PRE-CODING FOR SCHOOLS Page

What Am I?: History of Tech

About This Activity

Introduction

In this activity, learners will play a "Heads Up!"-style game where they will guess the word on a card that they cannot see based on hints that the other players are giving them. The words will be old tech objects to help them keep learning while having fun.

Objective

Upon completion of this activity, learners will:

be able to talk about what old examples of technology do and how technology has changed over the years

What You Need

This activity requires a high level of facilitator participation.

This activity will take about 30 minutes to complete.

You will need the following supplies:

- Scissors
- Pencil
- Timer or clock with a hand that shows seconds

Facilitator's Instructions

Since learners will need prior knowledge of the old technology to complete this activity, it is recommended to have your learner complete the previous activities in this sequence before attempting this one.

- 1. Print out the Learner's Sheet pages.
- 2. Gather your supplies.
- 3. Tell your learner about this activity: "Today, we're going to play 'Heads Up!' to test what you have learned about the history of technology. First, I'll give you a card to hold up to your forehead with the words facing toward me, but don't look at the words on the card. Then, I'll give you clues about what words are on the card and you'll try to guess before the timer is up. Let's start by cutting out the cards first."
- 4. Hand your learner the sheets with the cards and have them cut them out.



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Facilitator's Instructions Cont'd

- 5. Shuffle the cards and pick one at random. Hand it to your learner face down and tell them to put the blank side against their forehead so that the words face you.
- 6. Find the name of the old technology on the list of clues and keep it handy for yourself.
- 7. Set a timer for one minute and start giving your learner the clues. You can also use a clock to count the seconds instead.
- 8. If your learner guesses the name of the old technology within one minute, mark a point on the scorecard. If they do not, write the technology on the scorecard under "Words to Practice" so that your learner can use the previous activities to keep practicing these items.
- 9. Place the used card to the side.
- 10. Repeat steps 5-9 until the cards are all gone.
- 11. Congratulate your learner on a job well done! Use the list of words to practice anything that they might need to spend more time on.

Standards Addressed

CSTA

1A-IC-16, Impacts of Computing, Culture: Compare how people live and work before and after the implementation or adoption of new computing technology. 1B-IC-18, Impacts of Computing, Culture: Discuss computing technologies that have changed the world, and express how those technologies influence, and are influenced by, cultural practices.



STEM ACTIVITY FOR SCHOOLS - FACILITATOR'S SHEET Page

What Am I?: History of Tech

Examples of Clues

Gramophones and Phonographs

- · Before you were invented in the 1870s-1880s, the only way to listen to music was to hear it live.
- · One of you played sound recorded on wax cylinders.
- · The other of you played sound recorded by carving grooves into glass disks called records.
- A needle moved over these grooves to make vibrations. The vibrations created your sound.
- · To play sound on you, people had to turn a crank by hand the whole time.

Record Players

- · You are a gramophone that uses electricity instead of a hand-crank.
- You were invented in the 1920s.
- You played vinyl records instead of glass records.
- You were the most popular music device until the 1970s.
- Some people still listen to you because you have high-quality sound.

Cassettes and Boom Boxes

- · You were invented in 1962.
- · You were very small and not as breakable as records.
- You used magnetic tape to record sound.
- Your magnetic tape was encased in plastic.
- Finding specific songs on you was hard to do.

CDs (music)

- You were invented in 1982.
- Your users could skip to certain songs very easily.
- · You had a compact size and were durable.

iPods, Digital, and Streaming Music

- One of you was invented in 2001 and was the world's first digital music device.
- · Songs were downloaded and stored directly on devices to listen to your type of music format.
- · Devices could house an entire music library by using you instead of having to carry lots of tapes or CDs.

Betamax

- · You were invented in 1975. Before then, people could only see movies in a movie theater or when they played on live TV.
- You were the first type of tape made to be played on a VCR player.



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VHS

- · You came out one year after Betamax.
- · You were less expensive and easier to use than Betamax.
- · You became much more popular than Betamax.

DVD

- You were invented in 1995.
- You looked like music CDs but played using your own kind of player device.
- · You had better picture and sound quality than VHS tapes.
- You were smaller than VHS tapes and took up less storage space.

Blu-ray

- · You were invented in 2006.
- You were a high-definition (HD) version of DVDs. This means the picture and sound quality are even better.
- Your player devices can also play DVDs so users did not have to have more than one device to play both you and DVDs.

Streaming

- In 2007, Netflix started using you to play movies and TV shows over the Internet.
- · You allowed people to watch movies without needing to own or rent a physical disc or tape.
- More services using you started popping up as you became popular.

Atari Home Pong

- · You were invented in 1975.
- · You were the first home video game system.
- · You had only one game built in and people could not add more.
- · You only displayed black and white graphics.

8-bit Era (video games)

- Nintendo NES was released during your era.
- · You had the same quality graphics as arcade games, which was new for video games played at home.
- · People could play a different game in your era by changing the cartridge to a different game.

16-bit Era (video games)

- Your era began in 1989.
- · You had even better graphics and could do a lot more.
- To do more, controllers in your era had more buttons.
- · Your game cartridges were smaller than they were for 8-bit games.
- The most popular systems in your era were Super Nintendo (NES) and Sega Genesis.



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32-bit, 64-bit, and 3D Era (video games)

- Your era began in 1993.
- · Your video games were the first with 3D graphics.
- · Your era started to move away from cartridges and used CDs instead.
- · Popular systems in your era included Nintendo 64, Sega Saturn, and Sony PlayStation.

128-bit Era (video games)

- Your era began in 1998.
- Gaming systems in your era started using the Internet too.
- Players in your era could now play games with their friends online instead of having to be in the same place.
- Popular systems in your era included Xbox, Game Cube, and Playstation 2.

Current Era (video games)

- In 2005, gaming systems in your era started using body movements instead of controllers.
- Xbox 360 was during your era and was the first to use body movements.
- Nintendo Switch was a new format during your era, which easily switches from a portable console to one that shows on a TV screen.

Big (5.25") Floppy Disks

- You were invented in 1978.
- You were a thin square of plastic that was 5.25 inches long and had a magnetic disk inside the plastic that held data.
- · Computers accessed your data through a hole in the middle of the plastic.
- · Your shape is still used today as the save icon in most apps.

Small (3.5") Floppy Disks

- You were invented in 1982.
- · You were a smaller version of the bigger floppy disk.
- You also had a magnetic disk at the center, but was made of harder plastic and had a metal clip over the hole.
- · You could store more.
- · You were more durable.

Compact Discs (file storage)

- You were the most popular format in the 1990s.
- · You had two types: CD-R and CD-RW.
- · You could be scratched easily, which was not good.



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Flash Drives

- You were invented in 2000.
- · You were much smaller than CDs but held more data.
- · You plugged right into computer USB ports.
- · You were very portable due to your small size.

Cloud Storage

- You were introduced in 2011.
- You let people save limitless data online instead of to an object.
- You are still growing in popularity.

Candlestick Telephone and Switchboards

- You were invented in the 1890s.
- · Neighborhoods often shared one of you.
- · A switchboard operator connected calls, so you had no numbers on you.
- · You had a separate earpiece and mouthpiece so people had to use both hands to use you.
- You got your name because your base looked like a candle with a mouthpiece on top.

Rotary Dial Telephone

- You were invented in the early 1900s.
- · Switchboards changed so people could dial their own calls, which meant you needed to have numbers on you.
- You had a numbered dial that had to be turned for each number being entered. This made dialing numbers very slow.
- · The mouthpiece and earpiece were now in the same piece so only one hand had to be used to hold you.

Push-Button Telephone

- · You were invented in 1963.
- You had push buttons instead of a dial so numbers could be dialed faster.
- · You became smaller and smaller over time.

Motorola DynaTAC

- You were invented in 1983.
- · You were the first widely available cell phone.
- You were very large and heavy.
- You took about 10 hours to charge up your battery.
- · Your battery lasted for about 30 minutes of talk time.
- You were not popular due to the large size and expensive price.



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What Am I?: History of Tech

Cordless Telephone

- You were invented in 1994.
- · You did not have a cord between your receiver and base so users could move around when using you.
- · If users moved too far from your base, they lost their connection.

Candybar and Flip Phones

- You were more popular by the late 1990s and early 2000s.
- · You got smaller and lighter in weight, making you more portable.
- · This style of you was rectangular like a type of food, such as the Nokia 3210.
- · This style of you folded in half, such as the Motorola RAZR.

Feature Phones

- · By the early 2000s, cameras, games, music players, and calendars were added to more and more of you.
- · Some of you included full keyboards just like on a computer keyboard.
- · Popular brands included the Sidekick and Blackberry.
- · You were the first step toward smartphones being invented.

iPhone and Smartphones

- · The first of you came out in 2007 and were the world's first of your kind.
- · You had touchscreens and virtual keyboards.
- · You could access the internet.
- · You have changed the way that people use phones.



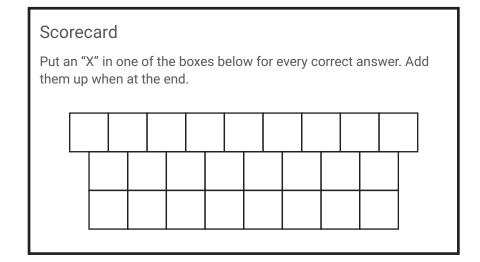
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Directions

Let's play a game! Cut out the cards below and stack them face down in a random order. Then, follow these directions:

- 1. Have a player pick a card without looking at what it says.
- 2. The player should hold the card against their forehead with the word facing out to the other players.
- 3. The other players will then give them clues about the word on their card.
- 4. The player with the card will try to guess what is on their card based on the clues the other players are telling them.
- 5. Once the player correctly guesses the word on their card, place the card at the bottom of the stack and have the next player repeat steps 1-5.







FOR SCHOOLS - LEARNER'S SHEET

What Am I?: History of Tech

Phonographs and Gramophones

Record Players

Cassettes and Boom Boxes



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CDs (music)

iPods, Digital, and Streaming Music

Betamax



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What Am I?: History of Tech

VHS DVD Blu-ray



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Streaming video

Atari Home Pong

8-bit Era (video games)



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16-bit Era (video games)

32-bit, 64-bit, and 3D Era (video games)

128-bit Era (video games)



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Current Era (video games)

Big (5.25") Floppy Disks

Small (3.5") Floppy Disks



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Compact Discs (file storage)

Flash Drives

Cloud Storage



What Am I?: History of Tech

Candlestick Telephone and Switchboards

Rotary Dial Telephone

Push-Button Telephone



What Am I?: History of Tech

Motorola DynaTAC

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