**The Turing Test**

Instructional Days: 1-3 days

Topic Description: The question “What makes something intelligent” is addressed by introducing the Turing Test. Students complete various activities that require them to analyze the differences between machines and humans.

# Objectives:

The student will:

# Understand what the Turing Test is and how it works

# Understand how the Turing test relates to intelligence

# Discuss whether computers are intelligent or whether they only behave intelligently

* Be able to identify a few basic human abilities that computers find very difficult to replicate

# Outline of the Lesson and Teaching Strategies:

# Introduce the Turing Test (5-10 minutes)

* Watch “The Turing Test” video
* Discuss the Turing Test with the class to make sure everyone understands what it is
* Have a class discussion about the questions listed in the “Thinking About the Turing Test” section

# Complete Activity 1 (5 minutes)

* Have students complete the activity individually or in small groups
* Have a group discussion about whether the being answering the questions was a computer or a human
* Discuss how computers might answer questions differently than humans

# Complete Activity 2 (30 minutes)

* Explain Activity 2 to the students and make sure everyone in the class understands how this activity is similar to the Turing Test
* Discuss the Pre-Activity Questions as a class
* After completing the activity discuss the questions in the “Turing Test Activity Discussion” section
* Make sure the students understand that both computers and humans have great strengths but that these strengths are very different
* Computers are great at fast, accurate calculations and following instructions while humans are much better at understanding their environment, learning, and adapting.

# Learn about Watson (15 minutes)

* Watch the “IBM Watson” video
* Talk about the discussion questions in small groups or as a class

# Introduce the Loebner Prize (15-20 minutes)

* Explain what the Loebner Prize is and how it relates to the Turing Test
* Have students interact with the chatbots in Activity 3
* Discuss the strengths and weaknesses of the chatbots and whether or not any of the chatbots would pass the Turing Test
* Wrap Up (5 minutes)
* Have students think about the potential of Artificial Intelligence and whether or not they believe any machine will be able to pass the Turing Test
* Watch the “Chatbots Conversing” video

Resources:

* All the resources including the worksheets are available on the Humans and Computers Overview page of the muddX website (http://studio.muddx.com/unit/HMC.MyCS.Middle-years\_Computer\_Science/branch/draft/block/vertical0223)