

# ADVANCED LEARNING LABS

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

GRADES

6-7

## Lab 3 • Innovation



### ENGLISH LANGUAGE ARTS

Select a recent science or technology innovation or current event in the news. Find 3 different media sources. Read/watch stories on the topic from each source. Note the main idea(s) in each story and supporting arguments. Separate facts from opinions but record both.

Based on your results, which news source do you find most accurate and trustworthy? Which seemed biased? Create a rubric that defines the characteristics of accurate and unbiased sources. Rate each media source on your rubric. Use this link if you need help creating a rubric: <https://www.rubric-maker.com>

Prepare an oral presentation that summarizes your findings. Publish the presentation using a media tool if available. Share it with your family.



### SOCIAL STUDIES

Quality of Life is a subjective standard that economists have used quantitative data to evaluate people across the world. One of the indicators that is used to judge Quality of Life is the material wellbeing. Every citizen can save, invest, and use credit responsibly to help improve one's quality of life.

Use the link to learn more about stocks, bonds, investment funds, and bank products for investing. After you read about a few different options, create a brochure that you can share with friends or family on what is the best option for saving.

**Link:** <https://www.finra.org/investors/learn-to-invest/types-investments>



### SCIENCE

Review these 2 NASA graphics demonstrating the changes in Nitrogen Dioxide (NO<sub>2</sub>) emissions over NC, SC, and GA.

- Average NO<sub>2</sub> in the atmosphere 2005-2019 <https://go.nasa.gov/2WD4O11>
- Average NO<sub>2</sub> in the atmosphere 2020 <https://go.nasa.gov/2yvoCw4>
- Review this short explanation from the Environmental Protection Agency about NO<sub>2</sub> emissions <https://bit.ly/2SJQcMM>

Identify what human behavior changes led to an improvement in air quality. Propose an innovative way to maintain improved levels of NO<sub>2</sub> in the area where you live as the state begins to open again. Identify obstacles for families and businesses implementing these behaviors and propose some ways to address them.



### MINDFULNESS

What do you see in your reflection?

Reflective writing is a process where a writer records and communicates their thoughts about something in their life (ex. an experience or a feeling). Reflective writing is also an opportunity for a writer to be innovative and explore their learning and develop self-knowledge.

Write a haiku poem. Address these 3 things:

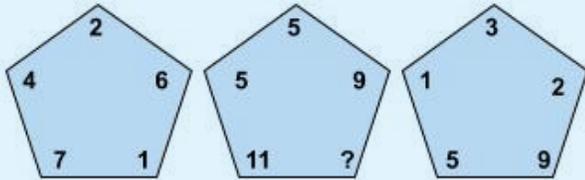
1. How have you changed in the last 5 years?
2. What makes you unique and special?
3. How do you want to grow and change in the next 5 years?

Illustrate your poem, showing the journey you describe.



## LOGIC PUZZLE

Can you figure out how all of the numbers are related and fill in the missing one?



Answers: <https://bit.ly/2yemUPn>



## FIELD STUDIES

Innovations in nuclear energy have evolved from being housed at large, expensive reactors, to smaller, more mobile nuclear energy facilities. Learn more about Isotopes & the Reactors of Tomorrow at the Idaho National Laboratory.

**Link:** <https://www.navigatingnuclear.com/nuclear-reimagined-vft/>

What differences did you notice between the Advanced Testing Reactors (ATR) and the Small Modular Reactors (SMR) shown? What are the environmental and financial benefits of investing in SMR research? Why do you think we still need ATRs?

For more information about the largest ATR in the world, visit <https://bit.ly/3bh4JWw>.



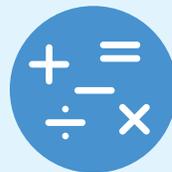
## RESEARCH EXPLORATIONS

You are an architect tasked with designing an innovative office space for someone working from home.

Conduct some background research using the internet and interviews to find answers to the following questions:

- What is a reasonable size for a home office?
- What are the key features people want/need in a home office?
- Are there critical design features that can increase work efficiency?

After you do the research, design the office and create a visual or multimedia display. Present your plans to a family member or friend.



## MATH

Review probability by watching this TED-Ed video.

**Link:** <https://youtu.be/Kgudt4PXs28>

Now use what you've learned to design a new game that involves probability.

- What are the risks a player has to take to be successful in your game?
- How likely are they to win based on the requirements of the game?

Create the game itself, along with a series of directions, and play with someone you live with. Did your hypothesis prove true? How can you increase or decrease your risk as a player?



North Carolina Department of  
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