S4 : Internet of Things :IoT

See video first ! (IoT\_PBS)

**Warm Up Questions**

1. What are examples of items that have microprocessors?

2. What do we use computers for?

3. Name some ways that technology has changed how you learn?

**Discussion Questions**

1. Explain how IoT might change your life, both socially and economically?

2. Predict what benefits the IoT will have for you, your family, your neighbourhood?

3. Select a person or population and evaluate how the IoT will affect this person/group and whether it will be a positive or negative effect?

Objectives:

Students will :

* Be able to define Internet of Things.
* **Formulate** models of their own IoT.
* **Explain** how the IoT may impact peoples’ lives.
* **Predict** ways their IoT may grow.
* **Analyze** positive and negative aspects of the growing IoT.

**Lesson Plan**

1. Students view the the.News segment on the IoT. Another good overview is the article and video on this ReadWriteWeb page: http://rww.to/c9fpQF. In the segment, students learn about cutting-edge uses for devices connected over the IoT. Students may notice that numerous diagrams and graphics are used to help understand the IoT. An excellent example is this infographic from Cisco: http://blogs.cisco.com/news/the-internet-of-things-infographic/. Icons, diagrams, and charts help tell the story of how the IoT is growing.
2. Ask each student to graphically represent his or her own IoT in a model
3. Begin by having students list IoT devices in their lives. Anything that connects to the Internet is in the IoT.
4. Allow students to design their models.

Models should include: 1) all of the IoT devices they interact with, 2) how the devices are connected to the Internet and to each other, 3) what kind of information each device communicates, and 4) how much they use each device and how they can represent that use in the model. For example, devices students use most might appear larger in the model.

1. Next allow students some time to find out about potential uses for the IoT now and in the not-too-distant future. Articles and videos in the resources section are good places to start. They are to use this information to design a second model that illustrates ways students would like to use the IoT in the future. Again, ask that they represent how much they think they would use various IoT devices, how they are interconnected, and the type of information communicated
2. Ask students to share their models with the group and to **explain** their connectedness with the IoT now and in the future
3. Discuss whether students think future IoT advances will be good or bad. What are pros and cons of such technology?

# Resources:

Top 5 Web Trends of 2009: Internet of Things <http://www.readwriteweb.com/archives/top_5_web_trends_of_2009_internet_of_things.php>8 Ways to Better Understand the Internet of Things

<http://www.readwriteweb.com/archives/8_ways_to_better_understand_internet_of_things.php>Top 10 Internet of Things Developments of 2010 <http://www.readwriteweb.com/archives/top_10_internet_of_things_developments_of_2010.php>Internet of Things Comic

<http://www.e-pages.dk/alexandra/10/>Internet of Things graphic

[http://cdn.bitrebels.netdna-cdn.com/wp-content/uploads/2011/09/Internet-Of-Things-By-Intel- 1.jpg](http://cdn.bitrebels.netdna-cdn.com/wp-content/uploads/2011/09/Internet-Of-Things-By-Intel-1.jpg)

The Internet of Things Infographic <http://blogs.cisco.com/news/the-internet-of-things-infographic/>

“The Internet of Things: This is Where We’re Going” from The Conversation <http://theconversation.edu.au/the-internet-of-things-this-is-where-were-going-3965>“The Internet of Hype” from The Economist (appropriate for grades 9–12) <http://www.economist.com/blogs/schumpeter/2010/12/internet_things>

IBM’s “The Internet of Things” <http://www.ibm.com/smarterplanet/us/en/overview/article/iot_video.html>“Practical Magic” from Think Quarterly <http://www.thinkwithgoogle.com/quarterly/innovation/practical-magic.html>Q&A with Prof. Bellovin: Computer Security <http://engineering.columbia.edu/qa-prof-bellovin-computer-security>Google Privacy Policy is Subject of Backlash

<http://wapo.st/xlCxUy>