

## Has Technology Gone Too Far?

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**Problem** Some say technology has gone too far. There are some, however, that say technology has gone far, but with good results. What do you think? *Has Technology Gone Too Far?*

**Lesson Summary** Students will collaborate within their groups to investigate the growth of technology and if it has gone too far or not. After investigating and answering the problem, they will use their robotic equipment to create something that is associated with their conclusion.

### Major Topic and SOLs

Math SOL 7.14

Science SOL LS.1

Language Arts SOL 7.1, 7.3

### Technology

- Demonstrate an operational knowledge of various technologies
- Identify and use available technologies to complete specific tasks
- Plan and apply strategies for gathering information, using a variety of tools and sources, and reflect on alternate strategies that might lead to greater successes in future projects
- Draw conclusions from research and relate these findings to real-world situations—investigating further, if necessary

**Length of Time** 5-90 minute class periods

### Student Objectives

- Students will work collaboratively to discuss opinions and provide evidence of technology in society today.
- Students will work collaboratively and persuasively to derive a conclusion of the problem presented.
- Students will research various uses of technology, using reliable sources.
- Students will create a robot that represents the conclusion they derived from the problem presented.
- Students, within their groups, will participate in an oral presentation of their conclusion of the problem and their resultant robot.

### **21<sup>st</sup> Century Skills**

- Critical-Thinking and Problem Solving
- Verbal and Written Communication
- Creativity and Innovation
- Collaboration and Group Work
- Information and Media Literacy

### **Assessment Evidence**

- Focus on the Task
- Dependability and Shared Responsibility
- Teamwork/Collaboration
- Information Gathering
- Construction/Materials
- Modification/Testing
- Oral Presentation

### **Supplies/Materials/Technology**

- One Hummingbird Kit per group
- Craft Supplies—tissue paper, cardboard, boxes, string, construction paper, glue, duct tape, cardboard tubing, paper clips, rubber bands, pipe cleaners.
- One Laptop per group
- One Recording device per group

#### **Lesson 1:**

- Using laptops with internet access, groups will research technology trends
- Groups will discuss their opinions of the problem presented and use persuasive techniques and evidence to come to a consensus on the group's conclusion.

#### **Lesson 2:**

- Teachers will introduce the Hummingbird Kit and show a video by Hummingbird on possible robots that can be generated.
- Students will have hands-on time as another student shows his robot (created earlier) and explains the programming and features.
- Groups will discuss the product they will create, based on their conclusion.

#### **Lesson 3:**

- Groups will design their robot (on paper).
- Groups will brainstorm and complete the details of their design.
- Groups will begin constructing their model, using materials available.

**Lesson 4:**

- Groups will finish their construction and begin testing, collaborating on improvements needed.
- Groups will begin making improvements/adjustments.

**Lesson 5:**

- Groups will finish their robot and begin drafting their oral presentation.

**Oral presentations will be conducted at a time agreeable to school Administration so that they may attend.**