

## BEYOND YOUR SCHOOLYARD: GOOGLE EARTH AND GEOSPATIAL TECHNOLOGIES

### OVERVIEW

Many of us use geospatial technologies such as Google Earth and Geocaching for recreation. These tools are more than that. The purpose of this course is to gain a deeper understanding of geospatial technologies, such as (GIS) Geographic Information System, Google Earth and Global Positioning Systems and how they can be used as tools to enhance authentic, problem-based instruction, and authentic assessments. GIS and GPS are identified in the National Standards. Teachers in earth, environmental, biological, general sciences, geography, history, economics and language arts will enhance teaching and learning by incorporating these geospatial technologies into their lessons.

In this course, participants will learn features of Google Earth such as formatting place marker descriptions, adding images and route paths and other ways to enhance understanding in great literature, community field trips, and international projects. Participants will become members of the Google Earth Education Community and find resources that take their students around and out of this world! You will plan to take students on a geocaching trip. Google Earth and geocaching will be incorporated into a lesson that will be submitted as a final product.

### GOALS

This workshop will enable participants to:

- understand the nature of Google Earth, Geocaching, and Geographic Information System as geospatial technologies
- use Google Earth and Geocaching as teaching tools and learning products
- learn how to use kml (Keyhole Markup Language) files and how to create them
- understand GIS as an educational tool
- plan to take students geocaching
- develop a lesson that incorporates Google Earth and geocaching into your curriculum

### FINAL PRODUCT

Participants will submit a lesson using the lesson template that incorporates Google Earth and geocaching as a final product.

### COURSE EXPECTATIONS

This workshop is divided into six one-week sessions which each include readings, activities, and an online discussion among workshop participants. Participants should expect to spend 4-5 hours per week in order to adequately complete the work.

The outline for the workshop is as follows:

Session One:	An Overview of Geospatial Technologies
Session Two:	Google Earth as an Educational Tool
Session	Creation of Google Earth File

Three:	
Session Four:	An Overview of Geocaching and GPS
Session Five:	Plan a Geocaching Field Trip
Session Six:	GIS in Your Curriculum

In the first session, participants will be provided with an overview of some geospatial technologies. In sessions two and three, participants will learn how to use Google Earth files and how to create some files. Participants will also be exposed to many educational ways that Google Earth that can be used to enhance the curriculum. In Sessions Four and Five, participants will learn how to create and how to plan a geocaching project.

Finally, in Session Six, participants will explore GIS and share how it can be used in the curriculum. Throughout this workshop participants will be working on developing a lesson that integrates geospatial technologies to be submitted, using the lesson template , as a final product.

These are suggested criteria to be used for evaluating successful participation in and completion of this workshop.

1. **Discussion Board Postings:** Participants are expected to respond to the online discussion prompt in each of the course sessions with an original posting. Participants are also expected to respond to the postings of at least two other course participants in each session. Guidelines for discussion postings, as developed by the EdTech Leaders Online, are available at the following URL: [http://www.edtechleaders.org/documents/discussion\\_guidelines.htm](http://www.edtechleaders.org/documents/discussion_guidelines.htm) *NOTE: Discussion Board postings are your "weekly attendance" and therefore must be made within the appropriate week. No more than one week can be accepted incomplete or late for course credit to be applied.*
2. **Readings and Activities:** Participants are expected to complete the required course readings and activities as posted in each of the session assignment pages. Optional readings may also be completed, but are not mandatory.
3. **Final Product:** Participants will submit a lesson.
4. **Pre and Post Workshop Surveys:** Participants are expected to complete both surveys. The final workshop survey must be completed within one week of the end of the last workshop session.

### Prerequisites

This is an introductory workshop for teachers, technology specialists, curriculum specialists, professional development specialists, or other school personnel. Participants are expected to have regular access to computers. In addition, participants should be proficient with using email, browsing the Internet, and navigating to computer files.

### Content and Technology Standards

This workshop will help participants meet the [ISTE Educational Technology Standards and Performance Indicators for All Teachers](http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS_T)  
([http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS\\_T](http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS_T))

\_Standards\_Final.pdf), especially Standards I , II and III.

In addition, this workshop will help teachers to enable their students to meet the following [Information Literacy Standards](http://www.iste.org/Content/NavigationMenu/NETS/ForStudents/2007Standards/NETS_for_Students_2007_Standards.pdf) (http://www.iste.org/Content/NavigationMenu/NETS/ForStudents/2007Standards/NETS\_for\_Students\_2007\_Standards.pdf), especially Standards I, III, and IV.

For more information about Technology Integration visit: <http://www.iste.org>

### **About This Workshop**

This course was developed by educators as part of the [eLearning Delaware](#) initiative. eLearning Delaware is Delaware's implementation of the [eLearning for Educators Initiative](#), a project funded through a federal [Ready to Teach](#) grant and a multi-state collaboration between eight state education agencies and associated public broadcast stations. eLearning Delaware partners are the [Delaware Center for Educational Technology](#), the Delaware [Department of Education](#), and [WHYY](#).