

ADVANCED LEARNING LABS

Collaboration between NC Department of Public Instruction and AIG Teachers across the state
TO ENGAGE, ACTIVATE, AND GROW OUR STUDENTS

GRADES

8-9

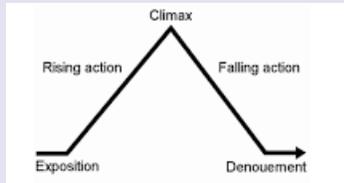
Structure



ENGLISH LANGUAGE ARTS

This illustration outlines the traditional plot structure for a story:

Some authors, however, choose to structure a story differently by sequencing events in a non-linear format or by manipulating time to create effects such as mystery, tension, or surprise.



Read William Faulkner's short story "A Rose for Emily" several times and analyze the plot structure: <http://www.cje.ids.czest.pl/biblioteka/7117936-A-Rose-for-Emily.pdf>

Create a diagram that illustrates the plot structure and label the parts of the plot. In a paragraph, explain the effect the author's choice of sequencing has on the reader.



SOCIAL STUDIES

A common phrase that is sometimes heard in movies is: "I will sue you!" What exactly does that mean? In the United States, the judicial system is structured with separate criminal and civil courts, while in many countries these courts are combined.

Follow the link to the American Bar Association's *How Court Works* website and explore the topics on that page to analyze the structure of these two different courts: <https://bit.ly/2OIUmSC>

- What is the purpose of each court?
- How is each structured?
- What similarities and differences are there between the two systems?
- What are the advantages and disadvantages of having separate systems?

Use a format of your choice to present your analysis of the U.S. civil and criminal court systems.



SCIENCE

The water crisis in Flint, Michigan began in 2014 when the city switched its drinking water supply in a cost-saving measure. Inadequate treatment and testing of the water led to water quality and health issues for the families that live in Flint.

In NC, many residents get their water from a community water system. Each community water system providing year-round service to more than 15 households or more than 25 people must make a water quality report available to customers by July 1 each year. To learn how a water quality report is structured and how to read it: <https://bit.ly/2CYzDln>

Find two water quality reports online, including one from your community, and compare their water quality. Structure the information into an infographic so that it would be easy to understand. Share with friends and family.



MINDFULNESS

Over the last few months the structures or routines in our everyday lives changed dramatically. Getting up, going to school, and eating dinner with family are a few examples of structures that help keep our lives 'normal.' As you reflect on the time spent distance learning, which structures did you most miss? What new structures did you develop?

Use the link and other internet resources to explore tips for successful distance learning: <https://bit.ly/3ebTdxF>

Create an infographic you can give other teens who might be struggling due to the lack of structure while distance learning. You can use a program like Piktochart or create your own design: <https://bit.ly/303ZbfM>



LOGIC PUZZLE

Looking at the structure of a sequence helps us determine the pattern.

What number is missing from this sequence?
Explain the pattern.

1, 3, 4, 3, 9, 5, 16, 4, 25, ____, 36, 3



FIELD STUDIES

North Carolina is made up of 100 counties. Each of these has its own town or city that is the governmental center of the county, which is called a county seat. Some states, however, are not structured into counties. Do other countries have counties?

Read this article to get an introduction to how local governments are structured in other states and nations: <https://www.nationalgeographic.org/encyclopedia/county/>

After reading the article, look up at least ten states and ten countries to discover how their local units of government are structured. Design and create a way to share this information with others.



RESEARCH EXPLORATIONS

The structure of our atmosphere is made up of four main layers: troposphere, stratosphere, mesosphere and thermosphere. These layers are based on the range of temperatures within them. You can learn more about the layers of Earth's atmosphere here: <https://climate.ncsu.edu/edu/Structure>

Scientists launch balloons to collect data to learn more about the different layers of the atmosphere. Use the virtual ballooning tool to collect data about altitude, temperature, and air pressure: <https://scied.ucar.edu/virtual-ballooning>

Create a chart showing the layers of the atmosphere and a description of each layer. The chart should include the change in temperature and air pressure as the altitude changes for each layer.



MATH

The Gateway Arch is a 630-foot monument in St. Louis, Missouri, United States. Read more about the Gateway Arch by clicking on the link here: <https://www.gatewayarch.com/>

The Gateway Arch's curve can be represented by the equation: $H = -0.00635x^2 + 4.005x - 0.07875$, where H is the height of the arch and x is the distance from one of the bases.

- Where would you stand if you wanted to stand under the highest part of the arch?
- How far would you be from the base?

You and your friend want to stand where the height of the arch is 10 feet. If you stand in two different spots, what is the distance between you and your friend? Explain your answer.



North Carolina Department of
PUBLIC INSTRUCTION



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Structure Reference Guide

K-1 Logic Puzzle:

Solution: Kayla 56, Matt 43, Maria 12, Theo 90

2-3 Logic Puzzle:

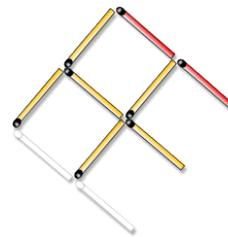
Watch the video for a solution: <https://mindyourdecisions.com/blog/2018/08/27/can-you-solve-these-matchstick-puzzles/>

4-5 Logic Puzzle:

Turn the fish with 3 matches:

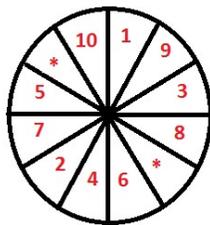


Turn the fish with 2 matches:



6-7 Logic Puzzle:

Solution:



WHEEL OF MATH

8-9 Science:

Infographic Resource link: <https://piktochart.com/blog/how-to-create-an-infographic-and-other-visual-projects-in-5-minutes/>

8-9 Logic Puzzle:

Solution: 4

10-12 Logic Puzzle:

Solution: 24

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Structure NC Standards Alignment

Grade Span	English/ Language Arts	Social Studies	Science	Math
K-1	RL.1.3	K.C&G.1.2 1.C&G.1.2 K.C&G.1.1 1.C&G.1.4	1.E.2.2	NC.1.NBT.3 NC.1.NBT.4
2-3	RL.3.5	3.E.1.2 3.E.1.2	3.L.2.2	NC.3.OA.8
4-5	L.5.5	5.G.1.1 5.G.1.1 5.G.1.4	5.P.3.2	NC.4.OA.1
6-7	RL.7.5	6.C&G.3 6.C&G.1.1	6.P.2	NC.6.EE.2 NC.6.EE.3 NC.6.EE.4 NC.7.EE.2 NC.7.EE.3
8-9	RL.9-10.5	F.P.C&G.2.1 CL.C&G.4.1	8.E.1.4	NC.M1.A-CED.2
10-12	RI.11-12.5	F.P.C&G.1	P.Sc.3.1	NC.M3.G-MG.1