

Innovations of the Second Industrial Revolution <https://www.sabes.org/pd-center/el>

Program: Abisi Adult Education	Class/Instructional Level: Intermediate/Pre-ASE GLE Range: GLE4-8 (STAR)
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PART 1: OVERVIEW
(This part is duplicated on the Scope & Sequence for this level.)

UNIT TOPIC/TITLE <ul style="list-style-type: none"> ▪ <i>Frame titles around topics relevant to adults and related to other content areas (e.g., civics/current events/social studies, science and technology, health, literature, workforce preparation, etc.).</i> ▪ <i>Aim for a pithy topic-related title that can be remembered and used by teachers when referring to the unit.</i> 	Innovations of the Second Industrial Revolution
TIME <ul style="list-style-type: none"> ▪ <i>Indicate the estimated # of hours (and weeks) required to complete the unit.</i> 	Days: 5-week unit (10 classes) Total Time: approximately 20 hours (2 hours for each class)
RATIONALE <ul style="list-style-type: none"> ▪ <i>Explain why this unit is important for adult learners (e.g. how it relates to typical goals of learners at this level).</i> 	<p>This unit explores the events and changes within the U.S. related to innovations that transformed the country from an agriculturally-based economy to an industrial giant. It will help students to understand how changes happened in the U.S. and provide a framework for thinking about how innovations might impact their lives in the future.</p> <p>Adult learners also improve their knowledge and skills related to reading and creating infographics, a common way information is presented in print and online platforms at work, in the community, and in social media. With an eye towards designing their own timeline, students learn to interpret complex timelines as well as to analyze and evaluate design decisions authors make about formatting, color, and images. These are skills they can use in their careers and as citizens.</p> <p>In addition, students will develop other important ELA skills, including taking and organizing notes from articles and videos; tracking main ideas in connected text and timelines; reading fluency; applying Tier 2 and Tier 3 vocabulary; summary writing on informational content; and explanatory writing that integrates information from multiple sources.</p>
ESSENTIAL QUESTIONS (optional) <ul style="list-style-type: none"> ▪ <i>Include “open-ended, thought-provoking and intellectually engaging questions that call for higher-order thinking.”</i> 	<ul style="list-style-type: none"> ● What societal factors lead to technological advances and inventions? ● How do advances and inventions impact society, for good and for bad? ● What kinds of societal and personal challenges did innovators of the era experience?

<p>UNIT OUTCOME / CULMINATING ASSESSMENT</p> <ul style="list-style-type: none"> ▪ <i>Describe, in a few sentences, the desired outcome, focusing on the central texts and end products students will use to show their ELA learning (and understanding of the content topic).</i> ▪ <i>When possible, include one or more authentic performance task(s).</i> 	<p>Students will find, gather, analyze, interpret, and organize information from videos and articles in order to learn about innovations from the Second Industrial Revolution.</p> <p>Students will show their learning by using an online platform to design and share a compelling digital timeline of 5 innovations of their choice, using graphic organizers to organize information from their readings. They will also write and read aloud to classmates an explanatory paragraph about one invention.</p>
<p><u>PRIORITY ELA STANDARDS</u></p> <ul style="list-style-type: none"> ▪ <i>List only the ~3-5 level-specific CCRSAE-ELA standards that will be explicitly taught and assessed.</i> ▪ <i>Include standards from across the Reading, Writing, Speaking/ Listening, and Language domains.</i> 	<p>R2D/SL2C (main ideas, development, & summaries)</p> <ul style="list-style-type: none"> - Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments. - Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. <p>R7D (integrate info from diverse formats)</p> <ul style="list-style-type: none"> - Integrate information presented in different media or formats (e.g., in charts, graphs, photographs, videos, or maps) as well as in words to develop a coherent understanding of a topic or issue. <p>W2C (informative/explanatory writing)</p> <ul style="list-style-type: none"> - Write informative/explanatory texts to examine a topic and convey ideas and information clearly. <p>W6C (use technology to write and publish)</p> <ul style="list-style-type: none"> - With some guidance and support, use technology, including the Internet, to produce and publish writing; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting. <p>W8C (gather information)</p> <ul style="list-style-type: none"> - Recall relevant information from experiences or gather relevant information from print and digital sources, summarize or paraphrase information in notes and finished work, and provide a list of sources. <p>L6D (vocabulary acquisition & use)</p> <ul style="list-style-type: none"> - Acquire and use accurately level-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression. <p>RF3C (phonics and word recognition)</p> <ul style="list-style-type: none"> - Know and apply grade-level phonics and word analysis skills in decoding words. <p>RF4C (fluency)</p> <ul style="list-style-type: none"> - Read with sufficient accuracy and fluency to support comprehension. <p><i>Also practiced: W5C/D (writing process), L1C/D (grammar and usage), L2C/D (mechanics), L4C (discerning word meanings), SL4 (present info).</i></p>

KEY STUDENT MATERIALS

- List authentic and relevant resources (texts, videos, websites, podcasts...) that students will read, listen to, or view.
- Include digital sources and attend to representations of different cultures and perspectives.
- Provide text complexity levels.
- Include texts with lower and higher text complexity levels to support differentiation.

Videos

- [Defining an Era: The Gilded Age](#)
 - [Edpuzzle.com version with embedded questions](#)
- [The New Technology and Inventions of The Gilded Age](#)
- [Inventions \(PowToon\)](#)

Newsela.com (5 levels of every text; font size and audio options)

***Contact program director for access information.**

- [Expansion and Reform: Technology of the 1800s](#)
- [Inventors and Scientists: Granville T. Woods](#)
- [Inventors and Scientists: Thomas Edison](#)
- [Colors of Innovation: A History of African American Inventors](#)
- [The History of Labor Day](#)

Readworks.com (font size and audio options; requires free account)

- [The Gilded Age](#) (GLE 7)
- [Edison's Failed Inventions](#) (GLE 7)

Online Textbooks

*Check with your local school system about access to online history textbooks. Those listed below were openly available online at the time this unit was constructed.

- [Holt United States History: Independence to 1914](#)
 - [An Industrial Nation](#) (Ch. 18) – pp. 574-578 (GLE 8)
 - [Americans Move West](#) (Ch. 17; Railroads)- pp. 550-552 (GLE 8)
- [The Americans: Reconstruction to the 21st Century](#)
 - [Section 1 - The Expansion of Industry](#) (Ch. 6) - pp. 230-233 (GLE 8)
 - [Section 2 - The Age of Railroads](#) (Ch. 6) - pp. 236-240 (GLE 8)

Other

- [Making Things Better: Margaret E. Knight and the Paper Bag](#) (GLE 5/6)
- [Margaret Knight](#) (GLE 8): ThoughtCo.

A list of all materials [can be found here](#).

PART 2: IN-DEPTH VIEW	
UNIT OBJECTIVES	ASSESSMENT OF OBJECTIVES
<ul style="list-style-type: none"> ▪ <i>These should align with the Priority ELA Standards.</i> ▪ <i>Include objectives for both ELA Skills (directly correlated to the leveled priority standards) and Content Knowledge (related to science, social studies, literature, careers, etc.).</i> ▪ <i>Add rows as needed.</i> 	<ul style="list-style-type: none"> ▪ <i>Consider how teachers will capture evidence for each objective.</i> ▪ <i>How will each objective be assessed through the culminating assessment mentioned in Part 1? (e.g., paper, project, problem, presentation)</i> ▪ <i>(Optional) Attach evaluation tools (e.g., rubrics, checklists) or provide other guidance for teachers.</i>
By the end of this unit, students will be able to:	
1. Interpret timeline infographics and evaluate the development of ideas. (R7D)	Posing and answering 2 questions related to their timeline infographics in Lesson 10 Self-assessing their timeline infographic in Lesson 9
2. Paraphrase <i>who, what, where, when, why, how</i> details in written texts and videos and use those to compose oral and written summaries. (R2D/SL2C)	Submitting completed Notetaking Forms Submitting a written summary of a section of text in Lesson 6
3. Take and organize notes from multiple print and video sources. (W8D)	Submitting completed Notetaking Forms Creating a Pre-Writing Web that integrates information from at least 2 sources
4. Create a timeline infographic of 5 inventions, effectively using text, formatting, images, and colors. (W6C)	Submitting and self-assessing their timeline infographics in Lessons 9 and 10
5. Write an explanatory paragraph about an innovation, integrating information from at least 2 sources and including an effective topic sentence; <i>who, what, where, when, why, how</i> details; and a concluding sentence. (W2C; W8D)	Writing and self-assessing their explanatory paragraphs in Lessons 8 and 9
6. Correctly utilize Tier 2 and Tier 3 vocabulary in oral and written communications. (L6D)	Incorporating at least 2 unit vocabulary words in the explanatory paragraphs Seeing how many unit vocabulary words they can use when verbally sharing their projects
7. Apply knowledge of the suffix <i>-ion</i> to spell and discern the meanings of words. (RF3B/C)	Using vocabulary with the <i>-ion</i> suffix appropriately in final projects, spelling and pronouncing them correctly
8. Read text aloud with accuracy, at an appropriate rate, and with good expression. (RF4C)	Reading aloud a self-written explanatory paragraph about an innovation Fluency Checklist

KEY VOCABULARY

- *Include academic words or phrases (Tier 2) and key content terms (Tier 3), unless teachers are expected to add these at the lesson plan level. Each set of words will require multiple days of practice.*
- **Tier 2 Vocabulary:** *minimum, objection, originate, penalize, reliable* (from the *Groundwork for a Better Vocabulary, Ch. 6*). (GLE 5-8)

Since Tier 2 words can be used to discuss any topic, teachers may choose different Tier 2 vocabulary from well-constructed vocabulary workbooks or online lessons, including:

 - *Vocabulary Basics* (Townsend Press; GLE 4-6)
 - *Building Vocabulary Skills* (Townsend Press; GLE 7-9)
 - [ABSPD Tier 2 Vocabulary Lessons](#) (units developed by NC ABE teachers)
 - [ALRC Tier 2 Vocabulary Lessons](#) (units developed by IL ABE teachers)
- **Tier 3 Vocabulary:** *invention, industrialization, transportation, communication, patents, innovation, monopoly, natural resources, corporation*

LENSES

- *Include brief clarifications for how the unit addresses each MA priority lens, providing further recommendations for lenses not transparently addressed in other sections of the unit plan.*

Evidence-Based Instruction (including EBRI):

- For **reading**, the essential components of EBRI (alphabets, fluency, vocabulary, and comprehension) are included in the unit.
 - **Alphabets:** Students learn the pronunciation, spelling, and meaning of words using the *-ion* suffix.
 - **Fluency:** Students regularly practice fluency individually, in pairs, or in small groups, using audio-assisted reading, echo reading, repeated reading, and or collaborative oral reading. [See this article for brief explanations of some options for fluency practice.](#) Because students will be using their fluency texts for their comprehension practice, it is important to match individual students with a text level that is near their silent reading comprehension level. Students reading at a similar level should be grouped together. Each student should have plenty of opportunities to read sentences and paragraphs aloud in each lesson, so fluency groups should be kept small.
 - **Vocabulary:** Students learn general academic words (Tier 2) and content vocabulary (Tier 3) that is related to the Second Industrial Revolution. Self-assessments, tools to introduce the new vocabulary, and practice exercises are provided in the unit, as well as prompts to include regular use of the words in classroom discussions and on final projects.
 - **Comprehension Strategies:** Students learn to track the development of main ideas in connected text and infographics, using *who, what, where, when, why, how* questions, graphic organizers, and guiding questions.
- For **writing**:
 - Students use the writing process (organizing/pre-writing, drafting, revising, editing, publishing) to compose an explanatory paragraph as one of the final projects.
 - For the explanatory paragraph, a graphic organizer for organizing ideas during prewriting is provided, as well as specific prompts and sentence frames for drafting text.
 - Checklists guide the revision and editing process for both the digital timelines and the explanatory paragraphs.
- The [Gradual Release of Responsibility Model](#) (I Do, We Do, You Do) is employed for instruction in all the reading, writing, speaking, listening, language, and digital literacy lessons. Students encounter and practice with their new knowledge and skills multiple times over the course of the unit.

Culturally Responsive Teaching:

- Situating the discussion of innovations within the Gilded Age intentionally surfaces issues of race, power, and privilege.
 - **Lesson 1** sets the stage by introducing the era as a time fraught with inequities. Include discussion that texts on the “Gilded Age” often exclude the perspective and experiences of marginalized groups.
 - **Lessons 2 and 3** each include texts about inventors from marginalized groups (a woman and an African American), to help students develop critical consciousness as they work through the rest of the unit. Incorporate opportunities for students to compare and contrast their experiences with those of the inventors and have a discussion about overcoming challenges.
 - **Lesson 5** includes text about African-American inventors and their contributions to the Second Industrial Revolution. Discuss the unique challenges faced by these inventors and place them in historical context. Provide opportunities for personal connections and affirmations.
 - In **Lesson 8**, students read about the origins of Labor Day, highlighting the challenges faced by workers in the increasingly industrialized nation. A logical unit topic to follow this one is on urbanization and worker rights; this unit provides opportunities to lay the foundation for that exploration.
- In **Lesson 6** (and **7**, if needed), teachers invite students to independently read and take notes about innovations of interest, helping students make personal connections to the content. Some online materials are provided [here](#); however, you may be able to find additional sources. **When doing so, be sure to include innovators from diverse backgrounds as much as possible.**
- Other approaches to enhance culturally responsive teaching and learning in the unit include:
 - Engaging students in talking about whose stories are being told in the readings. Be transparent about the difficulty in finding texts about diverse innovators and discuss why that might be.
 - Drawing attention to the titles of the texts (e.g., *Colors of Innovation*; *Margaret E. Knight: Female Inventor*) and discussing the pros and cons of separating groups from each other instead of integrating them into all articles about inventors.
 - Encouraging students to be thoughtful in how they choose what innovations to put on their timeline infographics.

Differentiation (especially for English learners and students with learning disabilities):

- Texts may be accessed online or printed out to accommodate the specific needs of learners.
- Texts at multiple levels are included for every lesson, with additional options for using audio and adapting the font size of the text.
- Edpuzzle.com versions of videos are provided where possible. These embed literal comprehension questions at key points in the video to assist learners in attending to and retaining information.
- Checklists are provided to guide the design of the digital timeline as well as the explanatory paragraph combining information from at least 2 sources. Options are included to accommodate students at different levels.
- The abbreviated and sample lesson plans prompt teachers to consider differentiation, offering specific ideas for activities.
- Additional recommendations include the following:
 - When using leveled texts for different groups, invite sharing (e.g., “What does your article mention that hasn’t been shared yet?”). Highlight how groups will learn from each other by having different texts with different information, not that the groups or texts are at different levels.
 - Although this unit is designed for intermediate ABE students, it is easily adaptable for ASE students. [Readworks](#), [Newsela](#), and [CommonLit](#) all have texts written at that level. Furthermore, the material generally found on the Internet is more accessible for that level, and students can be encouraged to do their own research (W3). When making citations, higher-level students can also use more sophisticated and standard citation procedures.

Digital Literacy and Technology:

- Adult learners engage with a variety of online platforms throughout the unit, including Google Docs, Google Forms, Jamboard, email, Edpuzzle, YouTube, polleverywhere.com, and graphic design sites.
- Ideally, students should have a Google Classroom account, from which they can access all materials online. They will also need a way to store their Notetaking Forms, Pre-Writing Web, the drafts of their explanatory paragraph, and perhaps their draft digital timeline.
- Adult learners receive explicit instruction and practice in designing an infographic, specifically a digital timeline. Some considerations include the following:
 - Use the [Infographic Resource List](#) to decide ahead of time which platform students will use for the infographic. When making the decision, choose one with which you are familiar or spend time creating your own timeline on a new platform before starting the unit. At the very least, students can use Jamboard or Google Slides to create their timelines.
 - Pay particular attention to the images that are available for students to use to represent their innovations. If students use images other than those available on designated platforms, they will need to cite the source on their timelines.
 - Choose only one template for students to use if this is their first time creating an infographic. You will need to model using each template, so including more will take additional time. Students who are more digitally literate can be encouraged to create their design without a template, or use a different template.
 - Higher performing students might be encouraged to create more complex timelines (e.g., one kind of info presented on top of the line and another kind of info presented under the line).
 - This is a good unit with which to collaborate with a designated digital literacy teacher, if your program has one.

Remote Instruction:

- All lessons can be conducted in remote or blended classes.
- Fluency instruction can be handled in a variety of ways for remote learners. Students can either:
 - Work in pairs or triads in Zoom or GoogleMeets breakout rooms. Students should be directed to the online version of their leveled text where they can adjust the font as needed. Then students engage in collaborative oral reading. (NOTE: All students in a group should be reading from the same leveled text.)
 - When the option is available, students can individually follow along with the audio version of the text either before, after, or instead of reading in pairs/triads.

ADDITIONAL RECOMMENDATIONS

- *Include guidance for formative assessments and other texts/resources not included in the Key Student Materials section in Part 1.*
- *What else do teachers need to know? Add these here as well!*

- Formative assessments are built into each lesson as Exit Tickets. Directions for many of them can be found in [Top 8 Stop and Checks for ELA](#).
- Be on the lookout for infographics in the community and local workplaces to use as examples in Lesson 1. Collect a mix of simpler and more complex versions to allow for differentiation.

SUGGESTED SEQUENCE OF LESSONS

- Provide a brief overview of what the focus of each lesson would be, as envisioned by the unit developers.

Two options are provided for viewing the Suggested Sequence of Lessons. Click on the hyperlinks below to see the version of your choice.

Unit At a Glance	
The Innovations of the Second Industrial Revolution	
LESSON 1	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 2	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 3	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 4	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 5	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 6	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 7	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 8	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 9	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 10	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 11	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials
LESSON 12	<ul style="list-style-type: none"> • Unit At a Glance • Unit Overview • Unit Assessment • Unit Materials

The [Unit At-a-Glance](#) is a one-page view of the major activities in each lesson.

Topic Tracker: The Innovations of the Second Industrial Revolution					
Topic	LESSON 1	LESSON 2	LESSON 3	LESSON 4	
Reading	• Analyze the structure of a text to analyze how it develops and what it contains, including how specific sentences, paragraphs, and sections relate to one another and the overall structure and purpose.	• Analyze the structure of a text to analyze how it develops and what it contains, including how specific sentences, paragraphs, and sections relate to one another and the overall structure and purpose.	• Analyze the structure of a text to analyze how it develops and what it contains, including how specific sentences, paragraphs, and sections relate to one another and the overall structure and purpose.	• Analyze the structure of a text to analyze how it develops and what it contains, including how specific sentences, paragraphs, and sections relate to one another and the overall structure and purpose.	• Analyze the structure of a text to analyze how it develops and what it contains, including how specific sentences, paragraphs, and sections relate to one another and the overall structure and purpose.
Writing	• Write informative/explanatory texts in which they introduce a topic, list relevant facts, and analyze causes or effects while using relevant data, statistics, and logical reasoning.	• Write informative/explanatory texts in which they introduce a topic, list relevant facts, and analyze causes or effects while using relevant data, statistics, and logical reasoning.	• Write informative/explanatory texts in which they introduce a topic, list relevant facts, and analyze causes or effects while using relevant data, statistics, and logical reasoning.	• Write informative/explanatory texts in which they introduce a topic, list relevant facts, and analyze causes or effects while using relevant data, statistics, and logical reasoning.	• Write informative/explanatory texts in which they introduce a topic, list relevant facts, and analyze causes or effects while using relevant data, statistics, and logical reasoning.
Speaking and Listening	• Engage in collaborative discussions with diverse partners on grade-appropriate topics, texts, and issues, building on others' ideas and expressing their own clearly.	• Engage in collaborative discussions with diverse partners on grade-appropriate topics, texts, and issues, building on others' ideas and expressing their own clearly.	• Engage in collaborative discussions with diverse partners on grade-appropriate topics, texts, and issues, building on others' ideas and expressing their own clearly.	• Engage in collaborative discussions with diverse partners on grade-appropriate topics, texts, and issues, building on others' ideas and expressing their own clearly.	• Engage in collaborative discussions with diverse partners on grade-appropriate topics, texts, and issues, building on others' ideas and expressing their own clearly.
Language	• Analyze how an author uses rhetorical techniques to achieve a purpose and persuade an audience.	• Analyze how an author uses rhetorical techniques to achieve a purpose and persuade an audience.	• Analyze how an author uses rhetorical techniques to achieve a purpose and persuade an audience.	• Analyze how an author uses rhetorical techniques to achieve a purpose and persuade an audience.	• Analyze how an author uses rhetorical techniques to achieve a purpose and persuade an audience.

The [Topic Tracker](#) is a 2-page view that tracks specific topics (e.g., *fluency*, *word study*) across all the lessons, so you can easily see how each lesson builds on the one(s) before it.

The [Lesson Flow \(with Abbreviated Lesson Plans\)](#) provides more information for each lesson:

- Follow the **headings** to see how *word study*, *fluency*, *comprehension*, *writing*, and *digital literacy* lessons build across the unit.
- Follow how **specific standards** are being addressed in each lesson by looking for notations in brackets (e.g., [R3C]).
- The materials recommended for each lesson are hyperlinked within the instructions. You may also see a [List of All Materials](#).

Sample Lesson Plans for the first two lessons go into even more detail, offering step-by-step instructions for teachers as well as specific tips for culturally responsive teaching and differentiated instruction. These lesson plans use the ACLS-approved ELA Lesson Plan Template.

- [Sample Lesson Plan for Lesson #1](#)
- [Sample Lesson Plan for Lesson #2](#)