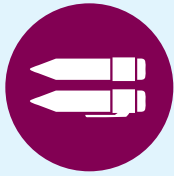# ADVANCED LEARNING LABS

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

TO ENGAGE, ACTIVATE, AND GROW OUR STUDENTS

GRADES 4–5

Lab 6 • Growth

ENGLISH LANGUAGE ARTS

Characters that grow and change are often the most interesting. Authors teach us about a character through physical descriptions and what the character says, does, thinks and feels.

Pick a favorite short story or book in which there are at least two characters that change and grow over the course of the narrative. Compare the ways in which their growth is described by the author.

Write an essay comparing and contrasting two or more characters. Include how the events in the story contribute to the growth of the characters, and how each characters' growth is reflected in their actions or behaviors.

SOCIAL STUDIES

Populations grow and change over time depending on different push and pull factors.

Push factors are the different reasons that people leave a place and pull factors are reasons that people go to a new place to live. What pull factors are there in your local area? Are there any push factors where you live?

Interview 10 friends, family members, or neighbors who have moved in their lifetime to find out why their families moved. Create a graph for the push and pull factors.

SCIENCE

How do you think sneezing and touching can pass diseases?

Design a model of how one sick person can pass their illness to 8 people but has only been in close contact with 2. Predict what would happen with even more interactions.

What purpose do skin and nose hair serve to protect us from illness? Why is it recommended to use hand washing and wearing masks to protect us, if skin and nose hairs are also working to protect us?

For an example of how sneezing can spread germs, view the link below:
https://docs.google.com/document/d/1ub3Z_VEHEnSeHuxd7he4xHBxrTsExwzTa_JhFsXTWYw/edit?usp=sharing

MINDFULNESS

A "growth mindset" means believing your abilities can improve through your will to learn and hard work.

Print or draw a copy of this image to fill out at the end of each day this week.
Link: https://tofasakademi.com/wp-content/uploads/2019/06/growth-mindset3.png

On the soil or roots, write 3 specific things that you learned that day. On a stem, write 2 specific things that you want to learn. Lastly, on a leaf write 1 specific question you still have. Look at how much you have grown during the week!

Learn about growth mindset from Dr. Carol Dweck, the researcher who developed the idea, as well as entertainer John Legend. **https://bit.ly/3c3rgXI**

LOGIC PUZZLE

Decode the Riddle

Uncover the riddle in this puzzle by placing the correct letters into each square. The list of available letters is given at the bottom of each column.

Follow this link: **https://bit.ly/2LPePUk**

FIELD STUDIES

M & M's candies were first introduced in 1941 and at one point were only sold to the military! Since their introduction, they have grown to become a staple in the candy industry. Watch the 360 video tour at the link below to learn how M & M's candy is made: Link: **https://youtu.be/GtfkemNzG_I**

Why do you think M & M's candy has grown in popularity since it started? What is an example of another product that has grown in success over the past 20 years? What do you attribute to their success?

For more information about M & M candy, see this article: **https://www.history.com/news/the-wartime-origins-of-the-mm**

RESEARCH EXPLORATIONS

What conditions are best for growing a fruit or vegetable in your home?

Pick one food that you can grow from leftover scraps and seeds that you have at home or can get.

Try to grow that food three different ways, while changing one condition resulting in three different methods. Traditionally, we use sun, water, and soil to grow food. Try two other ways that alter one of those conditions (more/less sunlight or water, type of music played, etc.). Every three days, draw a picture of what they look like and label the plant parts.

After three weeks, write what conclusions you can draw about growth based on your experiment.
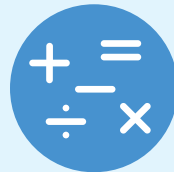
MATH

As a growing child, you probably eat a lot of pizza. Pizza dough has 7 ingredients: 2 cups flour, 1 package of yeast, 1 1/2 tsp sugar, 3/4 tsp salt, 1/8 tsp garlic, 2 tbsp oil, 3/4 cup water. One batch makes one 12-slice pizza.

You're very hungry and want 4 pizzas. How much of each ingredient do you need? If you have 1 cup of flour, how does the recipe change? What do you need to make 3 slices for each person in your house? How many pizzas is that?

Extension: At home, with adult help, try the recipe.

Link: https://sugarspunrun.com/the-best-pizza-dough-recipe/

Lab 6 • Growth
Works Cited and Answers

Research Explorations:

Link for All: **https://www.buzzfeed.com/jesseszewczyk/16-food-scraps-that-you-can-regrow**

Additional 4-5 Link: **https://empressofdirt.net/regrow-vegetable-scraps/**

Additional links for All: **https://www.ruralsprout.com/regrow-vegetables/**

Math:

2-3 Recipe Link: **https://www.yummytoddlerfood.com/activities/the-best-salt-dough-ornaments/**

4-5 Recipe Link: **https://sugarspunrun.com/the-best-pizza-dough-recipe/**

Answers:

2-3 Answers: With a 1/2 c of salt, you need 1 c of flour and 1/2 cup of water. If you need 36 keepsakes, you need 1 1/2 times the ingredients - 3 c flour, 1 1/2 c salt, 1 1/2 c water.

4-5 Answers: To make 4 pizzas, you need 4 times each ingredient - 8 c flour, 4 packages of yeast, 6 tsp/2 tbsp sugar, 3 tsp/1tbsp salt, 1/2 tsp garlic, 8 tbsp oil, 3 c water. With 1 c flour, you need to cut all ingredients in half - 1/2 package yeast, 3/4 tsp of sugar, 3/8 tsp salt, 1/16 tsp of garlic, 1 tbsp oil, 3/8 c water.

Advanced Learning Lab 6
NC Standards Alignment

Math	
K-1	N/A for Lab 6
2-3	NC.3.NF.1, NC.3.NF.2, NC.3.NF.3
4-5	NC.4.NF.2, NC.4.NF.3, NC.4.NF.4; NC.5.NF.1, NC.5.NF.3, NC.5.NF.4; NC.5.NF.7
6-7	NC.6.RP.3 NC.7.RP.1
8-9	NC.M1.A-CED.1 NC.M2.A-CED.1 NC.M3.G-GPE.1
10-12	N/A for Lab 6
English Language Arts	
K-1	N/A for Lab 6
2-3	W 3.3.c
4-5	RL 5.3
6-7	W.1
8-9	W.9-10.6
10-12	N/A for Lab 6
Science	
K-1	N/A for Lab 6
2-3	3.L.1
4-5	5.L.1
6-7	7.L.2
8-9	8.L.1
10-12	N/A for Lab 6
Social Studies	
K-1	N/A for Lab 6
2-3	3.H.1
4-5	5.G.1.4
6-7	6.G.2.2
8-9	AH1.H.3
10-12	N/A for Lab 6