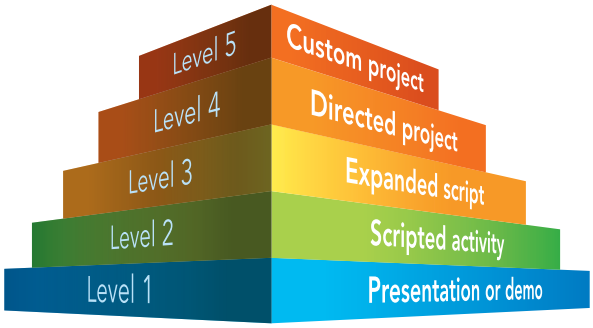
# Geographic Inquiry Process


| Step | What to do |
|---|---|
| 1. Ask a geographic question | Ask a question about spatial relationships in the world around you |
| 2. Acquire geographic resources | Identify data and information that you need to answer your question |
| 3. Explore geographic data | Turn the data into maps, tables, and graphs, and look for patterns and relationships |
| 4. Analyze geographic information | Determine what the patterns and relationships mean with respect to your question |
| 5. Act on geographic knowledge | Use the results of your work to educate, make a decision, or solve a problem |

# Instructional Use of GIS




| Level | Features |
|---|---|
| 1 Presentation or demonstration | • The teacher conducts a carefully planned presentation with GIS to highlight facts or concepts or to demonstrate a process<br>• The teacher can employ an interactive style of questioning and prompting to guide student discovery and coordinate content<br>• The group goes through the experience together |
| 2 Scripted activity | • Teacher and students follow a set of precise instructions to explore a modest set of information about a topic or a place, learn facts or concepts, experience a process or see that GIS can help answer a question<br>• The data, procedures, and questions are provided, and the movement tends to be linear toward a predetermined result<br>• The script may support analytical thinking, but questions not central to the activity's mission are avoided in order to focus the instruction |
| 3 Expanded script | • Having explored sets of data with GIS, teacher and students go outside the bounds of the instructions and questions from one or more scripted activities, following their own ideas with the provided resources<br>• The teacher may provide the question to explore, or teacher may provide general context with a realistic but broad strategy to provoke greater analytical thinking by students<br>• The mission is to open up the doorway for students to customize their explorations, strategies, analyses, and interpretations |
| 4 Directed project | • Students create their own project according to a set of parameters the teacher provides; they experience a "beginning-to-end" process without wasting time searching for an appropriate task<br>• The teacher typically structures the general focus, design, duration, and degree of difficulty of the project, such as working with data from a broad but finite catalog of pre-selected contents, deciding the range of time students have to identify a specific topic and question, focus on some relevant data elements, and prepare an "end product" such as a poster or report |
| 5 Custom project | • Students use geospatial technology while conducting a GIS project entirely of their own design<br>• Teachers guide students to tackle independently the processes of conceiving a question; seeking, sifting, and generating data; examining data in search of patterns and relationships to refine the question or improve the data accessed; integrating and analyzing the resources; and acting on the information gleaned |

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