

# ADVANCED LEARNING LABS

Collaboration between NC Department of Public Instruction and AIG Teachers across the state

TO ENGAGE, ACTIVATE, AND GROW OUR STUDENTS

GRADES

8–9

## Movement



### ENGLISH LANGUAGE ARTS

The Harlem Renaissance was a literary movement during the 1920s based out of the New York City neighborhood of Harlem. During this period, many African Americans who had relocated from the American South during the Great Migration, began to express themselves as poets, novelists, artists, and thinkers.

While Langston Hughes and Zora Neal Hurston are probably the authors most associated with the movement, there were many others. Explore the works of at least one author and one artist of the Harlem Renaissance. Keep in mind that the arts may include visual, musical and performing arts. In your journal make three columns: title, important learning, how does this add to previous learning. After each text or piece of art, stop and think about its "big learning." What did you learn that was new and important about the Harlem Renaissance from this resource? Complete the chart.



### SOCIAL STUDIES

In 1830, the United States passed the Indian Removal Act, which paved the way for President Andrew Jackson to force five nations of Native Americans, including the Cherokee, to move west of the Mississippi River. Along the way, a quarter of the Native Americans died. The Cherokee who ended up in Oklahoma are recognized as the Cherokee Nation, but those who hid out in the NC mountains eventually became recognized as the Eastern Band of the Cherokee. Investigate these links to learn more about the Trail of Tears:

- <https://bit.ly/3fFNWja>
- <http://www.nctrailoftears.org/about-the-trail/>
- <https://bit.ly/2WYkN1T>

After reviewing the links, create a visual that explains how the forced migration known as the Trail of Tears impacted the development of US history and the impact on both the Cherokee who remained and those who were forced to move.



### SCIENCE

What is the difference between an epidemic and a pandemic (*hint: the prefix pan means all*)? How do they relate to an outbreak? Check out this link to learn this and more about disease terminology:

<https://bit.ly/30um3Eb>

Create a chart that lists the terms epidemic, pandemic, endemic, and outbreak. Research to find at least five examples of each.

- Make sure to include the date, the location, and the number of individuals infected.
- How does the concept of movement relate to each one?
- Under the chart, in your own words, explain the difference between an epidemic and a pandemic.



### MINDFULNESS

Mindfulness is the act of being in the moment and to be aware of your surroundings. Take a mindful walk. You should walk at a slow pace and stay quiet.

Pay attention to what you see, hear, feel, and smell. Consider the following questions:

- Is the sun warming your skin?
- Can you hear children playing or birds chirping?
- Can you smell fresh cut grass?
- Can you hear your own breathing or your feet making contact with the ground?

When you return from your walk journal or draw a picture to document your walk. Will you do another mindful walk? Would you plan a mindful walk with a friend or family member?



## LOGIC PUZZLE

Shift your brain into gear with this challenging engineering puzzle! Put your problem-solving skills to the test as you try to determine the movement of multiple cogs and gears.

Try to determine what happens as the monkey turns the gears or check out an online version of the gear puzzle:

<http://www.engineering.com/gamespuzzles/connectit.aspx>



If the monkey rotates the first gear anti clockwise, the hand in last gear move towards 1 or 2?



## FIELD STUDIES

The fight for American civil rights spanned decades, cities, and states. Explore the Civil Rights Trail website - the articles, the photos, the maps- and learn more about the Civil Rights Movement:

<https://civilrightstrail.com>

The website is designed to help us plan a visit to these historical sites, but it also can give us insight into how the leadership of the movement and the action of citizens influenced the outcome of key civil rights battles.

Design your own Civil Rights Trail based on at least five sites that interest you. Create a presentation about each site. Be sure to include how leadership and citizen action influenced the outcomes there.

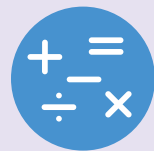


## RESEARCH EXPLORATIONS

Kinesiology is the scientific study of human or non-human body movement. In addition to the neurological system, muscles, bones, tendons, and ligaments are all required to create movement.

Research the movements in the human arm and hand. Design a working model. Several ideas can be found at this site: <https://www.scienceprojects.org/design-and-make-a-model-arm/>

- Take pictures and summarize what happened as you created the model arm.
- What did you use for bones, muscles, ligaments, and tendons?
- What difficulties did you encounter?
- What did you do to solve the problem?
- What would you do differently?



## MATH

Elton Brand was a number one draftpick into the NBA after playing for Duke University. Watch the video to see how he credits math for rapid improvement of his basketball skills: <https://to.pbs.org/3hcc90s>

Can you calculate the maximum height for Brand's perfect free throw? His average release velocity is 24 feet per second while the average release height is seven feet off the ground.

Create a graph that models the movement of Elton's perfect free throw using the Desmos Graphing Calculator. What happens if both height and initial velocity of the free throw is adjusted?

For more insight into how math is used to enhance the game of basketball check out this video: <https://bit.ly/2Cply5l>



North Carolina Department of  
**PUBLIC INSTRUCTION**



## Movement Reference Guide

### **K-1 Logic Puzzle:**

Solution: Pick up the 2nd glass and pour its contents into the 5th class and set it back down in its place empty.

### **6-7 Logic Puzzle:**

Solution example:

1. Start trip with 1000 bananas
2. Travel 200 miles and have 800 left. Leave 600 at 200 mile point, keep 200 for 200 mile trip back to start.
3. Pick up another 1000 bananas
4. Travel 200 miles and have 800 left. Pick up 200 from stashed and carry 1000 and have 400 more stashed.
5. Travel an additional  $333\frac{1}{3}$  miles, you're left with  $666\frac{2}{3}$ , stash  $333\frac{1}{3}$  there ( $533\frac{1}{3}$  mile point), you have  $333\frac{1}{3}$  left
6. Travel back  $333\frac{1}{3}$  miles to 200 mile point and pick up 200 stashed (leaving 200 still at 200 mile point), go back the other 200 miles.
7. Pick up another 1000
8. Travel to 200 mile point, leaving 800 bananas, pick up remaining 200 stashed
9. Pick up 1000 bananas travel  $333\frac{1}{3}$  miles to  $533\frac{1}{3}$  mile point, you're left with  $666\frac{2}{3}$  bananas.
10. Pick up all  $333\frac{1}{3}$  that were stashed
11. You are back at 10
12. Make remaining  $466\frac{2}{3}$  mile trip,

$1000 - 466\frac{2}{3} = 533\frac{1}{3}$  bananas left at the end.

### **10-12 Logic Puzzle:**

Solution: 40 minutes <https://www.mathsisfun.com/puzzles/baffling-bath-water-solution.html>

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**K-12**

## Movement NC Standards Alignment

Grade Span	English/ Language Arts	Social Studies	Science	Math
<b>K-1</b>	L.1.5	K.G.1.3 K.G.1.2 1.G.1.3 K.G.2.2 K.G.2.2 1.G.1.2	1.P.1.2 1.P.1.3	NC.1.G.1
<b>2-3</b>	RL.3.3	3.G.1.4 3.G.1.3	3.P.1.1	NC.3.NBT.2
<b>4-5</b>	SL.5.4	5.C.1.3 5.B.1.2	4.L.2.2	NC.5.NBT.1
<b>6-7</b>	6-8 Grammar Skill	6.G.1.2 6.E.1.1	6.P.1	NC.6.NS.5 NC.6.NS.6
<b>8-9</b>	RL.9-10.10	8.H.3.1 8.G.1.4	8.L.1.2	NC.M1.F-IF.7 NC.M2.-CED.2 NC.M2.-CED.3 NC.M2.A-REI.1
<b>10-12</b>	W.9-10.2	AH1.H.6.2	EEn.2.5.5	NC.M1.A-REI.1