Learning Through Locative Media

Grade: 7
Subject: Social Studies

Note: This unit is designed to follow the “Learning Through Location” unit in which students will have considered the importance of location in the study of their community history and have written scripts/stories in reference to that particular place. This “Learning Through Locative Media” unit is divided into part A and part B. Part A is designed to introduce the concept of the technical tools of locative media and marking the intended GPS hotspot. Part B is designed to follow the media presentation creation in either the “Audio Media Creation and Exploration” or “Video Media Creation and Exploration”. The media will be created in those units and then aligned with the GPS hotspot to set it up for sharing and reflection.

Description:
Students will use the history research of their community and script/story writing and geolocate those stories to mark a waypoint with a GPS hotspot. Their audio/video files presenting that script will then be saved in the correct format and uploaded to a GPS enabled PDA device so that they can be shared in the form of locative media, location specific presentations about historical people, places or events in their community.

Technical Materials Necessary:
To successfully accomplish this lesson, your class will need:
- access to GPS units for geolocation marking
- media creation software such as GarageBand and/or iMovie
- a set of mobile media devices (GPS enabled cell phone or PDA or GPS units to accompany cell phones or PDAs) for the class to use in groups or 2-5 students per group (two students per mobile device is ideal)

Learning Through Locative Media PART A

Lesson One: Teacher Directed

Prior to the lesson:
The teacher should have become familiar with and used the basics of mobile media and “Global Positioning Systems” (GPS) technology.

Materials Necessary:
Information on mobile media. Please refer to the notes at the end of this unit that provide a brief description of mobile media and GPS technology.
A brief presentation about GPS technology to share the information in a dynamic way. 
A GPS unit for reading the geolocation.
A set of locative media devices (GPS enabled cell phones or PDAs) for the class to use in groups or 2-5 students per group.
A set of location specific presentations relative to your school-yard loaded onto your class set of media devices.
It would be helpful to have an additional adult or older student assist in this lesson.
Small items to be used as prizes, eg candies for the geo caching activity.

Getting Started:
• Lead a think/pair/share discussion with the class about what they know about Global Positioning Systems (GPS) and the possible uses of it.
• Chart their responses.
• Share an introduction and description of the terms of GPS through a brief presentation either digitally through a media presentation and data projector or through notes and diagrams on an overhead projector or on the board.

Development:
• Give a brief demonstration of a GPS unit and how they work and the appropriate handling of them. In the classroom you will have difficulty receiving a proper signal but it will allow for students to see the unit and receive information on the safe handling of it.
• Take the students out into the school-yard for an interactive activity that will allow them to see the GPS unit and how it can be used.
• Demonstrate how to take a GPS reading.
• Give the GPS units a chance to load up and locate the satellites.
• Share with the class how the GPS unit is used to mark the geolocation.
• Split the class into as many groups as there are GPS units. If possible have each group accompanied by an adult.
• Have each group set off in different directions within the school-yard to hide their groups’ prizes. They are to hide the prize basically wherever they wanted, as long as the prize is somewhat visible.
• Let a student hold the GPS unit and mark the point where they’d hidden it.
• Have the students return to the original meeting place in the school-yard
• When all groups had returned, have them switch GPS units and then push the GO TO button so it would lead them to the other group’s hidden prize.
• The GPS will indicate that the prize is close, and then the students will have to start scouring the environment for the prize.
• The allows the students to see how to mark a waypoint with the GPS units, and is recording all of the data about the location (elevation, exact coordinates on the earth, time it was marked) and that sometime after they would be able to come back to that exact spot using the technology.

Application:
• Distribute the GPS enabled cell phones or PDAs for the class to use in groups or 2-5 students per group. These mobile media devices will already have a series of media presentations relative to specific GPS hotspot locations in the school-yard.
• Allow the student to explore the school-yard and experience the media presentations.
• At each hotspot location, ask the students to consider how the locative media presentation helped to share the information about that location.

Closure:
• Gather all of the students together and the locative media devices.
• Return to the classroom to review the process and reflect on the locative media experience.
• Chart their responses.
• What were the most memorable/exciting aspects of experiencing the locative media presentations?
• What were the most challenging aspects?

Lesson Two:

Materials Necessary: A sample school-yard location based media presentation and a data projector and speakers to share it.

Getting Started:
• Consider which of the school-yard location based media presentations that they saw last class that liked and which ones stood out in their minds.
• Play that presentation, and with the students, try and identify the components of the presentation that made it have impact.

Development:
• Chart their responses to the following questions:
  o What types of media are used in the presentation?
  o What can we hear? What can we see?
  o Did you like the location it was in? If so why?
  o What do you remember about the location based on the presentation?
• Lead a discussion of location choosing based on the appropriateness of topic and use of hotspot location as effective context for student presentations.

Application:
• Have the students work with their partner to examine the script/story that they have written and consider the translation of it as a location based the media presentation.
• Refer to the same questions as listed above for their historical script and plans for the creation of a media presentation.
• Have the students discuss their project and perform revisions to their scripts based the need to have it presented in a specific location.

Closure:
• Discuss how a story/script can create real impact by setting a mood.
• Have some willing students share their story/scripts with the rest of the class.
• What were the successful aspects of the story/scripts? Were there any challenges that need to be addressed?
• Review of terms presented about Locative Media, Hotspots, and any questions about the assignment

Lesson Three:
This lesson is a second field trip to the locations for students to geolocate and record the location using a GPS unit and to gain greater insight into the location through another investigation of it.

Materials needed: GPS unit for reading the geolocation and a map of the region and the locations.
Preparations necessary: Locations selected by the students need to be listed and grouped together so that when the groups of students go out to make their GSP readings, the locations will be in close proximity to each other.

Getting Started:
• Quickly review the importance of the hotspot in relation to the chosen topic.
• Reinforce the concept that the locative media presentation is about sharing information in a particular place.
• Share examples of community historical figures and potential regional hotspot locations that students have come up with.

Development:
• Demonstrate for the students how to use the GPS units to take readings of the exact location that they are at.
• Describe the logistics of taking groups out to take their GPS reading. eg: safety and guidelines for a successful experience.
• Students will go out with an adult in approximately four groups of two students per adult/GPS unit. Those groups will have locations that are close to each other in the downtown area.

Application:
• Hot spot GPS readings taken by as many groups as possible.

Closure:
• Lead a class discussion about the process of taking the GPS reading.
• What were the successes and challenges?

Lesson Four

Materials needed:
Completed scripts from “Learning Through Location” lesson.

Getting Started:
• Share an example with the class of a brief well crafted script presented in an audio/visual form in which location plays a strong role.
• Have a class discussion about what the effective elements were in the presentation that tied location in well.
• Create a list of things reinforcing what to consider when reviewing their script/story so that location plays as strong a role as possible.

Development:
• Check in with the class as to how successful their script/story location connection is. It is inevitable that there will be some groups will have some challenges in their writing in this area.
• Ask for one group that could use some help tying their location to their topic to share their work. Have them share their location and historical topic with the class so that script could be workshoped by the class.
• Focus on that one group and as a whole class offer suggestions as to how to make the script/story stronger and more cohesive and bring a sense of location into their writing.

Application:
• The students will work in their partnerships to revise their scripts and have a strong sense of location relative to their GPS hotspot.
• To facilitate each group making their stories stronger, the teacher can circulate throughout the class and guide them.

Closure:
• Have some of the groups share their stories/script with the rest of the classes.
• Lead a discussion with the class about what was the most interesting part of the script/story writing.
• Lead a discussion with the class about what was the most challenging part of the script/story writing

Lesson Five

Materials needed:
The completed story/script from the “Learning Through Location” that has been further revised based on the return visit to the location.
A historic audio/visual presentation to be shared through a data projector in the classroom.
The same historical presentation loaded onto the cell phones for students to experience in the small, cell phone format and critique.
Strong and weak audio/visual presentations loaded onto the cell phones for students to review and list the effective aspects.

Getting Started:
• Share a historic audio/visual presentation through a data projector on a screen in the classroom.
• Lead a think/pair/share discussion about the successful aspects of this presentation.
MEDIA ARTS PROJECT

Development:
- Have the same historic audio/visual presentation that the students just reviewed loaded onto the class set of GPS enabled cell phones or PDA’s.
- Have the class experience the difference between the way that the presentation looks and sounds on the large and small screens.
- Have the students work in small groups of 4-5 to discuss what the difficulties are in the translation from the large to the small screen. What visual and technical things should they look out for on when they create their locative media presentation to be shared on a cell phone/PDA?
- Use the GPS enabled cell phones to show images that work well in that scale and format eg: high contrast, black and white, not too much detail, strong composition, etc.
- Have the students work in their groups of 4-5 to look at the images on the phones.
- Create a list of what works well on the cell phone screen.
- Have the students look at images that don’t work well eg: too much detail, image too dark or too light, no clear idea of what the image is, etc.
- Have the students work in their groups of 4-5 to look at the images on the phones.
- Create a list of what doesn’t work well on the cell phone screen.
- The students will have to take these visual and technical aspects into consideration when they create their locative media presentation.

Application:
- The students will work further on their scripts relative to their hotspot in preparation for their media creation lessons to follow.

Closure:
- Have some groups volunteer to share their revised scripts/story.
- What were the successes and challenges of the project?
- Review the visual and technical considerations for media presentation sharing on a cell phone.

Homework: Students must complete their script/story for the “Media Creation and Exploration” lessons

The “Audio and or Visual Media Creation and Exploration” lessons will happen at this point. After the media is created, the class can proceed with the remainder of this unit: “Learning Through Locative Media Part B”.

Learning Through Locative Media PART B

Lesson Six:

Getting Started:
- Share one of the class media presentations via the data projector to help remind the students about the visual and technical elements to consider when the presentations will be viewed on the cell phones.
• Put the list of consideration from lesson five up on the board.

Development:
• Demonstrate the appropriate file format saving of their presentations and how to upload them to the locative media device (either the GPS enabled cell phones or PDAs).
• The students will save their locative media presentations into the appropriate format and upload them onto the locative media device.

Application:
• Students will take turns viewing their history presentations on the locative media devices.
• The students will work with their partners, and another pair of students. They will assess each other’s work and help each other to determine what is successful and what is challenging in terms of the way that the locative media presentations can be experienced on the cell phones.
• They can answer questions based on their viewing of the content on the locative media devices in lesson five before the media was created. Eg: Are the images easy to see and understand? Can the sound be easily heard and understood? Does the editing of the images and sound compliment the story and historical information well? What changes if any need to be made for the sharing of the presentation to be more successful?
• Students will work with their partners to make any visual or technical changes necessary to their media presentations to enhance the viewing of them on the locative media devices.

Closure:
• Lead a class discussion regarding the successes and challenges of the locative media presentation revision.
• What elements in the presentations most typically had to be changed?
• How did making those changes strengthen the presentations?

Homework or in class before the next lesson: Students will complete revisions on their locative media presentations and upload them to the locative media devices. Provide the students with a map of historic topic audio project hotspots within their community. Request that they design a route within the area of the hotspots to listen to 4 hotspots.

Lesson Seven:
This lesson is a class field trip to the region that contains the history locative media hotspots to experience the presentations in the actual location.

Prior to this field trip: All of the history presentations must be uploaded onto the locative media devices. Students must complete their route choosing 4 hotspots to listen to.

Materials Needed:
Pre determined hot spot tour partners in groups of 4-5. There needs to be an appropriate number of groups per class to match the number of locative media devices. Parent volunteer will be necessary to facilitate the supervision and viewing of the projects.
Getting Started:
- Students, teachers and class volunteers will meet at the school and prepare to travel to the locations to experience their locative media presentations.
- A brief introduction and description to the day will be given to the whole class at the school prior to setting out.

Development:
- When the class arrives at region of the community historical site, divide the students into their groups of 4-5, each accompanied by an adult and a locative media device.

Application:
- The students will follow their hotspot map route to experience and view the four hotspots that they have chosen on their route.
- After each hotspot experience, the students and accompanying adult will discuss the audio presentation and consider the following questions:
  - What did you learn about the history of their community in that presentation?
  - How were words/pictures used in the presentation eg: narrative, dialogue?
  - How effective was that for the topic and why?
  - How did the presentation use images and sounds to share their information?
  - How effective was that for the topic and why?
  - How was location a factor in the presentation?

Closure:
- While the students are traveling back to the school, have them fill out a reflection sheet with the following questions:
  - What historical information that you learned from the locative media tours sticks in your mind?
  - Why do you think those historical facts are memorable?
  - What audio/visual elements that you experienced do you remember and why?
  - How was location a factor in the presentations? Provide 2 specific examples of strong use of location from the locative media presentations you experienced.
  - How has the locative media experience made you think about the history of your community?
- After the class has experienced the hotspot tour, have a discussion about their locative media hotspot experience.
- What did they learn about locative media and how it can be used to share history?
- What did they learn about how location can be tied to history?

Lesson Eight:
 Completion and sharing
Getting Started:
- Share an example of a well crafted locative media presentation.
- Discuss the successful elements of the presentation.
- Remind the students to look out for those elements in their presentations.

Development
- The students will open up their audio presentations and complete any last changes to their work based on the experience of seeing them on location on the field trip.

Application
- Clean up and completion of locative media project.
- Saving files to exact specification process.
- Share the presentations with each other by rotating through each of the computers and experiencing each of the audio files. This can be done with partners rotating together or small groups or the whole class listening to each presentation.

Closure
- Highlight the elements of the presentations that stick in your minds.
- What elements were memorable and why?
- Review and discuss the process of researching the topics and creating the audio files.
- Discuss what the experience of creating the audio files was like.
- What were the challenges?
- What were the successes?
- What did you learn?
- What will you remember about your community?

Lesson Nine:

Sharing of presentations in a locative media context in the community. This may happen over the course of a few classes or in the evening sometime to involve the parents from the community.

Getting Started:
- Share some of the students’ locative media presentations in the classroom.
- Discuss their successful and challenging elements.
- Discuss how experiencing the locative media presentation in a different location could potentially change the experience of it.

Development
- Discuss the parameters with the class of going out for a locative media tour, eg: safety and guidelines for a successful experience.

Application
- Take a downtown historical tour of the community using the hand held GPS enabled cell phones
MEDIA ARTS PROJECT

Closure
- Lead a class discussion of the impact of the locative media presentations in a site specific location.
- What things do you remember about the presentation now that you have heard it in a particular place?
- Lead a discussion about what the students learned about the history of their community?
- Lead a discussion about what the students have experienced about the use of technology to help us understand our world better.
- Have the students write reflection papers about the process of being involved in the project and exploring their community’s history through technology and locative media.

Appendix:

Mobile Media
"Mobile Media" is a relatively broad term that essentially means “portable media”, that is, any kind of multimedia that can be delivered to audiences using a laptop, PDA, mobile phone, iPod, or other portable media player. So for example, one type of mobile media that's growing in popularity these days are “micro-movies” – basically, short films intended for people to download wirelessly and watch on their cellphones. Or a similar example would be TV shows downloaded to your iPod.

What is GPS and Locative Media?
“Global Positioning Systems” or GPS technology has been around for many years. It is a system that was originally developed by the U.S. Navy to locate a person’s exact position on the earth’s surface using a system of satellite radio transmitters. Many people call this a “location-aware” or “location-based” technology. There are 29 satellites orbiting the earth, at about 17 000 km. There are always six or seven of these satellites overhead at any particular time. These satellites broadcast signals that are detected by GPS devices. These devices then calculate their precise location on the earth with respect to latitude and longitude, and even elevation, by triangulating the satellite signals. As few as 3 satellite signals are required in order to determine a GPS unit’s location, but 4 or more signals are needed in order to achieve the best precision.

The term "mobile media" generally refers to multimedia delivered to roving audiences using small portable devices like cell phones, Blackberries, or PDAs – often hooked up to a Global Positioning System (GPS) or other sensor device that allows this media to be played in a specific geographic location, and thus become “location-based”