

Unit 10: Mapping Tools

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **FY**
Status: **Published**

Standards Alignment

New Jersey Student Learning Standards

SOC.6.1.4	U.S. History: America in the World: All students will acquire the knowledge and skills to think analytically about how past and present interactions of people, cultures, and the environment shape the American heritage. Such knowledge and skills enable students to make informed decisions that reflect fundamental rights and core democratic values as productive citizens in local, national, and global communities.
SOC.6.1.4.B	Geography, People, and the Environment
SOC.6.1.4.B.1	Compare and contrast information that can be found on different types of maps and determine how the information may be useful.
SOC.6.1.4.B.3	Explain how and when it is important to use digital geographic tools, political maps, and globes to measure distances and to determine time zones and locations using latitude and longitude.
SOC.6.1.4.B.5	Describe how human interaction impacts the environment in New Jersey and the United States.
SOC.6.1.4.B.10	Identify major cities in New Jersey, as well as in the United States, and the world, and explain how geographic and demographic tools (e.g., maps, globes, data visualizations) can be used to understand cultural differences.
SOC.6.1.4.C	Economics, Innovation, and Technology
SOC.6.1.4.C.12	Evaluate the impact of ideas, inventions, and other contributions of prominent figures who lived New Jersey.
SOC.6.1.4.C.14	Compare different regions of New Jersey to determine the role that geography, natural resources, climate, transportation, technology, and/or the labor force play in economic opportunities.
SOC.6.1.4.C.18	Explain how the development of communications systems has led to increased collaboration and the spread of ideas throughout the United States and the world.
AAAA.K-12.1	Inquire, think critically, and gain knowledge.
AAAA.K-12.1.1	Skills
AAAA.K-12.1.1.4	Find, evaluate, and select appropriate sources to answer questions.
AAAA.K-12.1.3	Responsibilities
AAAA.K-12.1.3.3	Follow ethical and legal guidelines in gathering and using information.
AAAA.K-12.1.4	Self-Assessment Strategies
AAAA.K-12.1.4.1	Monitor own information-seeking processes for effectiveness and progress, and adapt as necessary.
AAAA.K-12.2.3	Responsibilities

AAAA.K-12.2.3.1	Connect understanding to the real world.
AAAA.K-12.2.4	Self-Assessment Strategies
AAAA.K-12.4.4.1	Identify own areas of interest.

Integration of Career Readiness, Life Literacies and Key Skills

CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP3	Attend to personal health and financial well-being.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP5	Consider the environmental, social and economic impacts of decisions.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP9	Model integrity, ethical leadership and effective management.
CRP.K-12.CRP10	Plan education and career paths aligned to personal goals.
CRP.K-12.CRP11	Use technology to enhance productivity.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.

Technology / Integration of Computer Science and Design Thinking

TECH.8.1.5	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.5.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
TECH.8.2.5	Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
TECH.8.2.5.E	Computational Thinking: Programming: Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.
TECH.8.2.5.E.4	Use appropriate terms in conversation (e.g., algorithm, program, debug, loop, events, procedures, memory, storage, processing, software, coding, procedure, and data).

Interdisciplinary Connections: NJSL for ELA, Social Studies, Science and/or Math Section

LA.K-12.NJLSA.SL	Speaking and Listening
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Comprehension and Collaboration

LA.K-12.NJSLSA.SL1

Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

Presentation of Knowledge and Ideas

LA.K-12.NJSLSA.SL4

Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

LA.SL.4.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

LA.SL.4.4

Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Integration of Diversity, Equity and Inclusion; Climate Change; Informational and Media Literacy
New Section

see Crosswalks

21st Century Life and Careers

Stage I: Desired Results

Transfer/Overview/Rationale

Transfer / Overview / Rationale

Unit Rationale

The purpose of this unit...

21st Century learners use online resources to find locations in the world using latitude and longitude.

Meaning

Essential Questions

Essential Questions

- How can technology be used to locate, evaluate, and collect information from a variety of sources?
- How can technology tools be used to process data and report results?
- How can technology tools be used to enhance learning, increase productivity, and promote creativity?

Enduring Understanding/Indicators of Understanding

Enduring Understanding/Indicators of Understanding

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students use technology tools to enhance learning, increase productivity, and promote creativity.

Acquisition (Student Learning Objectives)

Knowledge

Knowledge

Students will know...

- Mapping tools vocabulary (e.g. coordinates, longitude, latitude, navigation, compass).

Skills

Skills

Student will be skilled at ...

- Using mapping tools (e.g. Google Earth) and coordinates, to identify a location.
- Capturing, inserting, and saving graphics.

Stage 3: Learning Plan

Resource and Mentor Texts

Resources and Mentor Texts

- Google Earth software
- Scavenger Hunt - see attached files for examples/ideas

[Google Earth Scavenger Hunt - Slides Presentation](#)
["Using Coordinates on Google Earth" - Teacher Version](#)
["Using Coordinates on Google Earth - Student Version"](#)

Formative Assessment Strategies

Formative Assessment Strategies

- Index card summaries/questions
- Hand signals
- Misconception check
- Student conference
- Observation
- Self-assessment
- Exit card
- Quiz
- Choral response
- Debriefing
- Oral questioning

Learning Activities/Unit of Study

Learning Activities/Unit of Study

- Google Earth Scavenger Hunt
 - Students discuss how to identify and use coordinates on a map.
 - Students discuss the features and use of Google Earth software.
 - Students open a prepared document, read clues and try to locate various landmarks, using Google Earth software.
 - When landmarks are identified, students either write what they found, or will take a screen capture and

copy the image into the previously prepared document.

Modifications and/or Accommodations

Suggested Modifications (ELL, Sp. Ed, Gifted, At-risk of Failure)

English Language Learners

Native language support: The teacher provides auditory or written content to students in their native language.

Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly.

Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand.

Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students.

Special Education Students

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Oral Reading: The teacher will read work orally to students. Class work such as tests and literature circles may need to be read aloud to the student.

Timers: The teacher will use timers as an instructional tool. The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

Students with 504 Plans

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Gifted & Talented Strategies

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

Students at Risk of School Failure

Directions or Instructions: Make sure directions and/or instructions are given in limited numbers. Give directions/instructions verbally and in simple written format. Ask students to repeat the instructions or directions to ensure understanding occurs. Check back with the student to ensure he/she hasn't forgotten.

Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment.

Increase One to One Time: When other students are working, always touch base with your students

at risk and find out if they're on track or needing some additional support. A few minutes here and there will go a long way to intervene as the need presents itself.

Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.