

THE RISE OF THE LEGENDS

Novel Study & Unit Study

GRADES 6-8



UNIT STUDY

UNIT STUDY: Multi-Subject Novel Study	NOVEL: The Rise of The Legends by Jake Zortman
SUBJECTS: ELA, Physical Science, Algebra, Social Studies, Technology	GRADES: 6th - 8th
PROJECT: Build a Radio	UNIT DURATION: 4 Weeks

Topics

All Weeks: ELA

- Genre, plot, characters, and themes
- Connections to real-life situations

Week 1: Physical Science

- Types and characteristics of waves
- FM vs AM radio waves

Week 2: Algebra

- Solve for missing values in the wavelength formula
- Use formulas to calculate wave velocity and frequency

Week 3: Social Studies and Technology

- The Tuskegee Airmen
- The Civil Rights Movement

Week 4: Capstone Project

- Build a radio
- Presentation

Assignments

(in appendix)

English Language Arts

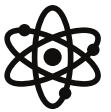
Physical Science




Math

Social Studies

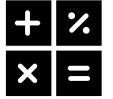
Project

Week 1: Science Focus



DAY	SUBJECT	LEARNING OBJECTIVE	ACTIVITY
Monday	ELA	Apply an understanding of genres by categorizing new texts into appropriate genres and justifying their choices based on specific textual evidence.	<ul style="list-style-type: none"> Introduce the author and book. Read the Prologue together. Compare the fiction genre to the science fiction genre in a class discussion, and use textual evidence to categorize the genre of The Rise of The Legends. Assign weekly reading: Ch. 1-20
Tuesday	Science	Distinguish between transverse and longitudinal waves by identifying key characteristics and providing examples of each.	<ul style="list-style-type: none"> Discuss parts of a wave and types of waves. Demonstrate transverse waves and compressional waves with a coil (Slinky™). Watch Longitudinal Waves Video Watch Transverse Waves Video ELA Assignment: Words to Know - Week 1 <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Longitudinal:</p>  </div> <div style="text-align: center;"> <p>Transverse:</p>  </div> </div>
Wednesday	Science	Define modulation and how it applies to FM and AM radio waves.	<ul style="list-style-type: none"> Review waves and radio waves. Watch this video on radio waves Discuss the difference between FM radio waves and AM radio waves. Science Assignment: Radio Waves <div style="text-align: right;">  </div>
Thursday	Science	Choose a STEM topic related to radio waves, formulate research questions, conduct research, and present information gathered through your research.	<ul style="list-style-type: none"> Brainstorm topics related to waves and radios about which students would like to know more Science Assignment: Choose your topic
Friday	ELA	Compare and contrast two or more characters within a text, comparing the challenges each encounter.	<ul style="list-style-type: none"> Discuss the setting. Discuss how each of the Legends might feel like an outsider and the impact this may have on their sense of identity. ELA Assignment: Character Analysis: Mikaela, Jorge/George, and Collin

Week 2: Math Focus



DAY	SUBJECT	LEARNING OBJECTIVE	ACTIVITY
Monday	ELA	Identify and describe the key elements of a plot, including exposition, rising action, climax, falling action, and resolution.	<ul style="list-style-type: none"> Discuss initial reactions to the book. Define Plot, Exposition, Rising Action, Climax, Falling Action, and Resolution. Make predictions of plot development. ELA Assignment: Plot Diagram Prediction Assign Weekly Reading: Ch. 21-40
Tuesday	Algebra	Solve for a variable in a formula.	<ul style="list-style-type: none"> Model solving for a given variable in a relationship of direct proportionality. Math Assignment: Solve for a variable in a formula
Wednesday	Algebra	Solve one-step mathematical and real-world problems using the wavelength formula.	<ul style="list-style-type: none"> Define all variables in the wavelength formula. Math Assignment: Solve mathematical problems using the wavelength formula
Thursday	Algebra	Solve 2-step real-world problems using the formulas for frequency and wavelength.	<ul style="list-style-type: none"> Math Assignment: Solve 2-step problems using the formula for velocity and the formula for wavelength
Friday	ELA	Identify examples of the theme "Be Legendary" in the novel. Reflect on the relevance of this theme in your own life and in society.	<ul style="list-style-type: none"> Discuss the major themes in the book. Discuss the theme of being legendary and use the following quote by Mikaela in Chapter 39. "You decided to change, to become the best version of yourself. The only way you could do that was to destroy what you had been and destroy Chaos. That was all you, and it took courage. Being a legend isn't about being famous; it's about being the best person you can be." Brainstorm characteristics that make someone legendary. ELA Assignment: Write a 4-paragraph essay on what it means to be legendary

Week 3: Social Studies Focus



DAY	SUBJECT	LEARNING OBJECTIVE	ACTIVITY
Monday	ELA	Compare and contrast the character traits and character development of two or more characters in a text.	<ul style="list-style-type: none"> Discuss the role of peer pressure on Thomas and how it relates to peer pressure at school. Social Studies Assignment: Character Analysis of Malcolm and Thomas Assign Weekly Reading: Ch. 41-51
Tuesday	Tuskegee Airmen	Connect the legacy of the Tuskegee Airmen to the broader Civil Rights Movement.	<ul style="list-style-type: none"> Introduce the Tuskegee Airmen. Watch this video from the History Channel Introduce the Assignment to create a museum exhibit centered on the Tuskegee Airmen. Social Studies Assignment: Museum Exhibit
Wednesday	Civil Rights	Connect the legacy of the Tuskegee Airmen to the broader Civil Rights Movement.	<ul style="list-style-type: none"> Discuss the role of the Tuskegee Airmen in the Civil Rights movement, specifically during the spring of 1945 at the Freeman Field Army Base. Project Assignment: Museum Exhibit
Thursday	History of the radio clock	Understand the development of radio technology.	<ul style="list-style-type: none"> Discuss the technological history of the radio. Highlight changes to the radio during the 1940's such as the invention of the clock radio. Project Assignment: Museum Exhibit
Friday	ELA	Identify and describe the key elements of a plot, including exposition, rising action, climax, falling action, and resolution.	<ul style="list-style-type: none"> Complete the actual Plot Diagram of the story and compare it to your prediction Plot Diagram. ELA Assignment: Plot Diagram

Week 4: Project



DAY	SUBJECT	LEARNING OBJECTIVE	ACTIVITY
Monday - Thursday	STEM	<p>Understand the basic components of a radio.</p> <p>Understand how the components of a radio interact to receive radio signals.</p> <p>Design and demonstrate how radio waves are generated, transmitted, and received, using appropriate tools.</p>	<ul style="list-style-type: none"> • Project and Presentation • Build a simple AM/FM radio.
Friday	Presentation	<p>Develop the ability to clearly and effectively communicate ideas and information to an audience.</p>	<ul style="list-style-type: none"> • Project and Presentation

Appendix

Rise of the Legends Novel Study
English Language Arts Assignments

NAME:

Character Analysis - Week 1

Mikaela, Jorge, and Collin all face different challenges in the beginning of the story. Describe their challenges.

Character: Mikaela

Challenge:

Textual Evidence:

Page:

Character: Jorge/George

Challenge:

Textual Evidence:

Page:

Character: Collin

Challenge:

Textual Evidence:

Page:

Comparison: What do their challenges have in common?

NAME:

Plot Diagram Prediction - Week 2

Rising Action:

Rising Action:

Falling Action:

Exposition:

Resolution:

Define Exposition:

Define Rising Action:

Define Climax:

Define Falling Action:

Define Resolution:

NAME:

Essay - Week 2

What does it mean to be legendary?

Write a 4-paragraph essay about two characteristics that make one of the characters of the book legendary. Use examples from the book.

Use the prompts and space below to plan and write your essay.

Introduction:

Thesis Statement:

Introduction to character and two characteristics.

Body Paragraph 1:

Characteristic 1:

Quote from the book:

Body Paragraph 2:

Characteristic 2:

Quote from the book:

Conclusion:

Closing Statement:

NAME:

Plot Diagram - Week 3

Rising Action:

Rising Action:

Exposition:

Falling Action:

Resolution:

NAME:

Character Analysis - Week 4

Identify the character traits of both Malcolm and Thomas. Analyze their character development throughout the book by identifying key moments of change and explain how these moments influence the character's actions in the story.

Character: Malcolm

Character Traits:	Evidence:	Page:
Moment of change:	Evidence:	Page:
Resulting Action:	Evidence:	Page:

Character: Thomas

Character Traits:	Evidence:	Page:
Moment of change:	Evidence:	Page:
Resulting Action:	Evidence:	Page:

How are the actions and consequences of Malcolm and Thomas similar and how are they different?

Similar:

Different:

Appendix

Rise of the Legends Novel Study
Physical Science Assignments

NAME:

Words to Know - Week 1

Research each word, write down a definition, and draw and label an illustration.

Word	Definition	Illustration
Wave		
Trough		
Crest		
Transverse Wave		
Longitudinal Wave (AKA Compression)		
Frequency		
Amplitude		
Wave Length		
Wave Speed		

NAME:

Radio Waves - Week 1

Research each word, write down a definition, and draw and label an illustration.

Define Modulation:

Define FM:

Define AM:

Draw FM waves:

Draw AM waves:

**Draw an FM wave that could
communicate: 1 0 0 1 0 0 1**

**Draw an AM wave that could
communicate: 1 0 0 1 0 0 1**

NAME:

Choose Your Topic - Week 1

Research one or more of the following topics and make a 5-minute presentation on what you learned.

Science	1. Wave interactions	2. The electromagnetic spectrum	3. Wave-particle duality
Technology	4. Ham radios	5. Crystal Radios	6. Transistor Radios
Engineering	7. Antennas and receivers	8. Resistors and amplifiers	9. Capacitors and batteries
Math	10. Wave equations	11. Binary code and mod 2	12. Sin and cos waves

Appendix

Rise of the Legends Novel Study
Social Studies Assignment

NAME:

Museum Exhibit Design:

Design a hypothetical museum exhibit on the Tuskegee Airmen, including descriptions of artifacts, images, and interpretive text that educates visitors.

1. Topic: Tuskegee Airmen

2. Exhibit Title: Create a compelling title for your exhibit that captures the topic and piques the interest of visitors.

3. Exhibit Overview: Write a brief summary (2 paragraphs) that introduces the topic of the exhibit. This should provide visitors with an understanding of what the exhibit is about and why it is important.

4. Artifact Descriptions (3 Artifacts):

- Identify three historical objects, or artifacts, from this time period that you would like to include in the exhibit. Research the objects and make a plan to create a model of each one.
- For each artifact, write a description (2-3 sentences) explaining what it is, its historical significance, and how it relates to the overall theme of the exhibit.

5. Visual Elements:

- Include at least five images (photographs, illustrations, maps, etc.) that enhance the understanding of the exhibit's topic.
- Each image should be accompanied by a caption that explains its significance and connection to the exhibit's theme.

6. Exhibit Floor Plan: Create a floor plan of the exhibit, showing how the artifacts, images, and visual elements will appear.

7. Bibliography/References:

- Provide a list of sources.
- Ensure all information in your exhibit is accurate and based on credible sources.

8. Model:

- Create a model of each artifact. Use clay, paper mache, printed materials, cardboard, or any other materials to create your models.
- Create a model of your exhibit, complete with the title, the overview, all artifacts and descriptions, and display all visual elements.

9. Creativity and Originality:

- Ensure your exhibit is creative and original. Think about how to present the historical topic in a way that is both informative and visually appealing.
- Consider unique ways to draw visitors' attention and make the exhibit memorable.

NAME:		
Museum Exhibit Plan		
Exhibit Title:		
Exhibit Overview: (2 paragraphs)		
Artifact 1 Title:		Draw Artifact 1:
Artifact 1 Description:		
Artifact 2 Title:		Draw Artifact 2:
Artifact 2 Description:		
Artifact 3 Title:		Draw Artifact 3:
Artifact 3 Description:		

**Visual
Elements:**

**Exhibit
Layout:**

Rise of the Legends Capstone Project

Build a Radio

Objective: You will build a simple AM/FM radio. This project will help you understand the basic components of a radio and how they interact to receive radio signals.

Materials:

- AM/FM Radio Kit (available online or at electronics stores)
- Wire cutters/strippers
- Screwdriver
- Soldering iron and solder (optional)
- Small speaker or headphones
- 9V battery (or other power source as required by your kit)
- Insulated copper wire
- Alligator clips (optional)
- Instruction manual (usually included with the kit)

Step-by-Step Instructions:

1. Unpack the Kit:

- Carefully unpack all the components in your AM/FM radio kit. Lay them out so you can see everything you'll be working with.
- Read through the instruction manual included in your kit to familiarize yourself with the parts and the overall process.

2. Identify the Components:

- Learn the names and functions of each component, such as resistors, capacitors, transistors, and the antenna. The manual should include diagrams or images to help you identify them.
- Make sure you have all the necessary components before starting.

3. Assemble the Circuit Board:

- Follow the instructions in the manual to place each component on the circuit board. Usually, this involves inserting the components into the correct holes and either soldering them in place or securing them with screws.
- Take your time to ensure that each component is placed correctly, as even a small mistake can prevent the radio from working.

4. Connect the Antenna:

- Attach the antenna wire to the designated spot on the circuit board. The antenna is crucial for picking up radio signals, so make sure the connection is secure.
- If your kit allows for it, you can experiment with different lengths of wire to see how it affects signal reception.

5. Connect the Speaker or Headphones:

- Connect the small speaker or headphones to the output terminals on the circuit board. This is how you will hear the sound from your radio.
- Ensure the connections are tight, as loose connections might cause the sound to be weak or distorted.

6. Power the Radio:

- Attach the 9V battery (or the power source specified by your kit) to the power terminals on the circuit board.
- Make sure the positive and negative connections are correct to avoid damaging the components.

7. Test the Radio:

- Turn on the radio by flipping the switch or connecting the battery.
- Slowly adjust the tuning dial or knob to find a radio station. You should hear sound through the speaker or headphones.
- If you don't hear anything, double-check your connections and the placement of components.

8. Troubleshoot (if necessary):

- If the radio doesn't work, review the instructions to make sure all components are correctly placed and connected.
- Check for loose wires and poor solder joints (if you're using solder); ensure the battery is connected properly.

9. Finalize Your Project:

- Once your radio is working, you can secure all the components and wires so that nothing moves out of place.
- You might also want to build a simple case or box to protect the radio components.

Safety Tips:

- Be careful when using a soldering iron. Always work in a well-ventilated area and avoid touching the hot tip.
- Make sure to follow the kit instructions closely to avoid damaging the components

Presentation:

- Prepare a brief explanation of how your radio works, including the function of the main components.
- Be ready to demonstrate your radio to your classmates.
- Explain any problems you encountered during the building process and how you solved them.
- Conduct a question and answer session

Scoring Guide

Self Assessment:

- **Excellent** (5 points) - Superior performance
- **Great** (4 points) - Meets expectations, needs a few minor improvements
- **Satisfactory** (3 points) - Meets basic requirements, needs improvement
- **Needs Improvement** (2 points) - Doesn't meet requirements, needs significant improvement
- **Not Satisfactory** (1 point) - Incomplete or inaccurate

Content: _____

Accurate, thorough, comprehensive.

Organization: _____

Logically organized with an introduction, body, and conclusion.

Delivery: _____

Confident, clear, engaging body language and tone.

Visual Aids: _____

Well designed, relevant, engaging.

Comprehension: _____

Provides accurate and thoughtful answers to questions.

Instructor Assessment:

Content: _____

Accurate, thorough, comprehensive.

Organization: _____

Logically organized with an introduction, body, and conclusion.

Delivery: _____

Confident, clear, engaging body language and tone.

Visual Aids: _____

Well designed, relevant, engaging.

Comprehension: _____

Provides accurate and thoughtful answers to questions.