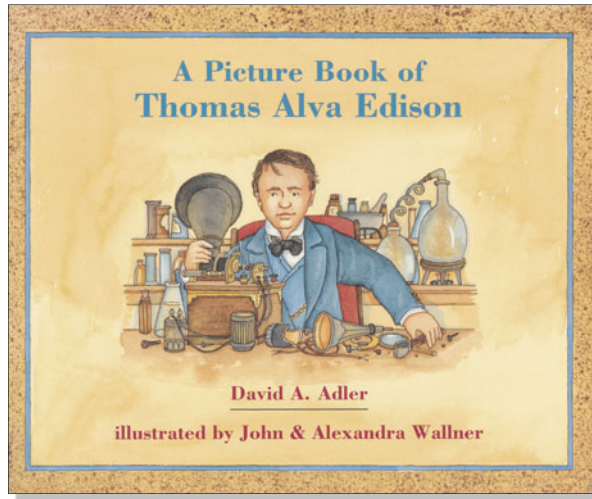


Thomas Alva Edison



Leveling Systems

Avenues: ●● More Fluent Readers
DRA: NF38
Fountas and Pinnell: M
Lexile: 730

This biography presents the life of Thomas Alva Edison. The clear, detailed illustrations support the challenging text, and allow students to draw conclusions about this famous inventor. An author’s note and time line provide reference for the reader. *32 pages, 1302 words*

In This Guided Reading Lesson:

Skill Lessons:

Background and Vocabulary	Read the Book	Respond to the Book	Comprehension/ Critical Thinking
<p>Science Terms: chemical experiment generate invent laboratory</p> <p>Character Traits: curious genius odd restless</p>	<p style="text-align: center;">Spotlight STRATEGY</p> <p style="text-align: center;">Clarify Meaning</p>	<p>Thoughts About Genius: Qualities Statement</p> <p>Experiment Log: Invention Explanation</p>	<p>Make Comparisons (PDF)</p> <p>Relate Cause and Effect (PDF)</p>

Build Background

Experiment with Electricity Explain: Electricity is a form of energy. The energy can be used to power machines. Demonstrate the concept:

1. Turn out the lights.
2. "Charge" the comb or balloon by repeatedly running it against your hair or a sweater.
3. Touch the charged comb or balloon to the base of the fluorescent bulb until small sparks appear.

Explain: Electricity travels from the comb to the light bulb. It's the same when electricity travels through a power cord. Have volunteers repeat the experiment, handling the glass bulb carefully.

Materials

- hard rubber or plastic comb (rubber balloon will also work)
- fluorescent light bulb (not an incandescent bulb)

Build Vocabulary

Role-Play Scientists Read the following lab book excerpt as if you were a scientist. Pause to define the underlined words:

- ▶ April 1—I was in my laboratory, ready to try a new experiment. I thought if I mixed two chemicals, I could generate fire. What I really invented was a new shampoo!

Continue playing the role of the scientist as students ask you questions about your job and experiments. Then have them pretend to be scientists and write their own lab book entry about an experiment that went awry.

Character Traits Model sentences about traits:

- ▶ Sal asks many questions. He is curious.
- ▶ My friend gets good grades. She is a genius!
- ▶ My aunt does strange things. She is odd.
- ▶ My brother cannot sit still. He is restless.

Post sentence frames: _____ (does) _____. He/She is _____.
Then have partners use real, historical, or fictional characters to complete the sentences with different character traits.

Key Vocabulary

chemical
experiment
generate
invent
laboratory

Key Vocabulary

curious
genius
odd
restless

2 Read the Book

Independent Reading Have students read the book silently or to a partner. Observe as each student reads aloud.

- Use the **Good Reader Guide** on pages 7 and 8 to coach students as they read.
- **Spotlight Strategy: Clarify Meaning** Students may experience comprehension breakdowns when they encounter difficult words: (pages 3: *mill*; 5: *scarlet fever*; 8: *cellar*; 14: *devices*; 20: *fumes*; 24: *streetcar*). Remind these students to clarify meaning by using visuals, a dictionary, or asking for help.

3 Respond to the Book

Thoughts About Genius Post Edison's statement: *Genius is one percent inspiration and ninety-nine percent perspiration*. Explain this in a simple way, for example:

- ▶ **Edison was a genius, but it wasn't just because he was smart. He said that perspiration, or hard work, was much more important. His great ideas worked because he never stopped working.**

Have students brainstorm qualities they think are necessary to be a good student. Have them rank the qualities from most important to least important. Then have them come up with a new version of Edison's remark, such as: *Being a good student is fifty percent creativity and fifty percent hard work.*

Experiment Log Display a T Chart. Model how to complete the chart with information about Edison's experiments and their results.

Then have partners name one of Edison's successful inventions and explain how it has made life better today. For example: *Thomas Edison invented the lightbulb. Without it, we would need candles to read at night.*

Materials

- T Chart from *Picture It! Big Book*, page 20

Answers will vary. Sample response:

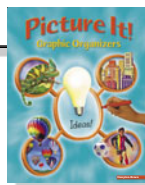
T Chart

Thomas Alva Edison

Experiment	Outcome
tried to hatch eggs	made a big mess
experimented with fire	burned down a barn
experimented with chemicals	set the train on fire
worked with a telegraph machine	invented the quadruplex
tried 3,000 different ideas to make lightbulbs	invented the lightbulb
tried to bring electricity to people	invented electricity generators

20

Use only a black dry-erase marker.



Picture It! Big Book, page 20

from Thomas Alva Edison

Take a Running Record		Number of Errors	Number of Self-Corrections
page			
3	Thomas Alva Edison was born on February 11, 1847, in Milan, Ohio. His parents were Samuel and Nancy Edison. Samuel Edison owned a mill which made wood shingles. Nancy Edison had been a teacher. Thomas was the youngest of their seven children.		
4	Thomas was curious and asked his parents many questions. If they didn't know an answer, he asked, "Why don't you know?" Thomas loved to experiment. He made a nest and filled it with goose and chicken eggs. He sat on the eggs to see if they would hatch. Of course they didn't. The eggs broke and ruined the seat of his pants.		
		Total	Total

Assess Fluency

Student reads with appropriate:

- expression
- intonation
- attention to punctuation
- rate
- phrasing

Assess Strategy Use

Self-Monitors:

- asks questions
- clarifies
- paraphrases
- uses visuals
- confirms word meaning
- uses punctuation clues
- uses signal words

Self-Corrects:

- asks questions
- rereads
- reads on
- searches for new clues
- adjusts reading rate
- translates
- reduces amount read

Calculate Accuracy Rate

$$(104 \text{ words} - \frac{\text{total errors}}{\text{total errors}}) \div 104 \text{ words} = \text{_____} \%$$

Determine Instructional Needs

<p>If Accuracy Rate Is —→ Then Have Student</p> <ul style="list-style-type: none"> <input type="checkbox"/> below 90% read a lower-level text <input type="checkbox"/> between 90–94% continue at this level <input type="checkbox"/> 95–100% read a higher-level text 	<p>Student needs more coaching in</p> <p>_____</p> <p>_____</p>
---	--

Good Reader Guide

Use these strategies to coach students as they read independently.

Text	Student Miscue	Coaching Strategies
The rocket is going very fast.	<p>The rocket is gro... going very fast.</p> <p>Hesitates or self-corrects after a miscue</p>	<ul style="list-style-type: none">• Observe or ask questions to discover the strategies the student is using, identify the strategy by name, and praise student's use of it. Then have student read on.
The shuttle orbits the Earth.	<p>The shuttle...?</p> <p>"Freezes" when faced with an unfamiliar or long word</p>	<ul style="list-style-type: none">• Prompt student to find clues in pictures and/or surrounding context.• Encourage use of cognates and/or word families to guess a meaning. Have student try the guess in the sentence.• If the word is phonetically regular, cover it and then reveal each syllable or letter pattern as student sounds out the word. Have student pronounce the word and try it in a rereading.• Have student skip the word and read on.
No one has been to Mars.	<p>Nobody has been to Mars.</p> <p>Substitutes an incorrect word that makes sense</p>	<ul style="list-style-type: none">• Ignore if the miscue does not affect comprehension.• Validate student's strategic use of picture or context. Point out print cues, such as first letters. As student sees that spoken and printed words do not match, ask him or her to self-correct.
There is no liquid water on the Moon.	<p>There is no little water on the Moon.</p> <p>Substitutes an incorrect word that does not make sense</p>	<ul style="list-style-type: none">• Direct attention to pictures or other cues in the text. Ask questions to help student revise the first reading independently.• Talk about pictures and context to make sure the word is in student's vocabulary. Then have student reread.

Good Reader Guide

Use these strategies to coach students as they read independently.

Text	Student Miscue	Coaching Strategies
Craters look like dark circles when you look up at the Moon.	Craters look like dark when you look up at the Moon. Skips important words	<ul style="list-style-type: none">• Repeat and ask: Does it make sense?• Read together; then have student start over.• Have student track the print and sweep a finger to the next line.
There are mountains on the Moon.	There...are mountains...on...the... Moon Reads slowly, word-by-word, without comprehension	<ul style="list-style-type: none">• Assign a book at an easier reading level, allowing student to build fluency and comprehension.• Recall the book's topic and/or title. Ask questions to tie the ideas in the text to the ideas in the preview.• Have student paraphrase small but meaningful chunks of text, relating it to own experience.
That's one small step for man, one giant leap for mankind.	That's one small / step for / man, one / giant leap for / mankind Reads aloud with poor phrasing	<ul style="list-style-type: none">• Highlight punctuation cues. Write out a section of the text. Demonstrate appropriate phrasing and help student mark the text to show how to group words. Then have student reread.• Relate text to student's personal experience to help student read with appropriate expression.
The Moon is full tonight.	TheMoonisfulltonight Reads quickly, without comprehension	<ul style="list-style-type: none">• Model slowing down and pausing to ask yourself questions periodically. Encourage student to apply these strategies.
The Moon is Earth's only natural satellite.	? Gets stuck; is unable to use any strategies	<ul style="list-style-type: none">• Ask questions to discover why student is stuck.• Suggest strategies and supply words.