
 6. In the first application, the phone wires are not held tight. One student transmits his/her voice to the phone, and the other student holds the phone to his/her ear.
 7. Ask the student holding the phone to his/her ear if he/she hears the sound.
 8. Students perform the opposite of the applications this time. (The student holding the phone to his/her ear makes a sound, and the student making a sound holds the phone)
 9. Steps **8, 9, and 10** are tried again with the wires held tight.
 10. Discuss with the students how different results are obtained when the wires are held tight or not.

What Should Future Science People Discover?

Students are asked the following questions:

- How was communication in the past?
- What kind of tool is the telephone? What is its structure?

Communication in the Past

Communication is one of the basic needs of living things. Animals communicate through sounds, body language, plants communicate through chemicals, smells, movements. Human communication, on the other hand, is the sharing of emotion, thought, and information among individuals. Since ancient times, various methods, tools, and technologies have been used for communication. People have ensured the transfer of knowledge through generations by continuing communication methods according to the conditions they live in.

For example; in very ancient times, people used smoke to send messages that changed shape. At the same time, they showed what they wanted to tell by drawing pictures on the cave walls. In later times, using Morse code, they communicated vocally or by light with telegraphs. With the invention of writing, people communicated by writing letters to each other, trying to send letters tied to the legs of pigeons.

Today, communication through letters continues through postal workers. The letter was a beautiful communication tool according to the conditions of that time. But after writing and sending, waiting again took time. With the invention of the telephone, communication became much easier. With phones at one end, the transmitted sounds reach the desired phone and a response is received quickly.

Humans have always wanted to increase their communication, for example, writing newspapers to be informed about the world, inventing the radio. The radio, developed, appeared in its pictorial form as television. Phones have become pocket-sized by shrinking, becoming one of the fastest communication tools today.

While phones initially worked with cables when they were first invented, they now work wirelessly. So how does wireless work? Signals are sent to base stations for wireless operations. Signals spreading in waves allow us to communicate.



Scientific explanation for the curious

Following questions will be directed to students:

- Can we call the device we made a phone, and why?
- What is needed for the transmission of sound during a phone call?

How is Sound Transmitted?

To hear sound waves from a sound source, a transmitting medium (solid, liquid, gas) is needed. Sound propagates through the wire, reaching the other person. The wire in the activity is solid and transmits sound. The transmitting medium, where sounds can be transmitted, is called the transmitting medium, and the wire is a transmitting medium. The wire must be tense for transmission to occur. As long as the phone vibrates, the sound is heard.

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What Else Can We Do?

Dear teacher, you and the little scientists have learned about communication tools from the past to the present and conducted an activity about the sound transmission of the phone. To reinforce the topic, you can do the "Coding My Number" activity.

Coding My Number

Materials

- Large craft paper
- Scissors
- White papers
- Glue
- Pen

1. Cut 10 circular pieces from white paper depending on the size of the craft paper.
2. Write numbers from 0 to 10 on them and stick them on the craft paper as shown in the example of the phone.
 1. Cut two squares from the papers and draw a phone picture on them, coloring one in green and the other in red.
 2. Place the prepared phone in the middle of the class and give students papers with their family's numbers written on them.
 3. Ask each student to hop onto the numbers on the phone while coding their number.



What Did We Discover? / Exit Card

"Little scientists, today we discovered how phones transmit sound. Who knows how much people in the past struggled to communicate, right?" After receiving answers, it is said, "Today's technology is quite advanced, and it is still developing. While using this technology, we must use it in a way that will benefit us. Otherwise, smart phones used for a long time will take away both our time and our health."

A warning is given. The "Draw What You Want to Tell!" page is taken from the activity pages.

Question Of The Day?



Why is the name of the phone "phone"?

CURIOUS BOX



miniskop

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