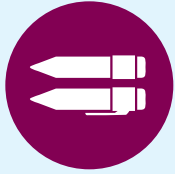# ADVANCED LEARNING LABS

A partnership between the North Carolina Department of Public Instruction and Duke TIP

TO ENGAGE, ACTIVATE, AND GROW OUR STUDENTS

GRADES 4–5

Lab 7 • Interactions

ENGLISH LANGUAGE ARTS

"Sliding Door Moments" are seemingly inconsequential moments or interactions that end up having a much bigger impact than anticipated. For example, you choose one park to play in over another, and you end up meeting your new best friend at that park.

Write a short story that includes a "sliding door moment" showing how the main character makes a different choice at that moment. Include how the story ends in different ways, **OR** Include how the choice the character makes impacts the different endings of the story.

SOCIAL STUDIES

Cultural diffusion is the spread of culture. We can see cultural diffusion happen as different societies and groups of people interact with each other. What is an example of cultural diffusion that influenced a commonly celebrated holiday?

Create a 5-8 panel storyboard depicting how that tradition spread as different groups of people interacted with another culture.

For more information and examples of cultural diffusion, visit **http://wvmsred6. weebly.com/uploads/8/6/9/3/8693332/ culturaldiffusionexamples.pdf**

SCIENCE

Baking can be very similar to a science experiment! You have to monitor and adjust your ingredients based on how they may react while cooking. Put room temperature cake batter in the oven to bake at 350 degrees.

How does the heat get transferred to the batter? In what ways would increasing the oven temperature by 100 degrees bake the cake faster? Would you want to eat that cake? Explain your reasoning.

Design a way to test your predictions.

MINDFULNESS

Host your own dance party!
Have you ever noticed how your favorite songs can change your mood or how good you feel after dancing?

You're not alone! Science has proven that the interaction of music and dance can improve brain health. Click this link to read about it:
Link: https://health.clevelandclinic.org/dancing- good-kid-infographic/

Today, take time to arrange a playlist with 5-10 of your favorite songs. Then, find a space to move freely and get your groove on! This may be a good opportunity to spend some time with yourself, or feel free to invite someone to join you, even virtually (family, friends, pets, etc.).

LOGIC PUZZLE

Polybius Square Cipher!

A Polybius Square was a method of encryption invented by the Ancient Greek historian Polybius.

See if you can uncover the hidden quote!

Link to Week 7 Puzzle: **https://bit.ly/3d9HpvR**

FIELD STUDIES

Historians and Archaeologists work every day so that we are able to interact with societies of the past. This week you'll watch a video to explain how archaeologists excavate a site to learn about civilizations and people of the past: **https://www.youtube.com/watch?v=qMzpA5oCGNY**

Watch this video that shows some of the notable discoveries from 2019: **https://www.youtube.com/watch?v=PcT1vGyJzyg**

Which discovery do you think is the most important? Do you think it's important to examine how people lived in the past? Explain why or why not.
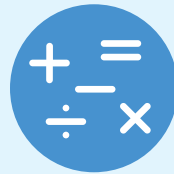
RESEARCH EXPLORATIONS

Sociologists study how people interact in groups. How each person behaves can change how the group interacts. Read more about sociology here: **Link: https://kids.kiddle.co/Sociology**

Each day for four days, choose a one-hour block of time and tally every time someone says something kind to someone else in your family. Then, for the next four days, do a random act of kindness for someone in your home. For the hour after your random act of kindness, tally every time someone says something kind to someone.

How did your family interactions change when you added a random act of kindness to your day?

Link: https://kids.kiddle.co/Sociology

MATH

Interacting with nature, you can observe fractals. A fractal is an object made of smaller versions of itself - a pattern within a pattern, like a snowflake or lightning bolt. With an adult's help, collect 3 leaves. For each leaf:

- Measure 4 fractal levels: stem, large veins branching from stem, medium veins branching from large, small veins branching from medium.
- Describe the relationships between fractal levels using fractions, ratios, or proportions. What do you observe about leaf fractals?
- Calculate measurements for smaller and larger sized leaf fractals. Describe the strategies you used.
- Use your original and new measurements to create fractal leaf art.

Lab 7 • Interactions
Works Cited and Answers

Works Cited- Math:

2-3 and 4-5 activity based on Fractal Leaf Art from Math Engaged -
http://mathengaged.org/resources/activities/art-projects/fractal-leaf-art/

Field Studies:

For more information about the future of spaceflight, read "Future of Spaceflight and NASA Missions Information" https://www.nationalgeographic.com/science/space/space-exploration/future-spaceflight/

English Language Arts:

8-9 May serve as mentor texts:
- "Did I Miss Anything?" by T. Wayman
- A&P by J. Updike

Logic Puzzle

6-9 Solution: https://bit.ly/2ZuCpht

Advanced Learning Lab 7

NC Standards Alignment

Math	
K-1	N/A for Lab 7
2-3	NC.2.MD.1, NC.2.MD.4; NC.3.MD.2, NC.3.NF.4
4-5	NC.4.NF.2, NC.4.NF.3, NC.5.NF.1, NC.5.NF.4
6-7	NC.6.RP.1
8-9	Not aligned to a specific NCSCOS standard
10-12	N/A for Lab 7
English Language Arts	
K-1	N/A for Lab 7
2-3	W.3.3
4-5	W.5.3
6-7	W.7.2.c.
8-9	W.9-10.3d W.9-10.3e
10-12	N/A for Lab 7
Science	
K-1	N/A for Lab 7
2-3	3.P.2
4-5	5.P.3
6-7	6.P.2, 6.P.2.2
8-9	8.P.1
10-12	N/A for Lab 7
Social Studies	
K-1	N/A for Lab 7
2-3	3.G.1.3
4-5	5.C.1.2
6-7	7.H.2.3
8-9	8.C&G.1.1
10-12	N/A for Lab 7