

Name:

Class/Date:



Episode 4

# TWO TRUTHS & A LIE!

## Warm Up

**Instructions:** Before watching the video, fill out the table below with what you know about the following International System of Units (SI) measurements. For example, what do the units measure? What tools use those measurement units?

<b>Kelvin (K)</b>	Kelvin measures temperature. A tool that uses Kelvin is a thermometer.
<b>kilogram (kg)</b>	
<b>second (s)</b>	
<b>meter (m)</b>	

## Video Questions

**Instructions:** While watching the video, complete the exercises below.

- 1) Write a “T” next to each statement that you think is true, and an “F” next to each statement you think is false.

a.) Scientists no longer need an object in Paris, France to tell them how much mass is in a kilogram.	
b.) The object which defines the mass of a kilogram is made out of diamonds.	
c.) The object which defines the mass of a kilogram has had different names over the years, like Grave, Gramme, and Le Grand K.	

- 2) Explain which statement about the kilogram is false and why.

3) Write a “T” next to each statement that you think is true, and an “F” next to each statement you think is false.

a.) Until the American Revolution, Americans used sundials to tell time.	
b.) The current definition of the second comes from vibrations on a tiny atom.	
c.) As clocks improved, people started to divide time into smaller chunks.	

4) Explain which statement about the second is false and why.

5) Write a “T” next to each statement that you think is true, and an “F” next to each statement you think is false.

a.) A meter is longer than a yard.	
b.) In the past, people used their hands, arms, and feet to define length.	
c.) A meter is constantly stretching and compressing based on the changing speed of light.	

6) Explain which statement about the meter is false and why.

By broadcasting a precise stream of invisible microwaves, Professor Second has the power to fix any clock. A second is the time it takes for **9,192,631,770** “wiggles” from her cesium atoms to pass through a fixed point!



**Post Video Questions**

**Instructions:** *After* watching the video, complete the table below.

	What did you learn about the SI units we studied today?	What questions do you have about the SI units we studied today?
kilogram (kg)		
second (s)		
meter (m)		