

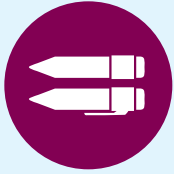
ADVANCED LEARNING LABS

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

GRADES

6–7

Lab 6 • Growth



ENGLISH LANGUAGE ARTS

Intellectual curiosity allows you to take an active role in life by observing and questioning your environment. There are several components of intellectual curiosity: curiosity, independent thinking, concentration, focus, auditory memory, and visual memory. Carefully consider each of these components and describe which you believe is the most important to have. Also consider your own level of competence for each component. In order to help you think about and write about which is most important to have, create a rating scale and rate each component for yourself and for roles in society (teachers, scientists, doctors). What can individuals do to cultivate a lower-rated component? Create either a written argumentative essay, multimedia presentation, or infographic to express your thinking.



SOCIAL STUDIES

Population growth and decline is important for government officials and demographers to track. Population data can show everything from famine, war, and times of large growth.

Watch this video to understand more details about what we can learn from population pyramids and how the pyramid is set up. Now, you will create your own pyramids. The first step is to gather the data, but at the link below you can use data already compiled. Draw your two pyramids and determine the differences between the two pyramids.

From the data which country is more developed and why? Review the link below for an example of a population pyramid data set. https://docs.google.com/spreadsheets/d/1Df9nSNBROw83Lstzgl-u07r_lzM9rhG4H1qEMNUylqM/edit#gid=0



SCIENCE

The 1918 flu was deadly and unique not only in virulence but also by whom was affected.

Review this graph of the 1918 death rate by age group compared to the seasonal flu bug in previous years.

Link: <https://wwwnc.cdc.gov/eid/article/12/1/05-0979-f2>

What do you notice? Predict how that death rate affected the population growth long term.

Based on your predictions, what do you think would be the impact on society?



MINDFULNESS

A “growth mindset” means believing your abilities can improve through a willingness to learn and hard work.

This graphic compares growth vs. fixed mindset. Create a T-chart. On the fixed side, write 1 specific example for each aspect listed (ex: Challenges, obstacles, etc.) of a time when you acted with a fixed mindset and what you could have done differently from a growth perspective. On the growth side, write 1 specific example (for each) of how you will act with a growth mindset this week.

Link: <https://bit.ly/2yU32S3>

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



LOGIC PUZZLE

Quote Square:

“I’ve never thought of that!”

Use investigation and process of elimination to reveal what that statement is talking about.

Follow this link: <https://bit.ly/35SBJn7>



FIELD STUDIES

New York City has one of the most recognizable skylines in the world. Today we will take a tour to look at how NYC’s skyline grew into what we know today.

Watch this video from Bloomberg that focuses on the Equitable Building.

Link: <https://www.youtube.com/watch?v=lGrolrQmwyw>

Zoning resolutions guide the growth of a city or town through regulations. Do you think that cities should enforce zoning laws? Explain why or why not?

Design and draw your own city skyline and include your own zoning laws.



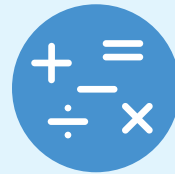
RESEARCH EXPLORATIONS

What conditions are best for growing a food at home?

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

First research what conditions are best for that plant to grow. Try to grow that food changing one condition three ways: the “traditional” way (using sun, water, and soil) and altering that one condition (more/less sunlight or water, type of soil or water, temperature, etc.).

Choose three ways to measure how well they grow over three weeks and take those measurements daily. What conclusions can you make about growth after three weeks, based on the data?



MATH

Why do people easily spend \$5 on a frozen pizza but don’t take advantage of a 3 for \$12 special when each pizza is actually \$1 less? Last year, Clark.com did a Target vs. Walmart price comparison.

Link: <https://clark.com/shopping-retail/target-walmart-price-comparison/>

Review the website and make a chart, or use a spreadsheet, to find the unit price for each item. Find the item on [target.com](https://www.target.com) and [walmart.com](https://www.walmart.com) and record the current unit price.

How have the rates changed? Do you think the pandemic has had an impact on pricing? Why is unit rate not the only factor in consumer purchasing decisions?



North Carolina Department of
PUBLIC INSTRUCTION



Lab 6 • Growth

Works Cited and Answers

Research Explorations:

Link for All: <https://www.buzzfeed.com/jesseszewczyk/16-food-scrap-that-you-can-regrow>

Additional 4-5 Link: <https://empressof dirt.net/regrow-vegetable-scrap/>

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