

Internet of Things Defined

Lesson Overview

Media: Video (10 Minutes)

Seat Time: 2 Classes | 100 minutes teaching

Goal:

To introduce the Internet of Things.

Description:

Internet of Things (IoT) collectively describes a network of nontraditional computing devices connected to the internet which communicate with each other to collect and share data. This presentation defines and provides examples of IoTs, discusses the Industrial Internet of Things (IIoT), illustrates the importance and potential threats to IoT devices and describes the aspects of smart cities and cyberwarfare.

Objectives:

1. To define Internet of Things.
2. To provide examples of Internet of Things.
3. To illustrate the importance of Internet of Things in our society.
4. To investigate potential threats to Internet of Things.

Lesson Plan

Class 1

Class Overview:

- *Internet of Things Defined* Video Presentation
- Action Plan
- Vocabulary Handout
- Key Concepts
- Assessment
- My Favorite Thing Project

Essential Questions:

1. What is the Internet of Things?
2. How has the Internet of Things changed our lives?
3. What are the potential threats to the Internet of Things?

Step 1: Bell Ringer:



- Have students write down their initial answers to the **Essential Questions**.

Step 2: Distribute the **Action Plan**, **Vocabulary Handout** and **Key Concepts**.



- The **Action Plan** lays out a list of tasks for students to complete during the lesson.
- The **Vocabulary Handout** is a list of terms used throughout the lesson.
- The **Key Concepts** is an outline which identifies the main ideas presented in the lesson which students can fill in to aid in note taking during the lesson.

Step 3: Show the **Internet of Things Defined** video presentation.



- This video is 10 minutes long.
- Be sure students utilize the **Key Concepts** for this segment of the lesson.
- After viewing the video, discuss their answers to the **Essential Questions**.

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Class 1 (continued)

Step 4: Administer the **Internet of Things Defined Assessment**.



- The Assessment is a comprehensive assessment covering material throughout the entire lesson.

Step 5: Students should begin working on the **My Favorite Thing Project**.



- Students should start researching and compiling information to include in their infographics.

Step 6: Exit Ticket:



- Students should provide a progress report on their **My Favorite Thing Project** prior to leaving class.

Class 2

Class Overview:

- My Favorite Thing Project

Step 1: Students should finish working on the **My Favorite Thing Project**.



- Students should finish their infographics and share them with the class.

Step 2: Exit Ticket:



- Students should turn in their **My Favorite Thing Project** prior to leaving class.

Project

My Favorite Thing

In this project, students will select an Internet of Things device and create an infographic detailing the purpose, features and cybersecurity risks associated with the device.

Modifications:

Have students only create an infographic containing one use, one feature and one cybersecurity risk associated with the device.

Extension:

Have students conduct further research and include how to prevent the device from being compromised.

Career & Technical Student Organizations

Technology Student Association

- Engineering Design
- Prepared Presentation
- Technology Problem Solving
- Webmaster

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Career Connections

Career Connections

Using the **Career Connections Activity**, allows students to explore careers associated with this lesson by viewing career interviews with various industry professionals. The career interviews are located on the Select Playlist drop down menu on the lesson page. If Student Licenses are being utilized, students can select the interviews to watch based on your directions. If only a Teacher License is being utilized, show students all of the career interviews and instruct them to only complete the interview form for the required number of interviews. See the **Career Connections Activity** for more details.

- Gil Chavez, President/Web Engineer, Knockout Digital Media, ESPN Radio
- Jeralyn Stephens, Manager of Web Content, National Cattlemen's Beef Association
- Phillip DeLaughter, IT Director, Good Fulton & Farrell
- Brandon Sharpe, Web Programmer & IT Manager, Converse Marketing