

ADVANCED LEARNING LABS

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

GRADES
10-12

Lab 4 • Community



ENGLISH LANGUAGE ARTS

Community network and cable talk show monologues have been popular for many years. For example, Steven Colbert and James Corden start each of their late-night shows with a monologue focused on current events. Watch recordings of one or two. Listen specifically to what is being said about each topic. Use the questions below to guide your reflection on what is actually said and the subtext:

- Why would they use understatement, sarcasm, and satire instead of just saying exactly what they mean?
- How does the content and their rhetorical style in their monologue contribute to the power and/or persuasiveness of it?

Create a monologue that incorporates satire, sarcasm, and/or understatement. Present to a family member.



SOCIAL STUDIES

Many of the United States' founding documents have been influenced by Enlightenment thinkers. John Locke's ideas in the Two Treatises of Government were an important influence for Thomas Jefferson while writing.

Read the Declaration of Independence and review this information about John Locke's ideas. Pretend that you are a journalist who is able to interview John Locke about the Declaration of Independence.

What would you ask him and how do you think he would respond? Write a script of what would be included in the interview.

Link: <https://www.archives.gov/founding-docs/declaration>



SCIENCE

Burning fossil fuels has increased the amount of CO₂ in the atmosphere over time.

Review this data about ocean CO₂ and pH and explain the inverse relationships in terms of Le Chatelier's principle.

Link: <https://bit.ly/2SO4uMC>

Organisms, like corals and oysters, need dissolved carbonate for their shells. Predict the possible impact on the development and survival of this community of organisms, identifying contributions both from the equilibrium you explained above and the changes in pH.

Design a unique way to test your predictions, including the types of measurements that would be needed.



MINDFULNESS

Students in your community have been out of school for several weeks, and it will soon be summer. That leaves a lot of time to think and be alone with your thoughts. This can be especially challenging for younger students.

Create a 5-minute guided meditation for elementary-aged students. Your guided meditation should give students specific steps to take to help them relax and be present in their moment without any stress. Review ways for children to meditate for more information by visiting the link below. Teach this information to an elementary-aged student you know, to see how your guide works!

Link: <https://well.blogs.nytimes.com/2016/05/10/three-ways-for-children-to-try-meditation-at-home/>



LOGIC PUZZLE

What is a Super Samurai Sudoku puzzle?

It's just your typical sudoku puzzle (x13 interlocking puzzles). NBD.

Follow the link: <https://bit.ly/2xNJf6g>

To learn more about Sudoku, visit <https://www.learn-sudoku.com/what-is-sudoku.html>



FIELD STUDIES

Museums are relying on technology to create a virtual community that allows artists and museum patrons to engage without being physically in the presence of art. This has its pros and cons.

Read How Museums are Using Virtual Reality (VR) and watch the embedded videos to learn more about VR is being used to create unique art experiences.

Link: <https://www.museumnext.com/article/how-museums-are-using-virtual-reality/>

What are the benefits and disadvantages of using VR in museums and art exhibits? Choose one prevalent disadvantage and brainstorm at least two solutions that can be implemented at a low cost by museums.

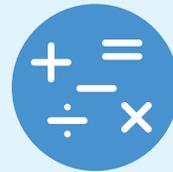


RESEARCH EXPLORATIONS

Sociologists research how people within communities behave and interact. Research how games have differed over time for elementary children.

Interview someone who was in elementary school in the 2000s, 1980s, and 1960s about games they played as children. Compare and contrast the games played by decade in elementary school. Research events during those decades that would have influenced the games they played.

Write a comparison of the games played by decade, including concrete details, most significant and relevant facts from those decades, quotations, and graphics. Share your comparison with the people you interviewed.



MATH

During times of uncertainty, community is even more important than ever. Math is used in a wide variety of careers that shape your community.

- Cartographers design, prepare and revise maps, charts, plans, three-dimensional models and spatial information databases.
- Urban planners develop long- and short-term plans for the use of land and the growth of urban, suburban, and rural communities.
- Architects design buildings and make sure they are functional, safe, and economical.

Brainstorm math career options and design a related project that challenges you to use math in unexpected ways to support your community.



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Works Cited and Answers

Works Cited:

K-5: Four Color Theorem Resources-

<https://www.crayola.com/lesson-plans/maps-and-math-lesson-plan/>

<https://www.mathsisfun.com/activity/coloring.html>

<https://medium.com/@MatthewOldridge/four-colour-theorem-187b32e03ce7>

10-12: <http://weusemath.org/>