Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_

Science Research  
Inferential Statistics Day 2

**SWBAT: Explain how a p-value can be used to determine significance**

*Do Now: Explain the difference between a null Hypothesis (H0) and an alternative Hypothesis (H1)*

*Watch the YouTube video titled “Understanding the p-value”(4:42) by Statistics Learning Centre (*[*https://www.youtube.com/watch?v=eyknGvncKLw*](https://www.youtube.com/watch?v=eyknGvncKLw)*)*

*Pause at 0:35*

1. Write/Copy what the p-value tells us

*Pause at 1:17*

1. Write/Copy the null hypothesis from the video

*Pause at 1:32*

1. Write/Copy the alternative hypothesis from the video

*Pause at 3:02*

1. Write/Copy what a p-value of 0.18 means in this example

*Pause at 3:55*

1. Explain what the phrase “If p is low, null must go” refers to

*Pause at 4:21*

1. What does a p-value less than the alpha value tell us?
2. What does a p-value higher than the alpha value tell us?

**PRACTICE EXAMPLE:***Using the following information, draw a conclusion about the population.*

Mean stress levels of male students in the sample= 5.9

Mean stress levels of female students in the sample= 6.5

H0= The mean stress levels of female students is the same as the mean stress levels of male students in the population

H1= The mean stress levels of female students is higher than the mean stress levels of male students in the population

P-value= 0.043

Alpha= 0.05

