# ADVANCED LEARNING LABS 



## ENGLISH LANGUAGE ARTS

Like us, characters have their own identity, which includes who they are, their personalities, and what they value that influences their choices.
Write a poem about one of your favorite characters. It can be a character from the book you're currently reading, one from an old picture book you love, or another favorite story.
Your poem should include at least five details about the character's identity and how the actions and choices the characters make add to the story. You can include a photo or illustration of the character in the midst of one of their defining actions.


## SCIENCE

Melt in your mouth AND in your hand! You may identify chocolate chips as a solid. However, it can also become a liquid.
For this experiment, melt chocolate chips using the heat from your hands. How can you do this efficiently (faster time and less mess)? Observe for the time it takes to become a liquid, consistency, and mess made.
Now change the liquid chocolate back to a solid. Use the same observational method: the time it takes to become a solid, consistency, and mess made.
Determine the most efficient way to make the solid/liquid/solid change with the chocolate. In your science notebook, explain the best way, using observations to support your reasoning.

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## SOCIAL STUDIES

The identity of people and places is more similar than we realize. Both are defined by a combination of the following elements:

- culture - beliefs, behaviors, way of life for a group of people
- demographics -age, race, population
- economy - income, occupation, roles
- geography - location, biology, etc.

Choose a region of the nation or state to research and focus on at least two of the various elements listed above that define that region. Use the Census link for help with this information: https:// www.census.gov/
Think of yourself as a region. What are your cultural, demographic, economic, and geographic identifiers? Create a "map" of you to share with your family.


## MINDFULNESS

Your identity is all the things that make you...you.
Some of these things can be seen from the outside, such as your soccer jersey, your hair, and stickers on your laptop. Many can't be seen such as your personality, your values, your hopes and dreams. All pieces of your identity are equally important though.
So, who are you? What makes you...you?
Ask a family member or friend to trace your silhouette. Draw a line down the center of your silhouette. Fill one half with pictures and/or words describing who you are/what you see on the outside. Fill the other half with pictures and/or words that represent who you are on the inside

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## LOGIC PUZZLE

## Tower of Hanoi

Move each of the three rings from the first peg to the last peg in the fewest number of moves.
Rules:
Only the topmost ring on a pile can be moved each time. A larger ring cannot be placed on top of a smaller ring.


To play virtually: https://www.mathplayground. com/logic tower of hanoi.html

## 。RESEARCH EXPLORATIONS

Bridges are constructed using many geometric designs, but one shape seems to surpass the others with its strength: the triangle!
Check out this video about triangles, strength, and design: https://www.youtube.com/ watch? v=mBHJtWbsiaA
Investigate more about different types of bridge design here: https://www.youtube.com/ watch? $=$ =mBHJtWbsiaA
Construct your own bridge to test the strength of triangles. Build additional bridges using other geometric designs. How much weight can each hold? How could you modify the design to hold more weight?
Test your designs with a friend or family member. FIELD STUDIES

How are art and identity linked? Explore the Metropolitan Museum of Art to learn about the art and history of different groups of people and time periods: https://www.metmuseum.org/art/online-features/ metkids/
Find a piece of art that you like or find interesting. Research who created it and how it relates to who they are, or their identity. Create a "copy" of the art piece, but instead express who you are, your history and your identity through it.

- How are the pieces of art similar? How are they different?
- How are the artists similar? How are they different?

Share with a friend or family member what you have learned about identity. Maybe they would like to create art as well, and you can have an Identity Art Gallery!


## MATH

What is a fractal? A fractal is a self-similar structure that repeats itself over and over, as it does, it gets smaller and smaller...infinitely! The Sierpinski Triangle is one such fractal, named for Waclaw Sierpinski, a Polish Mathematician.
Draw an equilateral triangle, then another inside the first, and then three more inside each of the remaining triangles.
Make your
math art by adding color and designs!

## Discover


more about SierpinskiTriangles: https:// fractalfoundation.org/resources/fractivities/ sierpinski-triangle/

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## Identity Reference Guide

## 2-3 and 4-5 Logic Puzzles:

Tower of Hanoi puzzles
https://www.mathplayground.com/logic tower of hanoi.html

## 6-7 Logic Puzzle:

Solution available during Ted Talk:
https://www.ted.com/talks/alex gendler can you solve the three gods riddle/transcript?language=en\#t-38386

## 10-12 Logic Puzzle:

Solution: The letter X
Solution: A tow truck
Solution: Corn
Solution: A rhyme

## ADVANCED LEARNING LABS

NC Standards Alignment

| Grade Span | English/ <br> Language Arts | Social Studies | Science | Math |
| :--- | :--- | :--- | :--- | :--- |
| K-1 | RL.1.3 <br> RL.1.7 | K.C.1.1 | K.P.2.1 | NC.1.OA.6 <br> NC.2.OA.2 |
| $\mathbf{2 - 3}$ | RL.3.3 | $3 . G .1 .5$ <br> $3 . G .1 .2$ | 2. P.2.1 | NC.2.G.1 |
| $\mathbf{4 - 5}$ | RL.5.3 | 4. H.2.2 <br> $4 . H .1 .6$ | 4. P.2.3 | NC.4.G.2 |
| $\mathbf{6 - 7}$ | W.6.3 | $6 . C .1 .1$ | 7.L.2.2 | NC.6.EE.6 <br> NC.7.EE.3 |
| $\mathbf{8 - 9}$ | W.7.2 | 8. B.1.3 | 8. L.2.1 | NC.M2.A-REI.4 |
| $\mathbf{1 0 - 1 2}$ | RI.11-12.7 | FP.C\&G.4 | BIO.3.3.3 | NC.M3.N-CN.9 |

