

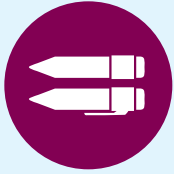
# ADVANCED LEARNING LABS

A partnership between the North Carolina Department of Public Instruction and Duke TIP  
TO ENGAGE, ACTIVATE, AND GROW OUR STUDENTS

GRADES

8–9

## Lab 1 • Change



### ELA

Select a grade-level complex literary text to read. As you read, trace the development of the theme, focusing on the point in the text where the author introduces the theme.

Identify a sentence, phrase, and word that the author uses to introduce the theme of the text. Write an objective summary of the story, including an analysis of the introduction to its primary theme.

Next, explain how each level of text—sentence, phrase, and word—conveys the depth of the theme to the audience.



### SOCIAL STUDIES

Explain how innovation in transportation has affected North Carolina after the Civil War. The Wheels Through Time Museum website may help you research unique transportation in the United States.

What do you think will be the next innovation in transportation? How would a new idea be beneficial for society? Create a timeline using Time Graphics to explain how long it will take to execute this creation for public consumption/use.

**Link:** [wheelsthroughtime.com/museum/#Exhibitarea](http://wheelsthroughtime.com/museum/#Exhibitarea)



### SCIENCE

With so many people remaining at home, fewer people are vacationing at the state's rivers, sound, or off the coast.

What might be the short-term impact on the different aquatic ecosystems?

What might be the short-term impact on humans? Consider both positive and negative factors.

How would you test whether you are correct about the impact? Predict what happens when humans return.



### MINDFULNESS

The Five Senses

Sit down and take a break from your daily activities and observe your surroundings.

What are 5 things you can see, 4 things you can touch, 3 things you can hear, 2 things you can smell, and 1 thing you can taste?

Breathe deeply as you notice the things around you.



## LOGIC PUZZLE

Word Garden:

This isn't your typical word search! Use deductive reasoning to uncover hidden phrases that will lead you to a mystery theme.

**Link:** <https://tinyurl.com/yd5zw3d9>



## FIELD STUDIES

Robots to the rescue!

Join an interactive experience and learn how robotic technology helps to respond to natural hazards.

Design an original form of robotic technology or build on a type of robotic technology you saw in the simulation to address a natural hazard of your choice.

**Link:** <https://tgreduexplore.org/interactives/robots-to-the-rescue/natural-hazards.html>

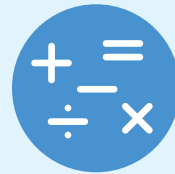


## RESEARCH EXPLORATIONS

Heart rate (HR) is a measure of physical fitness. Different exercises require different levels of physical fitness.

Run for 60 seconds, then measure your HR. Rest for a minute. Repeat for a total of 10 HR measurements. Next, skip for 60 seconds, then measure your HR. Repeat for a total of 10 HR measurements.

Calculate the median, mean, interquartile range, and standard deviation for the two sets of data and compare the center and spread of your heart rate running versus skipping.



## MATH

Choose a random geometric shape in your house and sketch it on a piece of paper.

Design a series of art pieces using translations, reflections, rotations, and dilations.

Host an art walk with your family and describe your art creations and your mathematical inspiration!



North Carolina Department of  
**PUBLIC INSTRUCTION**

