

## **Using GPS Equipment in the Classroom: An Annotated Bibliography**

Prepared by Sarah Steele, Curriculum Materials/Media Librarian, Campbell University

**(2008). EXPLORERS: The Next Generation. *School Library Journal*, 54(42). Retrieved from Academic Search Premier database.**

The article reviews the Web sites: Everyday Explorer from National Geographic at [www.everydayexplorer.com/bresnan/be-an-explorer.html](http://www.everydayexplorer.com/bresnan/be-an-explorer.html), Geocachingkids.com by Seth Leary, and My Wonderful World from National Geographic at [mywonderfulworld.org/kidsteens\\_welcome.html](http://mywonderfulworld.org/kidsteens_welcome.html).

**Alibrandi, M. (2003). *GIS in the classroom : using Geographic Information Systems in social studies and environmental science*. Portsmouth, NH: Heinemann.**

This book/CD-ROM package presents an overview of GIS, a computer application for urban planning, weather reporting, and geological studies. It gives examples of real projects that show how it can be used to teach students in middle school and up. The companion CD-ROM contains GIS software, plus sample projects and activities.

**Anderson, M. (2008). Geocaching for Fun and Learning. *MultiMedia & Internet@Schools*, 15(2), 32. Retrieved from MasterFILE Premier database.**

In this article, the author suggests the use of Global Positioning System (GPS) technology and geocaching by students. The author argues that there are good reasons for media specialists to push this idea. She identifies potential cache sites listed on Geocaching.com. She claims that geocaching supports new ways of learning and real-life learning. Geocaching, she explains, also promotes community connections and the potential use of primary sources.

**Bourdeau, V. (2007). Teaching GPS Technology in Nature Education Programs. *Camping Magazine*, 80(6), 1. Retrieved from MasterFILE Premier database.**

The article focuses on using Global Positioning System (GPS) devices in environmental education programming. The author discusses her experience creating a program at the Oregon 4-H Center in which campers learn the basics of a GPS unit through a geocaching exercise. She also describes an exercise combining education about GPS technology and identifying local tree species. Map making with GPS units is also discussed.

**Briggs, L. (2007). Here, There, and Everywhere. *T H E Journal*, 34(5), 50-51. Retrieved from Academic Search Premier database.**

The article focuses on the use of digital mapping for educational purposes in the U.S. Advocates of digital mapping in the field and classroom say that it encourages skills like critical thinking and decision-making, and can serve as an excellent way for students to learn where data comes from and how to collect it, along with learning about their local area's history, geography, topography, animal and plant populations, and much more. Digital mapping for educational purposes begins in the field with a global positioning system (GPS), which is used to receive information from several dozen GPS satellites orbiting the earth.

**Christie, A. (2007). Using GPS and geocaching engages, empowers & enlightens middle school teachers and students. *Meridian: A Middle School Computer Technologies Journal* , 10(1), Retrieved from <http://www.ncsu.edu/meridian/win2007/>.**

This article provides a theoretical rationale (E6 Learning Model) for creating technology-rich, constructivist learning environments that use GPS receivers and geocaching in K-12 classrooms and for engaging students in student-centered, personally meaningful, authentic, and collaborative learning. It also provides examples of classroom activities that incorporate GPS units and geocaching, steps for teachers to create similar lessons, and a curricular example that teachers can modify to increase student understanding of any curricular area. Finally, it provides online resources and a podcast that provide teachers with additional ideas for making GPS receivers and geocaching integral tools in their engaging, empowering, and enlightening classrooms.

**Joseph, L. (2006). Caching In on GPS. *MultiMedia & Internet@Schools*, 13(6), 21-25. Retrieved from Academic Search Premier database.**

The article offers information on several Web sites about Global Positioning System (GPS) that can be used in teaching. The Smithsonian Institution Web site discusses the history and uses of GPS. The Global Postcard Search interactive game provides the latitude and longitude of geographical locations along with a clue. The Web site of the Center for Technology and Teacher Education offers classroom activities on using GPS.

**Shaunessy, E., & Page, C. (2006). Promoting Inquiry in the Gifted Classroom through GPS and GIS Technologies. *Gifted Child Today*, 29(4), 42-53. Retrieved from ERIC database.**

Geography is rapidly becoming interactive, especially with the advent of the Global Positioning System (GPS) and Geographic Information Systems (GIS) and their adoption in the public and private sectors. The days of two-dimensional maps are quickly being replaced by geographic images that are stored electronically in computers and handheld devices, which also house layers of information that are available with the click of a button. This change in the way information is stored, retrieved, and used is transforming business, industry, and government, allowing for a more efficient use of time and money, and in some cases, saving lives. In order to prepare gifted learners to lead in the future, which will likely require competence in technological skills, social studies educators and teachers of the gifted should utilize GPS and GIS in their teaching, allowing students to use real-world information to address authentic problems.