

6d. Benchmarks to Achieve by Grade 10

Standard 1: Inquire, think critically, and gain knowledge
Strand 1.1: Skills
Indicator 1.1.1: Follow an inquiry-based process in seeking knowledge in curricular subjects, and make the real-world connection for using this process in own life.
<ul style="list-style-type: none"> Use an inquiry-based process for deepening content knowledge, connecting academic learning with the real world, pursuing personal interests, and investigating opportunities for personal growth.
Indicator 1.1.2: Use prior and background knowledge as context for new learning.
<ul style="list-style-type: none"> Read background information to discover the key components of the problem or question. Identify key words or synonyms, both stated and implied, to use them in further research. Develop a schema or mind map to express the big idea and the relationships among supporting ideas and topics of interest. Develop and refine the topic, problem, or question independently to arrive at a worthy and manageable topic.
Indicator 1.1.3: Develop and refine a range of questions to frame the search for new understanding.
<ul style="list-style-type: none"> Focus the purpose of the research by formulating specific questions to be answered. Refine questions to provide a framework for the inquiry and to fulfill the purpose of the research. Analyze what is already known or what is observed or experienced to form tentative thesis or hypothesis to predict answers to inquiry questions. Plan inquiry to test hypothesis systematically or to validate thesis.
Indicator 1.1.4: Find, evaluate, and select appropriate sources to answer questions.
<ul style="list-style-type: none"> Consider and prioritize possible sources of information based on specific information needs and strengths of different information formats. Use specialized reference materials to find specific and in-depth information. Use both primary and secondary sources. Evaluate sources based on criteria such as copyright date, authority of author or publisher, depth of coverage, and relevance to research questions.
Indicator 1.1.5: Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.
<ul style="list-style-type: none"> Evaluate and select information based on authority, accuracy, point of view, and reliability. Evaluate historical information for validity of interpretation, and scientific information for accuracy and reliability of data. Determine the extent of the research by the complexity of the subject, not by time or page limits.
Indicator 1.1.6: Read, view and listen for information presented in any format (e.g. textual, visual, media, digital) in order to make inferences and gather meaning.
<ul style="list-style-type: none"> Take notes using one or more note-taking strategies, including reflecting on the information (e.g., graphic organizers, two-column notes). Categorize information; add new categories as necessary. Interpret information.
Indicator 1.1.7: Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.
<ul style="list-style-type: none"> Recognize degrees of bias and the effect on the information presented. Counter the effect of bias on the accuracy and reliability of information by actively pursuing a balanced perspective.
Indicator 1.1.8: Demonstrate mastery of technology tools for accessing information and pursuing inquiry.
<ul style="list-style-type: none"> Use a range of electronic resources efficiently, effectively, and safely by applying a variety of search and evaluation strategies. Use social tools to demonstrate and share learning.
Indicator 1.1.9: Collaborate with others to broaden and deepen understanding.

- Seek ideas and opinions from others.
- Respect and help groups find and incorporate diverse ideas.
- Describe ideas of others accurately.
- Help to organize and integrate contributions of all group members in to products.

Standard 2: Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.

Strand 2.1: Skills

Indicator 2.1.1: Continue an inquiry-based research process by applying critical thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge.

- Identify main, supporting, and conflicting information using multiple sources to support interpretation or point of view.
- Make and explain inferences about main ideas.
- Critically examine and analyze relevant information from a variety of sources to discover relationships and patterns among ideas.
- If discrepancy in points of view is discovered, continue research until it is resolved.

Indicator 2.1.2: Organize knowledge so that it is useful.

- Use different organizational patterns as appropriate for point of view and conclusions (cause and effect, hierarchy, chronology, compare/contrast).
- Experiment with devising own organizational structure.

Indicator 2.1.3: Use strategies to draw conclusions from information and apply knowledge to curricular areas, real-world situations, and further investigations.

- Identify when information does not support tentative thesis or hypothesis; gather additional information or revise thesis/hypothesis.
- Draw clear and appropriate conclusions supported by evidence and examples.
- Combine ideas and information to develop and demonstrate new understanding.
- Recognize multiple causations for same issues or events.
- Apply strategies for making personal and real world connections with information.

Indicator 2.1.4: Use technology and other information tools to analyze and organize information.

- Use technology tools (including Web 2.0 tools) to create the most appropriate organizational pattern to express connections and patterns.
- Identify and apply common productivity software (e.g., use features such as spellchecker and thesaurus to ensure accuracy of word-processing documents; use formulas and create charts in spreadsheets; and insert pictures, movies, sound and charts in presentation software) to enhance communication to an audience, promote productivity and support creativity).

Indicator 2.1.5: Collaborate with others to exchange ideas, develop new understandings, make decisions, and solve problems.

- Participate in discussion to analyze information problems and to suggest solutions.
- Work with others to select, organize, and integrate information and ideas from a variety of sources and formats.
- Use online environments or other collaborative tools to facilitate design and development of materials, models, publications, and presentations.
- Apply utilities to edit pictures, images, and charts; complying with all copyright provisions.

Indicator 2.1.6: Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.

- Use pre-writing to discover most effective way to present conclusions.
- Decide presentation form based on effective communication of point of view or purpose.
- Draft the presentation/product to present argument, point of view, interpretation, or new model most effectively with supporting evidence.
- Create maps, charts, tables, diagrams, graphs, and other formats to present ideas and information.
- Expand formats to include multimedia, e-mail, software, podcasts, blogs, wikis, Web pages, spreadsheets and databases.
- Revise based on self-assessment, teacher feedback, and peer feedback.
- Edit for grammar, language conventions, and style
- Cite all sources used according to style formats.
- "Publish" final product.

- Evaluate the product and process throughout the work and make revisions when necessary.
- Express own ideas through creative products in a variety of formats.

Standard 3: Share knowledge and participate ethically and productively as members of our democratic society.

Strand 3.1: Skills

Indicator 3.1.1: Conclude an inquiry-based research process by sharing new understandings and reflecting on the learning.

- Present conclusions to answer the question or problem.
- Set high and clear standards for work and develop criteria for self-assessment or use established criteria (rubrics, checklists).
- Assess own work and establish own revision strategies.
- Follow own research plan and evaluate effectiveness of inquiry process.
- Reflect at the end of an inquiry process to identify additional areas of personal interest for pursuit in the future.

Indicator 3.1.2: Participate and collaborate as members of a social and intellectual network of learners.

- Seek ideas and opinions from others.
- Respect and help groups find and incorporate diverse ideas.
- Describe or summarize ideas of others accurately and respond appropriately.
- Seek alternative sources of information and respect the guidelines for access in all environments (public libraries, museums, cultural institutions, agencies).
- Recognize that equitable access to information depends on student responsibility.
- Share reading experiences and favorite literature to build a relationship with others.
- Use interactive tools/Web sites to collaborate, publish, and interact with peers, experts, and other audiences.
- Participate in discussions on fiction and nonfiction related to curriculum.
- Collaborate with others to design a product or solve a problem.
- Share research and creative products with others.

Indicator 3.1.3: Use writing and speaking skills to communicate new understandings effectively.

- Use an organizational structure that effectively connects ideas and creates the desired intent.
- Use the most appropriate format, tone and language to communicate ideas and point of view clearly to different audiences.

Indicator 3.1.4: Use technology and other information tools to organize and display knowledge and understanding in ways that others can view, use, and assess.

- Use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

Indicator 3.1.5: Connect learning to community issues.

- Use multiple resources to seek balanced perspectives.
- Find authentic connections of inquiry topic to real world.
- Demonstrate understanding of intellectual freedom and First Amendment rights.

Indicator 3.1.6: Use information and technology ethically and responsibly.

- Express opinions in an appropriate manner; respect ideas of others.
- Understand what constitutes plagiarism and refrain from representing work attributable to others as their own.
- Give credit for all quotes, citing them properly in notes and bibliography.
- Discuss issues related to acceptable and responsible use of information and communication technology (e.g., privacy, security, copyright, file sharing, plagiarism).
- Respect privacy of others (e-mail, files, passwords, book checkout, Web sites visited).
- Legally obtain, store, and disseminate text, data, images, or sounds.
- Abide by the Acceptable Use Policy in all respects and use Internet responsibly and safely.
- Explain First Amendment rights and the process available to defend them.
- Understand concept and role freedom of information plays in democracy.
- Demonstrate understanding of intellectual freedom and intellectual property rights by respecting and

observing guidelines for using information sources.

- Promote and defend the rights of others.
- Either put all information in own words or select short segments to quote.
- Extend respect for intellectual property rights and copyright by giving credit for ideas as well as directly quoted material.
- Demonstrate awareness and understanding of fair use guidelines for educational purposes.
- Make copies or downloads of print, software, or audio only when permission from author/publisher has been obtained or purchase has been made.
- Follow school guidelines related to use of technology.
- Observe Internet safety procedures including safeguarding personal information.

Standard 4: Pursue personal and aesthetic growth.
Strand 4.1: Skills
Indicator 4.1.1: Read, view, and listen for pleasure and personal growth.
<ul style="list-style-type: none"> • Share reading, viewing, and listening experiences in variety of ways and formats, including book clubs and interest groups. • Seek and locate information about personal interests and usually find it independently, using the same criteria and strategies used for academic information seeking. • Read, listen, and view in a variety of formats (e.g., print and electronic books, other media). • Read, listen, and view to explore new ideas beyond the required curriculum. • Read, listen, and view for pleasure, to learn, to solve problems, and to explore many different ideas. • Read, listen, and view for a variety of purposes: to live the experiences of a character, to answer questions, to find out about something new, to find facts about subjects of interest, to form opinions. • Pursue creative expressions of information in the community (public library, arts centers, museums).
Indicator 4.1.2: Read widely and fluently to make connections with self, the world, and previous reading.
<ul style="list-style-type: none"> • Recognize and evaluate the author's point of view and how it affects the text; consider and evaluate alternative perspectives. • Read books that connect to real-world issues. • Recognize similarities and differences among authors writing on the same theme. • Recognize how own point of view influences perspective on text.
Indicator 4.1.3: Respond to literature and creative expressions of ideas in various formats and genres.
<ul style="list-style-type: none"> • Assess the emotional impact of specific works on the reader or viewer. • Apply ideas gained from responding to literary and artistic works to own life. • Evaluate the effectiveness of a literary work in terms of the author's use and interweaving of literary elements. • Compare the theme and its treatment in different works of literature.
Indicator 4.1.4: Seek information for personal learning in a variety of formats and genres.
<ul style="list-style-type: none"> • Select texts for academic, personal, and real-world purposes. • Select print, non-print, and digital materials based on personal interests and knowledge of authors. • Select texts on topics of interest at both a comfortable reading level and one that requires higher levels of comprehension skills. • Read a variety of fiction and nonfiction materials. • Read/listen to works of international and multicultural authors. • Use print, non-print, and electronic information resources for information about personal needs; actively seek answers to questions. • Set reading goals and maintain a personal reading list.
Indicator 4.1.5: Connect ideas to own interests and previous knowledge and experience.
<ul style="list-style-type: none"> • Understand text on both a literal and an abstract level. • Use context and graphic clues to aid understanding. • Consider alternative perspectives and evaluate differing points of view. • Compare new ideas to previous understandings and make changes to mental framework where appropriate.
Indicator 4.1.6: Organize personal knowledge in a way that can be called upon easily.
<ul style="list-style-type: none"> • Use visualization to provide a clear picture of the ideas to be remembered. • Categorize new ideas with key words and tagging. • Develop own system of note-taking that incorporates personal reflections.
Indicator 4.1.7: Use social networks and information tools to gather and share information.
<ul style="list-style-type: none"> • Use information and communication technology tools and resources to collect, organize, and evaluate information relevant to a real-world issue or problem. • Use online catalog strategies to locate information about personal interest topics in own and other libraries.

- Search other libraries for information related to personal interests.
- Apply technology productivity tools to meet personal needs.
- Participate in social networks responsibly and safely.
- Use social tools to share and collaborate with others (e.g., interactive Web 2.0 tools and technologies).
- Use online catalog strategies to locate information about personal interest topics in own and other libraries.

Indicator 4.1.8: Use creative and artistic formats to express personal learning.

- Express own ideas through creative products in a variety of formats.
- Choose format appropriate for audience and purpose.
- Select and use various types of multimedia software for artistic and personal expression.
- Pursue creative expressions of information in the community (public library, arts centers, museums).

Action Example: Grade 9

GRADE: 9

LIBRARY CONTEXT:

- Fixed Flexible Combination Individualized Instruction
- Stand-alone lesson Lesson in a unit Multiple lessons in a unit

COLLABORATION CONTINUUM:

- None Limited Moderate Intensive

CONTENT TOPIC: Favorite author research paper

STANDARDS FOR THE 21ST-CENTURY LEARNER GOALS

Standard 4: Pursue personal and aesthetic growth.

Skills Indicator(s):

4.1.7 Use social networks and information tools to gather and share information.

Benchmark(s):

- Use information and communication technology tools and resources to collect, organize, and evaluate information relevant to a real-world issue or problem.
- Use online catalog strategies to locate information about personal interest topics in own and other libraries.
- Search other libraries for information related to personal interests.
- Apply technology productivity tools to meet personal needs.
- Participate in social networks responsibly and safely.
- Use social tools to share and collaborate with others (e.g., interactive Web 2.0 tools and technologies).
- Use online catalog strategies to locate information about personal interest topics in own and other libraries.

Dispositions Indicator(s):

4.2.1 Display curiosity by pursuing interests through multiple resources.

4.2.2 Demonstrate motivation by seeking information to answer personal questions and interests, trying a variety of formats and genres, and displaying a willingness to go beyond academic requirements.

Responsibilities Indicator(s):

4.3.1 Participate in the social exchange of ideas, both electronically and in person.

4.3.4 Practice safe and ethical behaviors in personal electronic communication and interaction.

Self-Assessment Strategies Indicator(s):

1.4.2 Use interaction with and feedback from teachers and peers to guide own inquiry process.

1.4.4 Seek appropriate help when it is needed.

4.4.1 Identify own areas of interest.

SCENARIO:

A ninth grade student has recently completed a traditional research paper on her favorite author: Jane Austen. In a conversation with the school library media specialist (SLMS), the student indicates that she would like to create a blog that includes information she gathered for her research paper and helps her connect with other fans of the author. The student would like to e-mail a Jane Austen scholar to ask questions but is not sure about protocol for e-mailing an expert. Upon further conversation, the SLMS encourages the student to bring her research paper to the library to review the paper and works cited list. After reviewing the research paper and works cited list, the SLMS suggests that the student expand the resources used for the research paper to include a bibliography of Austen's novels and books written about the author's work, along with links to graphics, video and audio clips from Austen's novels. The SLMS also suggests that the student may want to create a wiki, rather than a blog, to better share information. The SLMS then meets with the ninth grade team and proposes that a wiki would be a great way to follow up and share what students learn from their research papers as an addition to the research unit and offers to teach wiki design as an additional element to the project.

CONNECTION TO LOCAL OR STATE STANDARDS

(List here relevant content, information literacy, and technology standards)

- Content Standard for Grade 9 Language Arts: The student can use the writing process and conventions of language and research to construct meaning and communicate effectively for a variety of purposes and audiences using a range of forms
- Content Standard for Grade 9 Information Literacy/Library Media Standard: The student can locate sources, use information, and present findings.
- Content Standard for Grade 9 Information Literacy/Library Media Standard: The student can use information safely, ethically and legally.
- Content Standard for Grade 9 Information Literacy/Library Media Standard: The student can pursue personal interests through literature and other creative expressions.
- Content Standard for Grade 9 Technology Standard: The student can collaborate and communicate globally in a digital environment.
- Content Standard for Grade 9 Technology Standard: The student can apply digital tools and skills with creativity and innovation to express him/herself, construct knowledge and develop products and processes.

OVERVIEW:

The student wishes to share and expand upon information synthesized in an English I research assignment. In particular, the student wishes to exchange information with others interested in the same topic/author.

FINAL PRODUCT:

The student designs a wiki that includes a variety of resources and a component for exchanging information with visitors to the wiki.

LIBRARY LESSON(S):

The SLMS conducts informal, one-on-one instructional sessions and conferences with the student. These meetings focus on searches for additional resources, netiquette required for online exchanges and methods to build and sustain learning through social networks.

ESTIMATED LESSON TIME:

Multiple 15 to 30-minute sessions in the library.

ASSESSMENT

• **Product**

- The student and SLMS will create a self-assessment checklist to include criteria for (1) wiki design, (2) quality and variety of resources, (3) reliability and accuracy of information, and (4) appropriate credit for sources of information. The student and the SLMS will also use a SWOT (Strengths, Weakness, Opportunities and Threats) analysis to evaluate the wiki.

• **Process**

- The student will maintain a reflection log, outlined by the Student Self-assessment questions, throughout her independent research to share with the SLMS at their meetings.

• **Student self-questioning**

- Did I effectively expand the information beyond my original report?
- Did I gather good information from experts?
- Did I find some new pictures, audio or video to add to the original research?
- Did I achieve my goal to share my information with others outside of my class and school?
- Did I achieve my goal of connecting with other people who share my interest in Jane Austen?

INSTRUCTIONAL PLAN

• **Resources students will use:**

- Online subscription database(s) Web sites Books Reference
- Nonprint Periodicals/newspapers
- Other (list): Audio recordings, DVD movies, or other video sources

• **Instruction/activities**

- **Direct Instruction:** The SLMS reviews the online and library collection resources presented during the English I research project and suggests additional resources. The SLMS also reviews Netiquette Rules for safely and responsibly using electronic resources and in communicating with e-mail or other online communication tools, and provides instruction on how to choose a wiki site and how to set up the basic account information and design.
- **Modeling and guided practice:** The SLMS works with the student to identify search strategies appropriate for finding experts and multimedia resources and assists the student in searching WorldCat® for scholarly works on Jane Austen. The SLMS challenges the student to develop new questions that will lead to discovery of new information and understandings about the author and her works and guides the student toward examples of well-designed wikis.

- **Independent practice:** The student uses independent time to search for resources and make contact with experts. She creates and implements a wiki design that includes appropriately credited content and links to multimedia resources.
- **Sharing and reflecting:** The student and SLMS review the self-assessment checklist. The student completes a SWOT analysis of the wiki to plan updates and maintenance of the site. The student's wiki is linked on the library web page.

Action Example: Grade 10

GRADE: 10

LIBRARY CONTEXT:

- Fixed Flexible Combination Individualized Instruction
- Stand-alone lesson Lesson in a unit Multiple lessons in a unit

COLLABORATION CONTINUUM:

- None Limited Moderate Intensive

CONTENT TOPIC: Using InspireData™ software to compare data.

STANDARDS FOR THE 21ST-CENTURY LEARNER GOALS

Standard: 2 Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.

Skills Indicator(s):

2.1.4 Use technology and other information tools to analyze and organize information.

Benchmark(s):

- Use technology tools (including Web 2.0 tools) to create the most appropriate organizational pattern to express connections and patterns.
- Identify and apply common productivity software (e.g., use features such as spellchecker and thesaurus to ensure accuracy of word-processing documents; use formulas and create charts in spreadsheets; and insert pictures, movies, sound and charts in presentation software) to enhance communication to an audience, promote productivity and support creativity.

Dispositions Indicator(s):

2.2.3 Employ a critical stance in drawing conclusions by demonstrating that the pattern of evidence leads to a decision or conclusion.

Responsibilities Indicator(s):

3.3.4 Create products that apply to authentic, real-world contexts.

Self-Assessment Strategies Indicator(s):

1.4.3 Monitor gathered information and assess for gaps or weaknesses.

SCENARIO:

The school library media specialist (SLMS) is approached by an algebra teacher who attended a professional development session where the SLMS demonstrated InspireData™, software that allows students to use a variety of charts and graphs to manipulate and analyze data. She wants the SLMS to teach her students how to use this software. The SLMS suggests that the lesson will be more effective if the students actually have data to input. They schedule the teacher's six classes in the library computer lab for a 50-minute lesson on InspireData™. The teacher decides that students will plan a trip to Chicago. As part of that planning, they must decide on

the best mode of transportation based on the cost of travel and the amount of time that particular mode takes. The students will use pre-determined websites to collect costs and times needed to travel by train, car, bus and plane. Once they have collected their data, they will receive instruction on the use of InspireData™. The SLMS will guide the students through the features of the software at which time they will input their data. They take their printed graphs with their data back to class for review, presentation and assessment.

CONNECTION TO LOCAL OR STATE STANDARDS

(List here relevant content, information literacy, and technology standards)

- Content Standards for Grade 10 Algebra: The student can use two or more types of graphs to compare data sets.

OVERVIEW:

Tenth grade students in algebra class examine and manipulate various types of graphs to determine the appropriateness of different graphs in relation to the data.

FINAL PRODUCT:

Students produce graphs comparing cost and time of various modes of transportation.

LIBRARY LESSON(S):

Students will learn to use the features of InspireData™ and explore the various types of graphs that can be made using the software. They will use data collected about the cost and time it takes to get from their hometown to Chicago using several modes of transportation. In the process they analyze how best to graph the data depending on the intended purpose.

ESTIMATED LESSON TIME:

One 50-minute session

ASSESSMENT

- **Product**
 - Teacher, SLMS, and students use a teacher-developed rubric to assess the graphs based on the appropriate choice of graph in relation to information collected as well as conclusion based on analysis of data.
- **Process**
 - Teacher and SLMS use the graphs generated by the students to determine whether students can use the software correctly.
- **Student self-questioning**
 - Is my choice of the best mode of transportation supported by the evidence?
 - Have I chosen the most appropriate graph to show my conclusion?

INSTRUCTIONAL PLAN

- **Resources students will use:**
 - Online subscription database(s) Web sites Books Reference
 - Nonprint Periodicals/newspapers
 - Other (list): InspireData™ software

Web sites:

<http://studenttravel.about.com/od/getontheroad/qt/gasprices.htm>

<http://www.amtrak.com/servlet/ContentServer?pagename=Amtrak/HomePage>

<http://www.aa.com/aa/homePage.do>

http://www.greyhound.com/home/?crcat=payperclick&crsource=google_ads&crkw=greyhound

- **Instruction/activities**

- **Direct instruction:** The SLMS introduces students to features of the InspireData™ software.
- **Modeling and guided practice:** Using data gathered by the SLMS from the same websites that the students will use, students input the data along with the SLMS. They try different manipulating graphs and decide as a class which one most effectively represents the data.
- **Independent practice:** Students input the data they collected, choose the graph that best compares their data and print their completed graph.
- **Sharing and reflecting:** These graphs and conclusions will be shared and critiqued in the classroom.