

# Frames Project Ideas

Creative ways to utilize Frames in exploring Language Arts, Math, Science, and Social Studies.



# Frames Project Ideas—Language Arts

Frames is an engaging animation and digital storytelling tool students can use to build reading comprehension, literary analysis, research, and writing skills.

## Reading Comprehension

### Retelling

The *American School for the Deaf* is looking to bring young adult novels to life for their students. Your responsibility is to choose your favorite novel and create a short animation retelling the story using only visuals, with no sound and limited text. The goal is to create an animation that will focus students' attention on the actions of the characters to highlight the impact and importance of gestures and expression.

### Point of View

Many students have read or seen *Wicked*, the story of *The Wizard of Oz* as told by Elphaba, the Wicked Witch of the West. *Wicked* effectively demonstrates how the narrator's point of view affects how a reader feels about events in a narrative. In this project, students analyze a scene from a story and retell the events as they appear from the perspective of another character.

### Elements

A local media company is compiling a series of animated mysteries based on the works of famous American writers and poets. They are currently accepting submissions based on the work of Edgar Allan Poe. Choose one of Poe's works, such as "The Pit and the Pendulum," "The Raven", or "The Tell-Tale Heart," and create an animation that summarizes the basic elements and identifies the emotions evoked by the work.

## Literature and Literary Analysis

### Genres

The school librarian is asking for students to help create a collection of videos to promote books in the library. Your class has volunteered to create videos that explore the different genres in literature. Create an animation to be placed on a kiosk in the library that promotes a specific genre.

### Script Writing

Producers from a popular television talk show want to expand their demographics by including a literary segment in each episode. They are requesting audition tapes depicting interviews with characters from well-known novels. Create an animated interview with a character from your favorite novel, including questions about events in the novel as well as insight from your character about current events and other topics.

### Author's Persona

The A&E Channel plans to add a podcast section to their web site showcasing influential writers and poets from the 19th century. They would like the first episode to be about Oscar Wilde's public persona during his American lecture tour in 1882. Take time to study articles, both that promote and discredit him, as well as images used to advertise this tour. Create a podcast that examines a caricature from the lecture tour along with another image you have found, and explain how the images characterize Wilde.

### Adaptation

The public library in your city is starting a month-long campaign highlighting books that have been adapted into movies. Your school has been asked to help by the local public library to review young adult novels that have been made into movies. Analyze the differences between the print and film versions of a book of your choice, and consider how the adaptation from book to movie affected the story. Which was better, the print version or the movie? Why? Create an animated movie trailer for the city library to promote the book you selected, and explain why a viewer should read the book as well as see the film.

### Video Poetry

The National Poetry Council has decided to broadcast short poems set to music and pictures to introduce TV viewers to poetry. Due to positive initial response, they need help building their collection of televised poetry. Choose a favorite poem and analyze. Explore the verse, meter, and imagery, and choose pictures and music that will help convey the author's meaning.

## Media Literacy

### Theme

*Youth Rock TV* is launching a new educational series on how songwriters develop themes with their music. As one of their youth interns, you've been assigned to contribute by exploring Billy Joel's "We Didn't Start the Fire". This song's lyrics include references to people, places and events spanning four decades. Research and categorize events mentioned in the song and find images to help illustrate their historical relevance. Create a new animated video about the song to educate viewers on the themes and events the lyrics retell.

### Fair Use/Copyright

Your school is having issues with students and teachers understanding fair use and copyright. Who owns what you compose? Who controls what happens with the words, images, music, sounds, and videos you create? What rights do you have to use other people's compositions? Create a PSA to show at a school assembly that will explain this important topic to students, staff, and community members.



# Frames Project Ideas—Language Arts



## Writing

### Poetry

Change is an inevitable part of life. The ability to understand and accept change is key for career growth and planning for the future. Explore the theme of change through allegory and poetry by reading Shel Silverstein's *The Giving Tree* or Sandy Stryker's *Tonia the Tree*. Create an animated diamante poem related to the theme of change to be published in an online school anthology.

### Persuasive

Your community newspaper wants to expand its web site to include a series of podcasts that address important community issues. Research a local issue of personal interest and use multiple online news sources to collect up-to-date information to support your opinions about the issue. Create a short persuasive podcast on the issue to submit to the newspaper.

### Public Service Announcements

The President of the United States has decided to change the structure of the next State of the Union Address. The White House wants to include important topics affecting youth in America today, such as education, health, and social awareness. Create a short public service announcement on one of these topics to send to the President to help inform the government about how it affects the lives of youth in America.

### Expository

To encourage healthy living and quality of life, your town mayor has announced a new initiative to increase awareness about the foods people eat. Think about the food you eat and gather information about the impact it has on your body. Analyze the food advertisements you see to learn how companies market their products to specific audiences. Choose several healthful foods and create an advertisement for your local cable network encouraging people in your community to choose these healthy alternatives.

### Alphabiography

Your family has decided to preserve their memories in the form of a digital time capsule. In twenty years your family will reunite, open the time capsule, and enjoy looking back at this moment in your lives. To create your contribution to the time capsule, create an animated "alphabiography." Write about an event, person, object, or feeling associated with each letter of the alphabet. After the entry for each letter, sum up the stories by recording the life lessons you learned from the events.

### Propaganda

The Associated Student Body (ASB) advisor is asking for potential candidates to submit a short political commercial about a school topic they feel strongly about. Create an animation stating your platform on the school issue you feel most strongly about and explain the changes you will make if you are elected.

### How To

The local elementary school is exploring new ways to help students grasp abstract math concepts. They have recruited your school to create "how to" animations on these concepts for younger students. Choose an abstract concept from elementary math and create a short animation that explains the process and shows the steps required to understand and master the concept.

### 5 Paragraph Essay

The United Nations has launched its new summer intern program for young adults. In addition to a paper application, interested individuals must also submit a short animation explaining the role of the UN. Choose one of the topics on which the UN focuses, including International Peace and Security, Economic and Social Development, Human Rights, Humanitarian Action, International Law, and Decolonization, write a 5 paragraph essay, and develop it into an animated submission.

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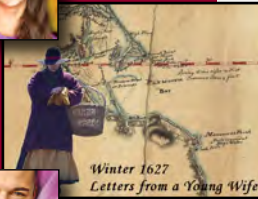
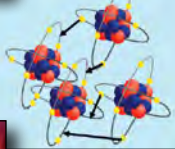
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# Frames Project Ideas—Math



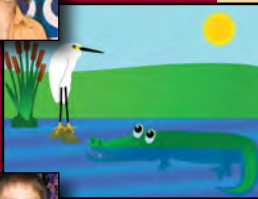
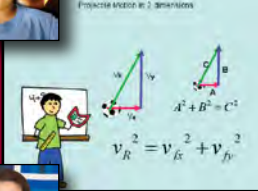
Covalent Carbon Bonds



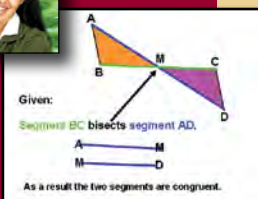
vs. Rome



PROJECTS REVIEW BY 2 SEMESTERS



2 Against 27...  
That Was Villamor!



## Algebra

### Formulas

You have just purchased a new house with a 30 year loan. Your significant other is having trouble understanding the principal and interest. Create an animated (Frames) or interactive (Share) amortization schedule showing the principal and interest on a 5% annual loan. Visually show on a year by year basis what percent of the home you actually own. At what year do you own half the home? How does that date change when the interest rate you pay varies by integer amounts, both positive and negative?

### Calculating Percentage

The owners of the pizza shop you manage have asked you to create an animated presentation (Frames) or an interactive document (Share) showing the profit made on each pizza sold. For each pizza, it costs \$2.21 for ingredients, \$1.24 for overhead, and \$0.47 for mailing flyers. You are currently charging \$5.84 per pizza. As a percentage of your costs, how much profit is the shop earning for each pizza sold?

### Patterns and Sequences

The concert hall in your city has hired you to create a diagram for a kiosk outside the venue that describes the the number of seats in the venue and the seating arrangement. Develop your diagram from the following: 40 rows of seats with 200 seats in the first row, 250 seats in the second row, and the succeeding rows following this arithmetic sequence. Develop an animation (Frames) or an interactive presentation (Share) demonstrating this sequence visually.

## Trigonometry

### Pitch and Load

You are an architect designing a roof for a client's house in the mountains. Because of excessive snowfall, the pitch of the roof needs to be at least 30 degrees on both sides of the truss. Building code says that each truss must contain at least 3 internal structural supports and each external board in the truss must be supported by at least one perpendicular member. Design a truss system that will support a roof 30 feet wide. Show your client an animation (Frames) or interactive document (Share) of your design and explain why your design would be the best for the job.

### Pythagorean Theorem

In fields such as surveying, construction, engineering, and aviation, a length or distance must often be calculated rather than directly measured, using concepts from trigonometry. Create a project showing the angle of elevation of the sun on the surface of the earth using the shadow of a friend. Then, use this information to determine the height of an object that you are unable to measure directly. Create an animation (Frames) or presentation (Share) of your results and the process you used to solve this puzzle.

### Sines and Cosines

The tutoring group you volunteer with is looking to create a series of instructional animations for SAT test preparation. You have been assigned to illustrate and animate the proofs for both the Law of Sines and the Law of Cosines. Be sure your animations (both Frames and Share) include both terminology and graphical representations of all underlying concepts.

## Calculus

### Parameters

The engineering firm you are working with is looking to build a hydro-electric power dam. You need to limit the flow of water to a rate of 5 gallons per second for your generator to function properly. If the reservoir has a natural water pressure of 10lbs per square inch, what diameter of a 30 foot long pipe leading to the generator would you need to achieve the desired flow rate? What if the pipe was 20 ft long? What are some of the other parameters you should consider when solving this problem? Create an animation (Frames) or interactive presentation (Share) to demonstrate your findings your colleagues.

### Velocity and Time

You are the engine tuner on a Top Fuel drag racing team. You have just downloaded your position versus time data from your car's first run down the track. You know that the velocity and acceleration of the car are both derivatives of its position versus time function. Generate the position, velocity and acceleration versus time functions from your data. How might you use this function to improve the car's performance in a quarter mile drag race? In order to convey the results to your driver, create an animation (Frames) or interactive document (Share) that demonstrates your modifications to the car's velocity and acceleration functions.

### Law of Reflection

The geometry of reflection and refraction explains the apparent position of a rainbow relative to the sun, and calculus shows why light is concentrated in the rainbow. Using Snell's Law and the Law of Reflection, create an animation (Frames) or comic (Share) explaining the different colors in the rainbow, and an exploration of secondary and tertiary rainbows.

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# Frames Project Ideas—Science

Students can use Frames to create animated news broadcasts, digital stories, video biographies, and more to explore the science curriculum.

## Weather and Climate

### Wind

Imagine that you are a hot-air balloonist. You want to fly your balloon across the continental United States. To achieve the fastest time, would it make more sense to fly east-to-west or west-to-east? Be sure to explain how the prevailing winds influenced your decision as an outdoor activity group is looking to publish your findings in a new guidebook.

### Weather

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### Climate

A group of scientists are looking to find answers about the cause of the last ice age. You have recently come across a time machine that will allow the group to travel back in time to the last ice age. Create an informational video (Frames) or brochure (Share) on the type of equipment your group will need to bring to find out more about the causes as well as what the climate will be like.

## Earth

### Plate Tectonics

Hollywood is looking for a more traditional approach to the movie *Journey to the Center of Earth*. You are to create a travel video (Frames) or an illustrated journal (Share) on your journey to the center of Earth describing the layers of Earth through which you travel. Be sure to explain how temperature and pressure change beneath the surface.

### Earthquakes

You are an inventor who has created a simple device that can detect an earthquake. To protect your rights to the invention, you apply for a patent. For the patent application they are asking for a simulation video (Frames) or an interactive simulation (Share) describing your device and how it will indicate the direction and strength of an earthquake. Be sure to include an illustration labeling your device.

### Volcanoes

As a travel agent, you are planning a Pacific Ocean cruise that will visit volcanoes in the Ring of Fire and Hawaii. Create an animated commercial (Frames) or an interactive document (Share) advertising the types of volcanoes the group will see and explain why the volcanoes formed where they did.

## Chemical Interactions

### Chemical Bonding

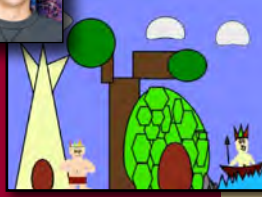
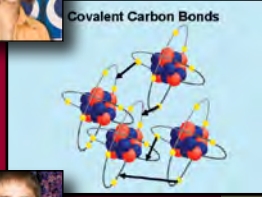
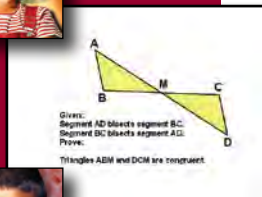
Pretend that you are the size of an atom, and you are observing a reaction between a potassium atom and a fluorine atom. Create an animation (Frames) or interactive simulation (Share) of an ionic bond as the atoms react. Tell what happens to the valence electrons on each atom and how each atom is changed by losing or gaining electrons.

### Chemical Reactions

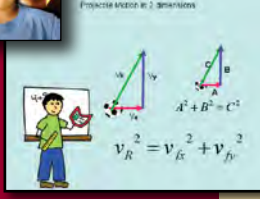
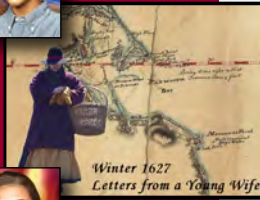
Cartoon Network has hired you to create a series of animations (Frames) or comic book to be posted on their web site (Share) on chemistry. Your first cartoon should help young children understand the concept of "activation energy." Be sure to use examples that young children can relate to, such as the burning of wood or gas.

### Carbon Chemistry

As a chemist you invent a polymer that can be a substitute for a natural material such as wood, cotton, or leather. In order to market your invention you must create a commercial (Frames) or a poster (Share) for your polymer, explaining why you think it is a good replacement for the natural material.



# Frames Project Ideas—Science



## Astronomy

### Earth, Moon, and Sun

It has been many years since we landed on the moon. Since then the moon has lost popularity amongst space travel and knowledge. NASA has recently hired you to create a public service announcement (Frames) or interactive presentation (Share) to post on their web site on the origin of the moon and how it formed.

### Exploring Space

Imagine that you are a scientist planning the first human expedition to Mars. The government will not fund the project until they have ample information. You will need to create a video (Frames) or interactive simulation (Share) for them about some of the major challenges that such a mission would face and provide possible solutions. **Think about the physical stresses of space travel and how the crew's basic needs will be met.**

### Solar System

You have been hired by an online intergalactic travel group to create a commercial (Frames) or a magazine advertisement (Share) for the inner planets other than Earth. Design a video for your selected planet, including basic facts and descriptions of places of interest. **Why would individuals choose to visit this planet over others?**

## Structure and Function in Living Systems

### Viruses, Bacteria, Protists, & Fungi

You are a detective for the Mold Prevention Agency and have been assigned to create a "Wanted" commercial (Frames) or poster (Share) for a mold that has been ruining food in kitchens. Present the mold as a "criminal of the kitchen". Include detailed descriptions of the mold's physical characteristics, what it needs to grow, how it grows, and any other details that will help families identify this mold. Propose ways to prevent new molds from growing in kitchens.

### Invertebrates

As a television reporter, you are covering a story about a giant squid that has washed up on the local beach. When you arrive there are scientist swarming the creature. Create a news segment (Frames) or newsletter (Share) describing the discovery, as well as how scientists classified the animal as a squid.

### Vertebrates

As an ornithologist for the San Diego Zoo you have decided to create an informational video (Frames) or interactive presentation (Share) for the kiosk at the large bird exhibit. This video should inform visitors about adaptations that enable a large bird to fly.

### Cells

Combining music and animation can help people remember ideas and information. In the tradition of School House Rock, write a song about the structure and function of plant or animal cells. Then, create an animated short segment to air between children's programming (Frames) or a comic strip to publish in a children's magazine (Share).

## Structure and Function in the Human Body

### Bones and Muscles

The local cable network is looking to create a series of informational pieces on personal health. They feel it is important to educate the community on the functions of bones and muscles for proper health. Create an animation to be viewed on the local channel (Frames) or an interactive document to be placed on their web site (Share) comparing the characteristics of cartilage with the characteristics of bones. Be sure to explain the advantages of both types of materials.

### Nervous System

As a brain researcher it is important to understand the relationship of the right and left halves of the brain. You decide to create a public service announcement (Frames) or newsletter (Share) for individuals to better understand how their brain functions. Compare the functions of the left and right halves of the cerebrum. **Discuss what kinds of mental activities each half controls as well as which side of the body it controls.**

### Genetics

Imagine you just found out that you have an identical twin who was raised in another country. Create a video (Frames) or brochure (Share) for them of what you think they would be like. Be sure to include information about what you think they look like, their interests, and unique characteristics they may have. **Does environment play a role in any of these?**

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# Frames Project Ideas—Social Studies

Students can use Frames to create animated news broadcasts, digital stories, video biographies, and more to explore the social studies curriculum.

## Geography

### Interpreting Data

The ebb and flow of people into and out of urban centers can reveal some interesting cultural and economic trends. The U.S. Census is looking for trends in the following cities: New York, San Francisco, Dallas, Atlanta, Seattle, Denver, Los Angeles, and Detroit. Create an animation on how the trends you cover may influence your decision on where to move after 12th grade.

### Diversity

Since the 16th century, immigration has played a major role in the United States. The mayor of your town is looking to celebrate the diversity of the citizens and wants to share their stories through the local cable channel. He has hired you to create a digital story based on an interview with a local individual who has migrated to the United States.

### Sites of Interest

The online travel resource Travelocity is looking to add digital guidebooks to their site. Visitors will download the animations to handheld devices and phones to use when traveling to a chosen destination. Create an animation, in the form of a visitor's guidebook, highlighting your region's unique physical and human characteristics.

## American History

### Declaration of Independence

You're a teacher during colonial America. During this time the colonists are striving for independence from Britain. The youth sometimes get caught up in the turmoil, and many do not understand what's going on. You decide to create an animated children's version of the Declaration of Independence. **What should colonial youth know about the Declaration of Independence?**

### Jacksonian Era

You're a member of one of the following groups: common people, states' rights supporters, rich and well-born, or Native Americans. During this time of change in America, you have been asked to document what your group's life was like during the Jacksonian Era. Create a video journal assessing Jackson's presidency from the perspective of your group. **What was life like during Jackson's presidency?**

### Immigration

It is the dawn of the 20th century. You're an Italian, Jewish, Chinese, or Mexican immigrant leaving your country to start a new life in America. The American government has chosen to implement a new program for all incoming immigrants titled "Journey into America". You will be asked to create a digital scrapbook documenting your experiences as an immigrant to preserve your story for future generations. **What was your experience as an immigrant like in America at this time?**

## Medieval History

### Africa

You are a traveler (a merchant, a scholar, or some other interesting and realistic character) to the Songhai empire during the rule of Askia Mohammad Toure (1493 - 1538 c.e.). During this time, the empire is experiencing a golden age, a time of great prosperity and achievement. Describe your most exciting and interesting experiences through a travel journal. **How is the time of Askia Mohammad a golden age?**

### Japan

You are a daimyo, a warrior-lord in 14th-century Japan. Create an animated handbook to instruct new samurai who come to fight for you. **What must a samurai know in order to be successful?**

### Europe

You have been asked to write a narrative about the European Age of Exploration (1418 - 1620) as a children's book. Create an animation about the voyage of one ship across the Atlantic Ocean to the "New World." **What successes and challenges did European explorers face?**

## Ancient Civilizations

### Silk Road

You are a merchant traveling the Silk Road in northern China during the Han Dynasty. Along the way you meet many interesting people and trade for goods from around the world. Create a digital story of your adventures to share with generations of people to come. **What was life like along the Silk Road?**

### Roman Empire

You are a scholar traveling around what used to be the Roman Empire in the year 500 c.e. The empire has fallen and you are writing an eulogy to commemorate the achievements of the Romans. Create a digital story for your eulogy. **What are the lasting contributions of the Roman Empire?**

### Indus Valley

You have been hired to complete a news segment for *Archaeology Today* TV that highlights the archaeological discoveries made at Harappa and Mohenjo-daro. **What was daily life like in the Indus Valley civilization?** Describe and analyze artifacts found at both Harappa and Mohenjo-daro. Some examples might include jewelry, games, statues, or buildings.



# Frames Project Ideas—Social Studies



## Economics

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### Choropleth Maps

Gross Domestic Product (GDP), a basic measure of economic output, is the total market value of all final goods and services produced in an economy in a given year. Geographers apply a spatial perspective to economic and social data using choropleth maps. A choropleth map shows differences between areas. The web site [economist.com](http://economist.com) has hired you to create a choropleth map animating the components of Gross Domestic Product, using the flow of product approach. **How can a nation increase its GDP?**

### Government's Role in Economy

In order to ensure and support economic and political freedom, the founders of our nation envisioned a very limited role for the government in economic affairs. Citizens, interest groups, and political leaders often disagree about how involved the government should be in economic activities. A local outreach group is looking to educate their community on the role the government plays. Create an informational video to broadcast on the local cable channel about the role you think the government should play in the economy.

### Industrial Revolution

The Industrial Revolution marked a major turning point in human history, influencing nearly every aspect of daily life. The History Channel has hired you to create a segment for their latest documentary on the Industrial Revolution. **Why was the concept of division of labor utilized during the Industrial Revolution?**

## Civics/Government

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### Bill of Rights

As citizens of the United States, we have an obligation to champion the ideas put forth in the Constitution and Bill of Rights. While we may not necessarily agree with all components of government in its ideal or current form, we are still responsible for the upkeep and improvement of modern society. The U.S. government is looking to post a video on YouTube around the idea of citizenship and responsibility. Create an animation about the responsibilities we have as U.S. citizens in regards to these rights.

### Democracy vs. Republic

The Roman Republic and the Athenian (Greek) Democracy are the foundations for most modern government structures. CNN news has hired you to create a newscast to educate individuals unsure of the difference between the two. Compare and contrast a Republic government with a Democratic government. **How does the structure of the United States government reflect these two foundations?**

### Natural Rights

Most people in the American colonies believed that everyone had a right to life, liberty, and property. These rights were called **natural rights**. (Sometimes these are now called basic rights or fundamental rights.) The Founders of our country used these ideas when they developed our government. Your local news station is looking to have a special feature next month on civil liberties and would like for you to create a news segment on natural rights. **What might life be like in a state of nature?**

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# Free Resources



## Connect • How do you engage, create, and share?

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Free!

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## Trading Post • The place to find and share integration ideas

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Free!

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Free!

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