

Growth

Grades K-1

English Language Arts

As people grow, they change. Sometimes big events bring changes to our lives and these changes lead to growth.

Choose one big event and write a story about how it changed your life. Events might include: getting a new sibling, moving, starting a new school, getting a new pet, the impact of the coronavirus, or anything else you think changed your life. Be sure to explain how the change happened, include details about the big event, and use transition words like "then" or "next." In your conclusion, explain how the event changed your life.

Save your writing and return to it at a later time as a reminder of how you have changed and grown.

Social Studies

You are growing every day!

A timeline shows what happens over time. Make a timeline of your life. Draw a straight line. On the left end, mark the beginning with the year and day you were born. On the right end, write today's date. Fill in the middle with at least 5 events from your life that caused you to change or grow.

Decorate and illustrate your timeline. Give it a title.

- When you look at your timeline, what big statement can you make about how you have grown?
- How has your growth affected other people in your life?

Science

To grow and survive, animals need air, water, food, and shelter; plants need air, water, nutrients, and light.

Make a list of plants and a list of animals. You can even add pictures you find in magazines or go on a scavenger hunt to find living things in nature to add to your list.

- Group these plants and animals into categories and name the categories.
- Can you think of a different way to group the plants and animals on your list?
- What big statement can you make about living things?

Think about what these plants and animals need to grow. How are plant and animal needs similar and different?

Mindfulness

How does a tree change as it grows?

Stand tall like a tree. Pretend that your feet are rooted into the ground to hold you in place. Your legs are the trunk and your arms are the branches.

First imagine you are just a sapling (baby tree), and a gust of wind comes along. How would you move? Now imagine you are an old tree and a gust of wind comes. How would you move?

- What did you notice in your body as you pretended?
- Did the baby tree move differently than the old tree?
- How do you move differently as you grow?

Logic Puzzle

Five students were eating apples to help them grow to become strong! Who finished eating their apple first?

- Ali finished before Ben, but behind Carlos.
- Dan finished before Emani, but behind Ben.
- What was the finishing order?

Can you use positional terms to help you like "in front of," "first," "last," and "behind?"

Who finished first, second, third, and fourth, and fifth?

Field Studies

We need food to grow! Apples are a fruit that we eat as part of a healthy diet. Let's take a trip to an apple orchard: <https://www.farmfood360.ca/en/apple-orchard/360-video/>

During your time at the apple orchard, be sure to watch the video "Apples and Mother Nature." Consider these questions as you go on your journey.

- What threats are there to an apple's growth?
- Can you think of other threats the farmer doesn't mention?
- What do you think an apple needs to grow?
- How is what an apple needs to grow *like* what you need to grow?
- How is what an apple needs to grow *different* from what you need to grow?

Research Explorations

Living things grow most places on Earth. Specific habitats have different plants and animals. Use this link to learn about living things in different habitats:

<https://kids.nationalgeographic.com/explore/nature/habitats/>

Pick two habitats. List animals and plants that grow in each place. Pick an animal or plant that grows in one of your habitats but not in the other.

- Why does this living thing struggle to grow in one location, but thrive in another?
- Which habitat would you like to visit? Why?
- Which habitat would be best suited for your own survival and growth?

Challenge: Draw yourself in one of the habitats. Include things you would need to grow and thrive.

Math

Think about how the class's pet snake is growing!

1. It was 14 inches long. It grew 3 more inches. How long is it now?
2. It was 14 inches long. It grew a few more inches. Now it is 17 inches long. How many inches did it grow?
3. It grew 3 more inches. Now it is 17 inches long. How long was it to start?

Extension:

- How many inches taller are you than the pet snake at its longest point?
- Try writing your own problem about an animal growing.

Grades 10-12

English Language Arts

Read the words of Dr. Martin Luther King, Jr.:

- *"I have decided to stick with love. Hate is too great a burden to bear."* From his sermon at the 11th annual SCLC in Atlanta, Georgia.
- *"Injustice anywhere is a threat to justice everywhere."* - "Letter from a Birmingham Jail"
- *"In the process of gaining our rightful place we must not be guilty of wrongful deeds."* - "I Have A Dream" speech

Select two of the quotes and read the entire script of the sermon, letter, or speech. Analyze the differences and similarities between how Dr. King approaches the same theme with each text.

Discuss what you have learned with family or friends and answer the following question: How can knowing our past prosper growth for our future as a nation?

Social Studies

"The Star Spangled Banner" is more than just a song. It is the name of the famous American flag that inspired our National Anthem. It is on display at the Smithsonian Museum of American History. Check out the symbolism and history of this national artifact using this link:

<https://amhistory.si.edu/starspangledbanner/>

Analyze our National Anthem for its historical meaning and symbolism. Prepare for a classroom debate determining if the anthem has helped us grow or unify as a nation. As you prepare for your debate, consider the following:

- Evidence to support your opinion.
- High-quality information from reputable sources.
- Arguments created using your research.

Science

Aviation was born in Kitty Hawk, NC and has grown into a multi-million dollar industry that impacts the entire world. Orville Wright made the first successful flight on December 17, 1903 traveling 120 feet in 12 seconds.

Using the Wright Brothers flight simulator, attempt to fly the first plane:

<http://smithsonianeducation.org/flight3/index.html>

Create a graph recording the headwinds, time, and distance for each of your flights.

- What conclusions can you draw about these variables?
- How did the velocity of the flight affect the distance?
- What role did the headwinds play in the time?

Mindfulness

Your body needs protein, fat, carbohydrates, vitamins, and minerals for proper growth and development. Healthy eating habits are essential for older teens and adults who rely on nutrients for lean tissue development and cell growth.

Pick Your Plate! A Global Guide to Nutrition is a game that will help you learn about building healthy meals while using nutritional guidelines from other countries. Have some fun exploring meals from America, Australia, Lebanon and other places: <https://ssec.si.edu/pick-your-plate>

Create a family meal plan for next week, being sure to include healthy eating habits that align with the Global Guide to Nutrition. For fun, create your weekly meal plan based on the dietary guidelines of another country.

Logic Puzzle

According to jigsaw puzzle makers, Perfect Fit: *"Playing with jigsaw puzzles helps to enhance mental and intellectual growth."*

Piece together jigsaw puzzles of iconic portraits from the National Portrait Gallery. Choose a favorite, and then choose the number of puzzle pieces you want to tackle. Drag and fit the pieces together to watch the portrait grow!

<https://www.jigsawplanet.com/smithsoniannpg/the-portraits>

Field Studies

NASA's Chandra X-ray Observatory is a telescope specially designed to detect X-ray emission from very hot regions of the universe such as exploded stars, clusters of galaxies, and matter around black holes. From this telescope you can watch galaxies collide, and stars survive collisions with black holes.

Peruse the student page on the Chandra website:

https://chandra.harvard.edu/index_students.html

Select 'Galaxies' then explore the photos, animations, and podcasts about our ever- expanding universe.

After exploring this information, create 10 follow-up questions that you still have for scientists about our expanding universe.

Research Explorations

What is the difference between an epidemic and a pandemic? Find out by exploring here:

<https://www.britannica.com/video/215272/Top-questions-answers-epidemic-versus-pandemic>

Research the ways an epidemic can grow into a pandemic using the Center for Disease Control (CDC) website: <https://www.cdc.gov/globalhealth/healthprotection/fieldupdates/winter-2017/why-it-matters.html>

Explore three pandemics that have impacted our world in the past century. How can learning about these pandemics help our research regarding future pandemics? Create a pamphlet explaining how these past epidemics have grown into worldwide problems.

Math

Mathematicians often use sinusoidal curves on a graph to show growth. Using graph paper or the online Desmos calculator, create a sinusoidal curve.

Maximum and minimum average daily temperatures of two cities are shown below:

City	January 15 (15th day)	July 16 (197th day)
Montreal, Quebec	-10 C	21 C
Orlando, Florida	15 C	28 C

- On the same graph, sketch a sinusoidal curve (day of the year, temperature) for each city and create an equation to represent each curve.
- Explain differences between the curves and any correlations you see in the temperature growth.

Reference Guide

K-1 Logic Puzzle:

Solution:

In order, first through fifth:

Carlos, Ali, Ben, Dan, Emani

10-12 Logic Puzzle:

Online jigsaw puzzles <http://www.jigsawplanet.com/smithsoniannpg/the-portraits>