

TECHNOLOGY-10

SELECTIVE UNIT 2 (S02)

(Technology Resources - Map Skills)
(July 2017)

Unit Statement: The student will focus on an exploration of an available technology resource that focuses on the digital map reading skills and ability to use navigational software for exploration. The student will practice digital map reading and creation skills as well as will compose a map or a tour.

The technology teacher should collaborate with the classroom teacher to create projects that align with outcomes in other subject areas.

Essential Outcomes: (must be assessed for mastery)

1. **The Student Will** demonstrate the ability to utilize old concepts in different ways, and to integrate new techniques into what they already know.
2. **TSW** practice map reading skills in a variety of digital media.
3. **TSW** select an appropriate topic and create a map or tour in a digital application.
4. **TSW** collect and evaluate sources to support a map or tour.
5. **TSW** present the created map or tour to an audience.

Introduced and Practiced Outcomes:

1. **The Student Will** apply existing knowledge to generate new ideas, products, or processes.
2. **TSW** advocate and practice safe, legal, and responsible use of information and technology.
3. **TSW** exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
4. **TSW** identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services.
5. **TSW** apply existing knowledge to generate new ideas, products, or processes.

Suggested Materials and Software:

- Marble - offline and online featured application that provides map and globe information. Platform Availability: Windows, Mac OS X, Linux, Android. Free.

<https://marble.kde.org/index.php>

- Nasa World Wind - a virtual globe application, Java based Software Development Kit. Platform Availability: Windows, Mac OS X, Linux, Android. Free.

<https://worldwind.arc.nasa.gov/>

- OpenStreetMap - an open online source application that provides geographical information on the whole world streets/ maps. It is free to use under an open license.

<https://www.openstreetmap.org/#map=5/51.500/-0.100>

- Google Earth - offline and online featured virtual globe application.

<https://www.google.com/earth/explore/products/>

When engaged in problem based learning it is helpful to create guidelines for students that include identification of an essential question, goals, elements (tasks), research tasks, a timeline and rubrics. Here is an [excellent resource to assist with planning](#).

Destiny Webpath Express (found on QSI schools Library site)

Use this search engine to find age-appropriate websites that align with this unit.

Suggested Activities, Assessment Tools and Strategies:

(TSW 1) - A teacher should choose the most effective globe application for the school area (location) considering the internet availability and a computer lab facilities. A variety of video tutorials of a chosen application are available online (See the links under Suggested Materials and Software).

(TSW 2) - Using an application students may practice basic navigational tools and learn how to read maps:

1. Students can use the application to identify the meanings of different colors represented on the physical map (green - is for forests, jungles; white, blue and etc.)
2. Students can use the application to fill in the data for a created table with the following column headings: feature (desert, forest, island, etc), color (the feature is represented on the map), shape or texture (that can be identified on the map), and others.
3. Students can play with zoom and describe how different views of the earth are different, when it is possible to see a horizon and etc.
4. Students can fly to different places around the world and identify cultural/ geographical symbols (Fly to a famous place, find a building, a bridge, any other symbols or icons.)

(TSW 3) -Topics can be chosen by the teacher or the student with the help from the teacher. Topics for a map/tour might include the following: (1) A virtual autobiography; (2) Research on a famous person; (3) Important information from a recently read book; (4) Places of worship in the student's community; (5) Environmental health of a river overview (identification of critical environmental point sources); (6) Create a work of fiction; begin with a journey that can trace a PATH and then add moments along the way

that tell the tale using imagery to inspire them, (7) Five Themes of Geography, (8) Different Climates, (9) Religions, (10) Home/Host country tour and etc.

(TSW 4) - students use a variety of sources to collect information related to the chosen topic. A map/tour journal can be created and updated after each research. Sources are recorded. Students can use Destiny Web Path Express for a safe search. See a school librarian.

(TSW 5) - students use the global application to create a map/tour. The teacher can create a checklist with features to use in the final project.

ASSESSMENT RUBRIC FOUND ON FOLLOWING PAGE.....

Assessment Rubric – S02 – Technology Resources – Map Skills

Student Name: _____ Date: _____

To receive a 'B' the student must show 'B' level mastery on ALL Essential Outcomes. (TSW's)

To receive an 'A', the student must show 'A' level mastery on 2 of 3 available and 'B' level mastery on all remaining TSW's.

TSW	'A' Level Mastery	'B' Level Mastery	'P' Comments
1. The Student Will transfer current knowledge to learning how to use new applications.	The student can explain how they have utilized old concepts in different ways, and to integrate new techniques into what they already know.	The student demonstrates the ability to utilize old concepts in different ways, and to integrate new techniques into what they already know.	
2. TSW practice map reading skills in a variety of digital media.	The student can compare and contrast two digital map programs.	The student can demonstrate the ability to read a map online.	
3. TSW select an appropriate topic and create a map or tour in a digital application.		The student can select an appropriate topic for a map or tour.	
4. TSW collect and evaluate sources to support a map or tour.	The student can justify the value of their sources for a map or tour.	The student can collect and evaluate sources to support a map or tour.	
5. TSW present the created map or tour to an audience.		The student can present the map/tour to an audience.	