

The Internet: Present and Future

Phones - cell phone HVAC

sensor

clock

teacher phone

wireless router

Smart Board

Printer

Smart Watch

Computers - Chromebook (cart)
Projector

Journal:

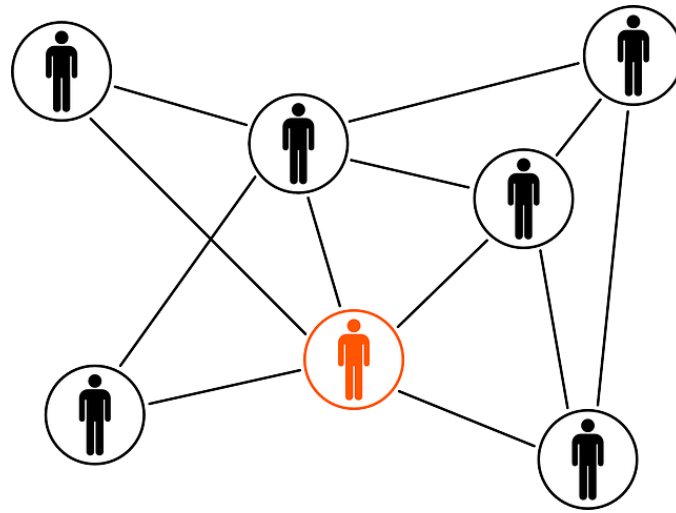
Identify as many objects in the room as you can that are connected to the Internet

Unit 3 Lesson 2

Objectives:

- Students will understand the development of the Internet.
- Students will understand how devices communicate on the Internet.
- Students will imagine/design things (that don't yet exist) that could connect to the Internet.





What's connected?

1. Discuss: What different kinds of things are connected via the Internet?
2. Review investigations of Internet usage statistics completed for homework from 3-1.

The Internet of Things



Video (5 min)

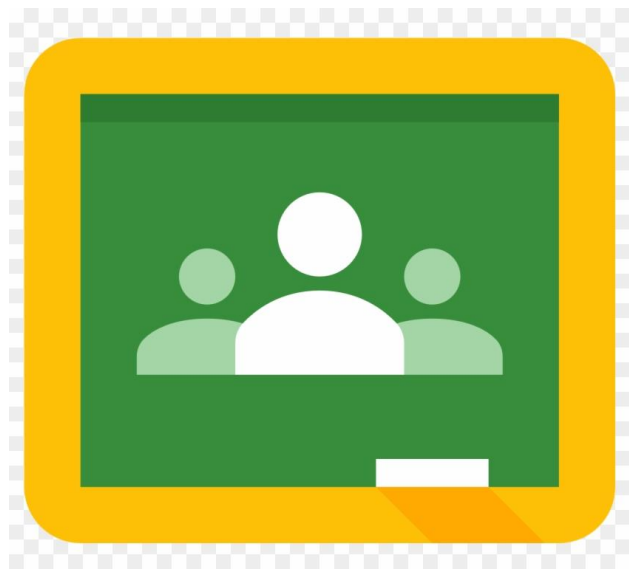
An average everyday person uses objects connected to the Internet in our current society: (3:58)

Share what you saw



Reading

Pre-reading: What is ubiquitous?
read the [article](#): (~2.5 pages)



CS MATTERS IN MARYLAND – COMPUTER SCIENCE PRINCIPLES

Investigating “The Internet of Things”

Read the article: “The Internet of Things outlook for 2014: Everything connected and commercializing” and find the answers to the following questions.

1. Who, what and when was the phrase “The Internet of Things” coined?
2. What is Mr. Ashton’s definition of The Internet of Things? (and what does ubiquitous mean?)
3. The article states, “The Internet of Things is not just about _____ but it is also _____.”
4. The article details two major concerns with associated with The Internet of Things. Identify and summarize the concerns:

Concern	Summary
1.	
2.	


5. The Internet of Things is closely associated with another trend – Cloud Computing. Use details from the article to explain this connection.

Assignment:

With a partner, imagine a device that might someday be a part of the Internet of Things, but currently, does not exist. An example might be a shoe that has its own wireless acquired IP address and keeps track of how many steps one takes each day. (Note: This may already exist.)

As a small group (2 or 3), create a document containing the following tasks or answers:

- A sketch of the device.
- What is the purpose of this device?
- What data will your device collect?
- What someone will it use?
- Who will make use of the data?
- What will be the rings of values needed to store the data?

 CS Matters in Maryland – Computer Science Principles 1

Small Group Activity

Imagine a device that might someday be a part of the "Internet of Things," but currently does not exist. As a small group, submit a document answering the following questions:

- What is the purpose of this device?
- What data will your device collect?
- What sensors will it use?
- Who will make use of the data?
- What will be the range of values needed to store the data?

This document should also include a sketch of the device.



If Time – Code it



□ **Project:** You have been hired by an electronics company. Your job is to write a Python program that allows the user to create an advertisement for their new computational device.

Sample Output (bold is user input):

What is your object?

Shoe

What data will your **shoe** take in as input?

foot temperature

How will you receive the **foot temperature** from your **shoe**?

a. Computer b. Phone Application c. Console on the object

c

Where would this console be?

a. Clip on b. On the object c. Other

c

Please type your other location

on the user's head

Coming soon to stores! This amazing innovation is a simple **shoe** that can record your **foot temperature!**

It is easy to control from a **console** located **on the user's head!** Order now!

Your Python Program Must...

Greet the user

Ask the user between 5-10 questions about their product (School appropriate please!)

Take in user input, then output a commercial based on their responses

Use loops and if/else statements to validate user input for multiple choice answers

Include comments explaining how the code works



Homework



- Read *Blown to Bits* (Pg 303 - 306) - IP Addresses - stop at "The Key to It All: Passing Packets."
- Submit a response on Google Classroom
 - Choose one Word, one Phrase, one Sentence to summarize

