Title: THOMAS EDISON by Shannon Zemlicka

Subject Matter Emphasis and Level: Reading - 4th Grade

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Brief Description of the Lesson/Unit:

Students will read the biography of THOMAS EDISON. They will identify and discuss the character traits that shaped Edison’s life and ultimately led to his numerous inventions. After reading, they will determine his top three inventions and why and how these were the most important. They will create a timeline of Edison’s life.

SD Content Standards:

4.R.4.1 Students will read a biography, learning what makes up this genre. They will access, synthesize, and evaluate information in this biography with other materials. They will use text features to categorize and gain insight into the meaning. They will compare and contrast and make inferences.

Stage 1: Identify Desired Results

1. What enduring understandings are desired?

Students will understand that a biography tells about an individual’s life and achievements. They will be able to see and understand that being “curious,” asking “why,” coupled with an intense desire to understand how things work and how something can be made to make life better, are traits of an inventor. They will be able to
discuss those traits that made Edison famous – positive ones- along with those that created a less than positive family life – negative ones. They will understand that these were all part of his personality that drove him to success. They will evaluate the positive and negatives of the inventions Edison is famous for and which ones made the greatest impact for today’s world. They will develop some technical vocabulary and scientific reasoning as they attempt to understand Edison’s invention of the light bulb and why it finally burned successfully.

2. **What essential questions will guide this unit and focus teaching/learning?**

What was Edison like as a young person – his character traits, schooling, activities, and experiences that shaped his personality and desire to invent.
What drove him to invent?
How did he decide what projects to work on?
Students will define his work ethic and his expectations for the workers in his own company.
What impact has Edison’s inventions had on our society today?
What about movies and the fact that Edison is the “father of motion pictures”.

3. **What key knowledge and skills will students acquire as a result of this unit?**

Students will learn those traits necessary to pioneer and preserve – specifically invent. They will be able to compare Edison’s experiences to other inventors and individuals who have made a difference against great odds but never given up. They will see the value of positive vs negative forces in being creative. They will be able to compare and contrast other inventor’s inventions. They will be able to develop a timeline. They will develop a list of vocabulary words that relate to the inventions involving electricity and the light bulb and include character traits that Edison demonstrated.

4. **What prior learning, interests, misconceptions, and conceptual difficulties might be brought to this unit?**

Prior learning would include students’ knowledge of electricity and the light bulb and especially movies.
There can be a discussion of how much longer the light bulb, as we know it, will be of value and how inventions evolve and or become obsolete.
Students can investigate what motion pictures really are and the problems initially inherent in making them “move”. How has this been improved from when Edison’s movies could be viewed for 5 cents by one person at a time?
Misconceptions may arise in how inventions develop – the process and time along with how many people may have added to the idea until one person finally develop it.
They will notice what inventions Edison made from the beginning to the final product.
Difficulties in the technical knowledge involved in many inventions – steps, materials, experiments required to develop the final product.
There may be a great amount of interest in Edison’s Menlo Park laboratory and what was in it necessary for creating new inventions. How did he acquire a labor force and what were the requirements to work for him?

**Stage 2: Determine Acceptable Evidence**

1. **What evidence will show that students understand?**

   **Performance Tasks:**

   Students will create a timeline of Thomas Edison’s life, including his major inventions.

   Students will read in pairs the five chapters. They will use the literature circle format to read and discuss each chapter. After reading they will do their “jobs”. JOBS include – word wizard, quotable quoter, questioner, visualization, summarizer, and connector.

   Students will be able to choose:
   - Work on the internet to find all they can about Edison’s family
   - Draw a picture of one of his inventions
   - Choose a character trait and illustrate it
   - Draw a picture of the first motion picture machine – a kinescope;
   - Show Edison’s favorite invention - the phonograph and explain how it works
   - Discuss the word “deaf” – what is the meaning, how does it apply to Edison and how did it happen?
   - Write about it, draw several pictures illustrating its meaning in Edison’s life.

   - Write a poem
   - Create a news broadcast
   - Write an editorial
Other Evidence:
Quizzes, Tests, Prompts, Work Samples (summarized):

Students will write a summary of Thomas Edison on a ”light bulb” pattern. They will use any material or notes they have in their folders to tell about his life and inventions. They will include one paragraph explaining their own reactions to his story. These will be hung in the hall.
Students will make a timeline to hang on the wall. They will decide what should be included and place each item in the correct year.
Students will take a Reading Counts quiz on the book. They will be required to pass the test with a 7 out of 10 right or better.

Unprompted Evidence: (observations, dialogues, etc.)

I will watch the students working and listen to them interact. I will ask them questions at certain times to see if they are on track. Sometimes we will work together on reading or completing an assignment.

Student Self-Assessment

At certain times the student will be asked to assess himself using who, what, when where, and why questions that he/she will answer to determine if there is adequate comprehension of the material.

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Stage 3: Plan Learning Experiences and Instruction

1. What sequence of teaching and learning experiences will equip students to develop and demonstrate the desired understandings?

   Major Learning Activities:

   Step by step literature circle tasks that are developed one by one
   The correct pronunciation and definitions of vocabulary words necessary for comprehending this book including the scientific and technical terms involved in the inventions,
   Oral discussion
   Literature Circle Jobs for understanding
Materials & Resources (technology & print):

- Thomas Edison – by ShannonZemlicka
- Thomas Edison, an Inventor – Margaret Brown

Websites
- [www.tomedison.org](http://www.tomedison.org)
- [www.pbs.org/wgbh/amex/edison/](http://www.pbs.org/wgbh/amex/edison/)
- [www.nps.gov/ediso/home/htm](http://www.nps.gov/ediso/home/htm)
- [www.edisonnj.org/menolopark/taemenlo/asp](http://www.edisonnj.org/menolopark/taemenlo/asp)

Management:

- **Paired Reading**
  - Small Group discussions – literature circles

Support Services and Special Teacher Notes:

- Small group, Title 1 Teacher
- Librarian

Extensions and Adaptation:

- Type Here.

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**Stage 4: Plan Differentiation**

2. **What differentiated instruction strategies are being used in this lesson/unit?**

**Differentiated Process:**

Choose one:
- Read the book Chapter by chapter by yourself. Meet with a small group to discuss after each chapter.
- Read with a partner – each chapter with discussion after each one.

**Differentiated Content:**
Several different books of Thomas Edison’s life are available for students to read, representing three reading levels.

The websites contain a variety of vocabulary and text.

Vocabulary words are selected for several reading levels.

**Differentiated Product:**

Choose one:
- A written report.
- A written report including a picture.
- A reaction paragraph of Edison’s life including a picture of one invention.
- A paragraph of Edison’s young life, family, inventions, and final years. Display each with a picture to go with it.