

Coloring Sheets: History of Tech

About This Activity

Introduction

In this activity, learners will be shown a coloring sheet with images of changing technology throughout the years in a given category, such as music or movies. Learners can read short facts about the objects on the sheet as they color. There are five different variations of this activity in order for learners to see more than one category of technological history.

Objective

Upon completion of this activity, learners will:

- know how technology in different categories has changed how people live and work over the years
- be able to speak about how multiple categories of technology have changed
- know the names and functions of historical objects

What You Need

Depending on your learner's reading level, this activity requires a medium level (for readers) or a high level (for pre-readers) of facilitator participation.

Each coloring sheet will take about 10 minutes to complete depending on the learner's skills.

You will need the following supplies:

- Coloring supplies

Facilitator's Instructions

1. Print out the Learner's Sheet pages.
2. Gather your coloring supplies.
3. Tell your learner about this activity: "Today, we're going to learn about how people used to do things! You can read about different types of technology as you color."
4. Have your learner start coloring.
5. For pre-readers, you will need to read the facts about the tech to them. Readers can read on their own while they color. Be prepared to help them with any new or technical words that they might need help with.
6. Congratulate your learner on a job well done!
7. Have your learner complete the other coloring sheets to keep learning more about how tech has changed over the years.

Coloring Sheets: History of Tech

Bonus Challenge

If you have examples of any of these items on hand, show them to your learner! You will be conducting a scavenger hunt for these items in a later activity but it can always be helpful to show them these items now.

Standards Addressed

CSTA

1A-CS-02, Computing Systems, Hardware and Software: Use appropriate terminology in identifying and describing the function of common physical components of computing systems (hardware).

1A-IC-16, Impacts of Computings, Culture: Compare how people live and work before and after the implementation or adoption of new computing technology.

Coloring Sheets: History of Tech #1

Directions

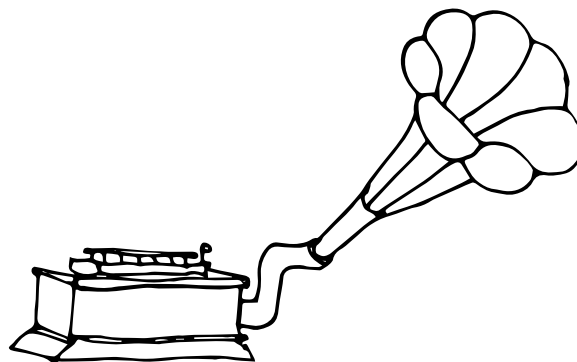
Learn about how listening to music has changed over the years! Color the page and read the facts about each item.

What You Need

- ✓ Crayons, markers, or colored pencils

Phonographs and Gramophones

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



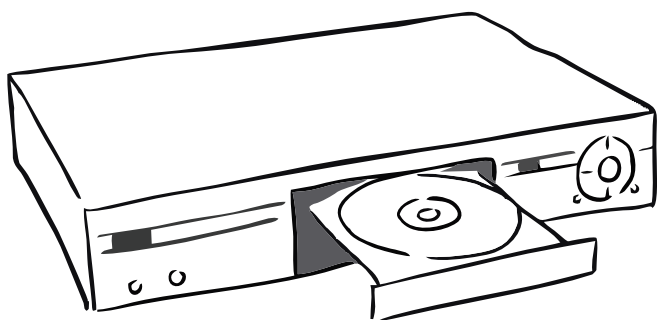
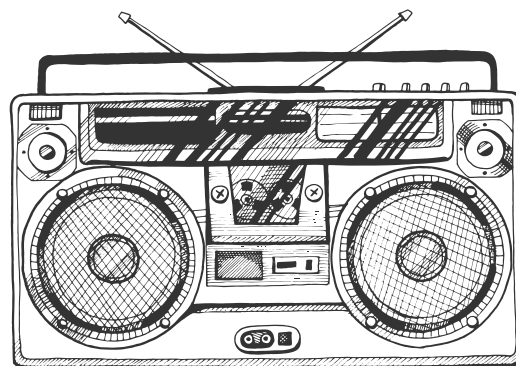
Record Players

- Record players are gramophones that use electricity instead of a hand-crank.
- Invented in the 1920s.
- Vinyl records replaced glass records in the 1930s. These were easier to make but were still breakable and easily scratched.
- Record players were popular music devices until the 1970s.
- Some people still listen to vinyl records because they have high-quality sound.

Coloring Sheets: History of Tech #1

Cassettes and Boom Boxes

- Invented in 1962.
- Very small and less breakable than records.
- Used magnetic tape to record sound.
- The magnetic tape was encased in plastic.
- Finding specific songs on a long tape was hard to do.
- Played on large devices called boom boxes, like the one shown here.

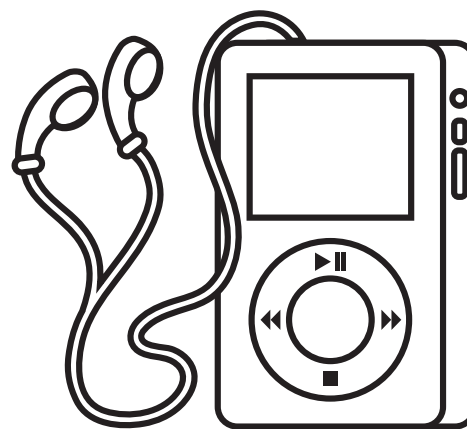


Compact Discs (CDs)

- Invented in 1982.
- Users could skip to certain songs very easily.
- Compact size and durable.
- Played in a CD player, like the one shown here.

Digital and Streaming

- The iPod was invented in 2001.
- World's first digital music device.
- Songs were downloaded and stored directly on the iPod.
- Could take your entire music library with you instead of carrying lots of cassette tapes or CDs.



Coloring Sheets: History of Tech #2

Directions

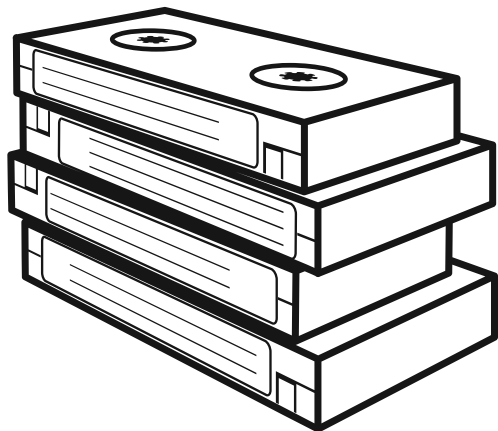
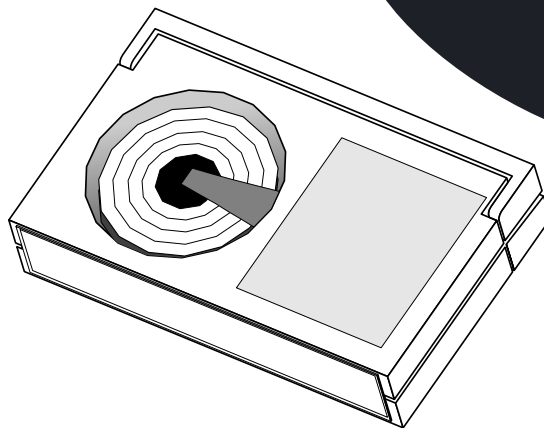
Learn about how watching movies at home has changed over the years! Color the page and read the facts about each item.

What You Need

- ✓ Crayons, markers, or colored pencils

Betamax

- Invented in 1975. Before then, you could only see movies in a movie theater.
- The first type of tape made to be played on a VCR player.



VHS

- Came out one year after Betamax.
- VHS tapes were made to be played on a VHS player.
- Less expensive and easier to use than Betamax.
- Became much more popular than Betamax.

DVD

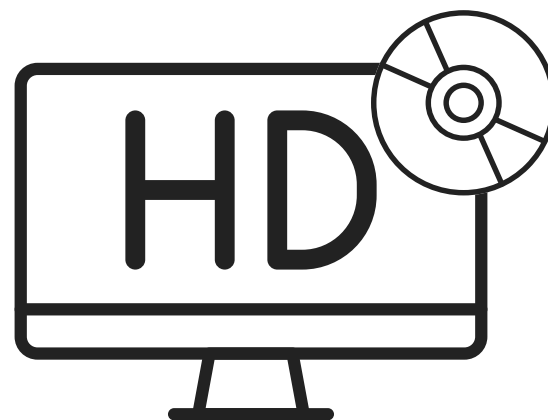
- Invented in 1995.
- DVDs are discs that look like music CDs and play in a DVD player.
- DVDs have better picture and sound quality than VHS tapes.
- Smaller than VHS tapes, so they take up less space in the home.



Coloring Sheets: History of Tech #2

Blu-ray

- Invented in 2006.
- A high-definition (HD) version of DVDs. This means the picture and sound quality were even better.
- All Blu-ray player machines can play DVDs so users did not have to have more than one device to play both formats.



Streaming

- In 2007 Netflix started streaming movies and TV shows over the Internet.
- Allows people to watch movies without needing to own or rent an actual disc.
- More streaming services also started as streaming movies became popular.

Coloring Sheets: History of Tech #3

Directions

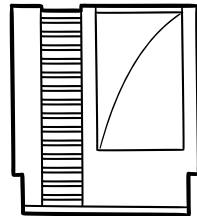
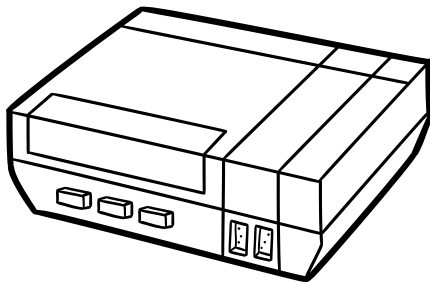
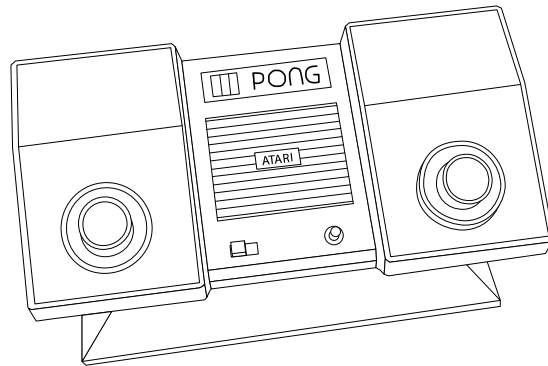
Learn about how playing video games at home has changed over the years!
Color the page and read the facts about each item.

What You Need

- ✓ Crayons, markers, or colored pencils

Atari Home Pong

- Invented in 1975.
- These were the first home video game systems.
- Had only one game built in and you could not add more.
- Only black and white, no color graphics.

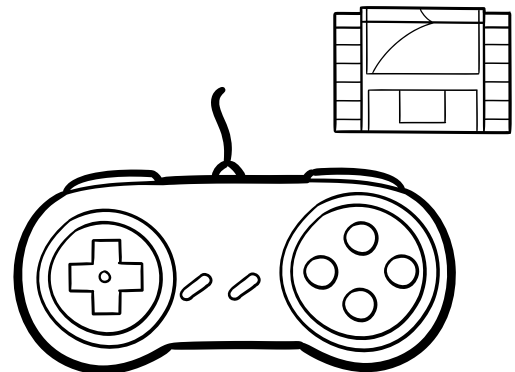


8-bit Era

- The higher the number of bits, the better the graphics and the more you can do.
- In 1983, Nintendo NES was released. This started the 8-bit era for at-home video games.
- Same quality graphics as in the arcade games.
- Could play a different game by changing the cartridge to a different one.

16-bit Era

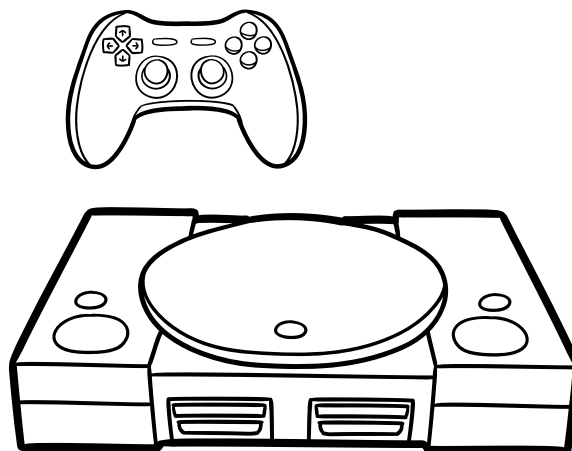
- This era began in 1989.
- 16-bit video games had even better graphics and could do a lot more.
- To do more, the controllers had more buttons.
- Game cartridges got a little smaller than they were for 8-bit games.
- Most popular 16-bit systems were Super Nintendo (NES) and Sega Genesis.



Coloring Sheets: History of Tech #3

32-bit, 64-bit, and 3D Era

- This era began in 1993.
- 32-bit and 64-bit video games were the first with 3D graphics.
- Started to move away from cartridges and used CDs instead.
- Picture quality and sound were the best yet.
- Popular systems included Nintendo 64, Sega Saturn, and Sony PlayStation.

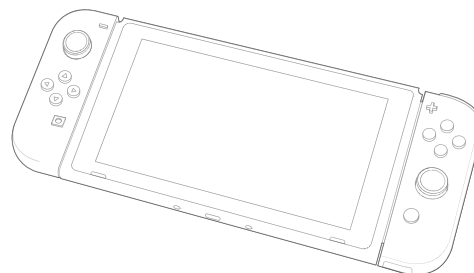


128-bit Era

- This era began in 1998.
- Gaming systems started using the Internet too.
- Players could now play games with their friends online.
- Popular systems included Xbox, Game Cube, and Playstation 2.

Current Era

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



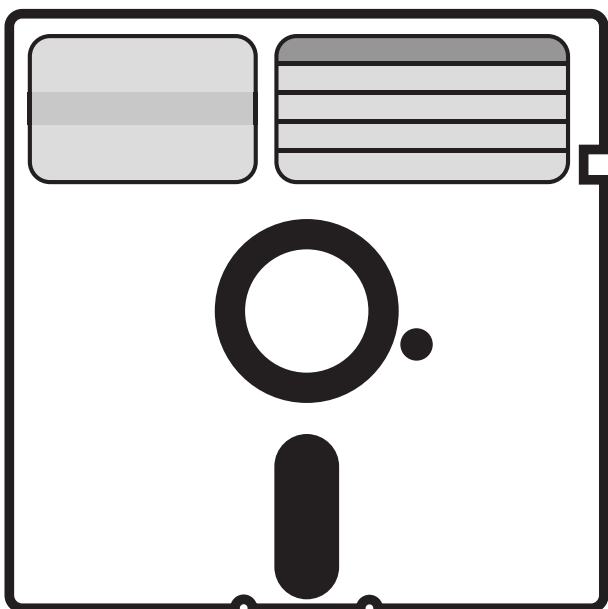
Coloring Sheets: History of Tech #4

Directions

Learn about how saving files and data on computers has changed over the years! Color the page and read the facts about each item.

What You Need

- ✓ Crayons, markers, or colored pencils

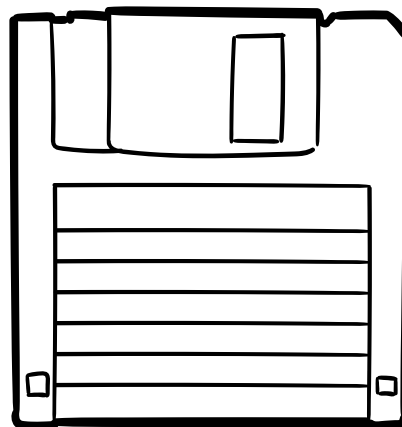


Big (5.25") Floppy Disks

- Invented in 1978.
- A thin square of plastic that was 5.25 inches long and had a magnetic disk inside the plastic that held data.
- Computers accessed the data through a hole in the middle of the plastic.
- The shape of a floppy disk is still used today as the save icon in most apps.

Small (3.5") Floppy Disks

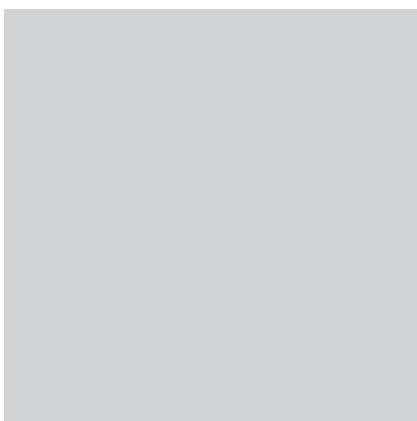
- Invented in 1982.
- A smaller version of the bigger floppy disk.
- It also had a magnetic disk at the center, but was made of harder plastic and had a metal clip over the hole.
- Could store more.
- Were more durable.



Coloring Sheets: History of Tech #4

CD-R and CD-RW

- Most popular format in the 1990s.
- There were two kinds: CD-R and CD-RW.
- CD-Rs stored data that didn't change.
- CD-RWs were rewritable, so they were used to save data that changed often.
- Could be scratched easily, which was not good.

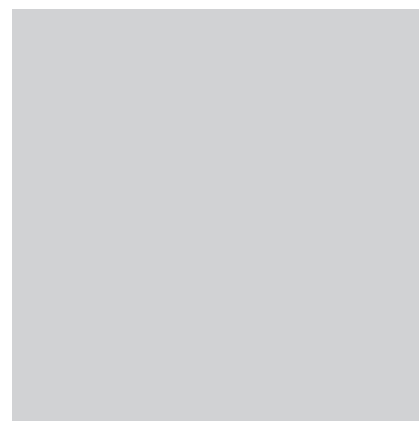


Flash Drives

- Invented in 2000
- Much smaller than CDs but held more data.
- Plug right into computer USB ports.
- Very portable due to small size.

Cloud Storage

- Introduced in 2011.
- Lets people save limitless data online instead of to an object.
- Still growing in popularity.



Coloring Sheets: History of Tech #5

Directions

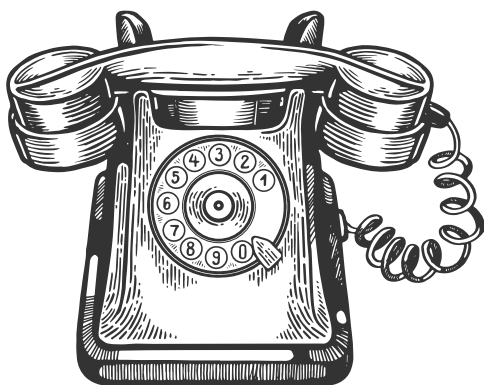
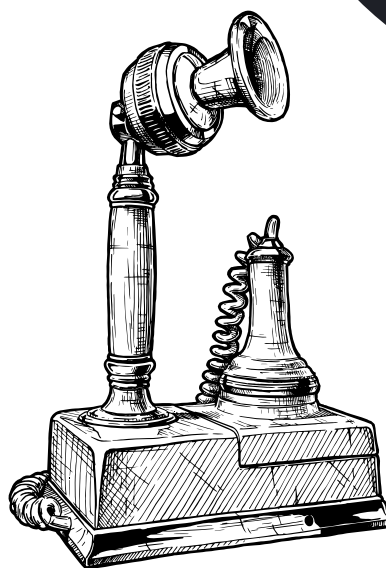
Learn about how telephones have changed over the years! Color the page and read the facts about each item.

What You Need

- ✓ Crayons, markers, or colored pencils

Candlestick Phones and Switchboards

- Invented in the 1890s.
- Neighborhoods often shared one phone.
- A switchboard operator connected calls, so phones had no numbers on them.
- Had a separate earpiece and mouthpiece.
- Called “candlestick” because the base looked like a candle with a mouthpiece on top.



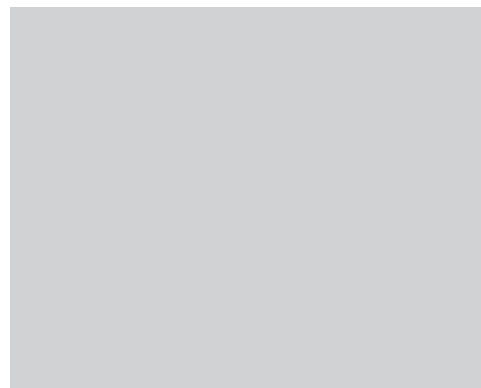
Rotary Dial Phones

- Invented in the early 1900s.
- Switchboards changed so people could dial their own calls, which meant the phones needed to have numbers on them.
- A rotary phone 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 it.

Coloring Sheets: History of Tech #5

Push-Button Phones

- Invented in 1963.
- Had push buttons instead of a dial so numbers could be dialed faster.
- Became smaller and smaller over time.

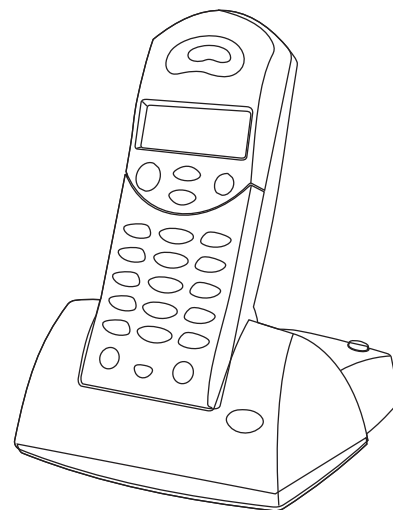


Motorola DynaTAC

- Invented in 1983.
- First widely available cell phone.
- Very large and heavy.
- Took about 10 hours to charge the battery.
- The battery lasted for about 30 minutes of talk time.
- Not popular due to large size and the expensive price.

Cordless Telephone

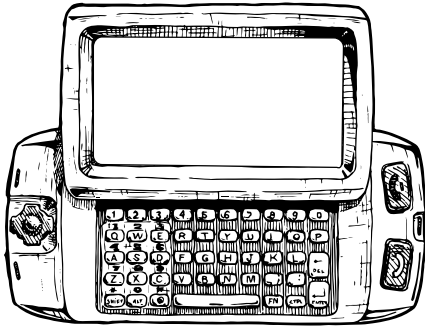
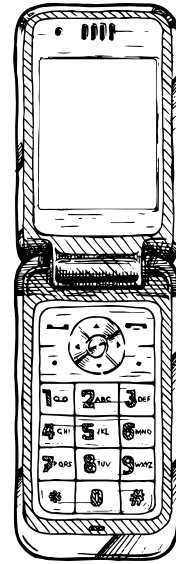
- Invented in 1994.
- Did not have a cord between the receiver and the phone's base so users could move around.
- If users moved too far from the base, they lost their connection.



Coloring Sheets: History of Tech #5

Candybar and Flip Phones

- Cell phones were more popular by the late 1990s and early 2000s.
- Got smaller and lighter in weight, making them more portable.
- Candybar-style cell phones were rectangular like a candybar, such as the Nokia 3210.
- Flip phones folded in half, such as the Motorola RAZR.



Feature Phones

- By the early 2000s, cameras, games, music players, and calendars (or “features”) were added to more and more cell phones.
- Some included full keyboards just like on a computer keyboard.
- Popular brands included the Sidekick and Blackberry.
- These were the first steps to smartphones being invented.

iPhone and Smartphones

- First iPhone came out in 2007.
- World's first smartphone.
- Have touchscreens and virtual keyboards.
- Can access the internet.
- Have changed the way that people use phones.

