

Marketing Your Smart Device

KEY LEARNING OBJECTIVES

Each family member will invent a smart device or application to monitor and conserve energy and water. In this activity, each participant will develop an infographic, web page, podcast, or video to market their device.

BACKGROUND

Have you ever thought about how much technology has changed in the past 100 years? In our world today, we can place the Internet in our pocket, ask a device to play our favorite artist, use a 3D printer to make a home, and sit in a car that can drive itself. It's exciting to think about what the next 100 years will bring! How are these things possible? Did you know that in 2020, there will be an estimated 50 billion devices connected to the Internet! That means 6.6 devices for every person alive. Many of these devices have sensors that are constantly monitoring changes and relaying that information to the Internet. We refer to this as the Internet of Things (IoT). How can we use the Internet of Things to track our own consumption of water and energy usage? Homeowners can benefit by using this technology to identify and solve problems in real time, and improve the safety of their homes. Smart technology helps reduce the risk of fire in case of gas and electricity problems, and can lessen damage from water leaks and floods. This family activity is designed to encourage conservation and inspire next generation innovation for more resourcefulness world.

PLAN

In this activity, family members will work as a team and assume the roles of engineer, manager, recorder, and inspector to uncover devices that could be connected to the Internet and remotely controlled. Each family member will invent a smart device that will monitor and conserve energy and develop an advertisement, web page, podcast, or commercial to market their device.

DESIGN

What are the materials you might need to get started?

- Technology Timeline Cards
- Scissors
- Design Sheet
- Internet access

MAKING PREDICTIONS

1. Begin this activity by having the youngest family member cut and spread the technology timeline cards on a table or flat surface. Let's see how technology has changed over the last 100 years! Work together to make predictions on which device was made first by placing them in sequence from oldest to newest. The oldest member of the family will check the accuracy of your timeline by using the key at the end of the lesson.

GATHERING INFORMATION

2. What exactly makes a device "smart"? Briefly share your answers with one another.
3. Select one or both videos to gather more information about the Internet of Things. This information will be useful when marketing your smart device later!

[What is the Internet of Things?](#) or [How it Works: Internet of Things](#)

4. After the video, have each family member make a list of devices connected to the internet that they use.

INVESTIGATE

5. Before you begin to investigate various areas of your house, decide which family member will have each of the following roles:
 - **Utility Manager:** is responsible for ensuring that gas, water, and electricity are considered in each area of the house
 - **Inspector:** is responsible for making observations and identifying devices that consume energy and could be potentially remotely monitored
 - **Engineer:** is responsible for brainstorming ideas that could help with conservation and resourcefulness
 - **Recorder:** is responsible for recording all observations from the inspector and ideas brainstormed by the engineer
6. As a team, determine 3–5 locations inside and/or outside of the home to investigate. For each location, the inspector will identify devices that could be monitored and remotely controlled, the engineer will brainstorm potential ways to monitor and reduce energy consumption, the recorder will capture the information on the design sheet, and the manager will ensure that gas, water, and electricity were all considered.

CREATE

7. After reviewing the information gathered on the design sheet, each family member will brainstorm a device that can be used to track their usage of water, gas, or electricity consumption.

8. Using the list below, describe how your device could do one or more of the following:
 - detect abnormal usage
 - enhance safety
 - deliver cost savings
 - remotely connect or disconnect service
 - remotely controlled
9. Each family member will sketch an app tile that people could download to use their device. Make sure you have a title for your app and an eye-catching logo!
10. Finally, each family member will create a way to market their device. Some fun and interactive ideas include making a podcast, video, webpage, or infographic! In your marketing campaign, be sure to include:
 - what your smart device does
 - how it works
 - what special features it may have
 - how it encourages resourcefulness and conservation
 - why people should buy it
 - your app tile design

NEXT STEPS

To extend this activity, each family member should research an energy-saving IoT device currently available for purchase. The research should include both the cost of the device and potential energy savings for the year. After this information is gathered, discuss which devices could be used to develop a family energy conservation plan.

RESOURCES

<https://www.youtube.com/watch?reload=9&v=LVIT4sX6uVs>

<https://www.youtube.com/watch?v=QSIPNhOiMoE>

[Connected Technologies \(https://stem.guide/connected-technologies/\)](https://stem.guide/connected-technologies/)

[Proven, secure solutions for smart utilities and cities \(https://www.itron.com/na/solutions/use-case-portfolio?SelectedIndustry=%7bD60F12B3-6828-4DCB-9596-5DE33C0F9BC3%7d\)](https://www.itron.com/na/solutions/use-case-portfolio?SelectedIndustry=%7bD60F12B3-6828-4DCB-9596-5DE33C0F9BC3%7d)



Portable Music



Car



Television



Cellular Phone



Camera



Refrigerator



Internet



Barcode



Smart Phone



Personal Computer



DVD



GPS





Television

Car

Portable Music

1927

1918

1979

Refrigerator

Camera

Cellular Phone

1923

1977

1983

Smart Phone

Barcode

Internet

1994

1974

1973

GPS

DVD

Personal Computer

1978

1996

1975

Area of Home:	
Device/appliance that uses water	Ideas that could monitor / reduce energy consumption
Device/appliance that uses gas	Ideas that could monitor and reduce energy consumption
Device/appliance that uses electricity	Ideas that could monitor and reduce energy consumption

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