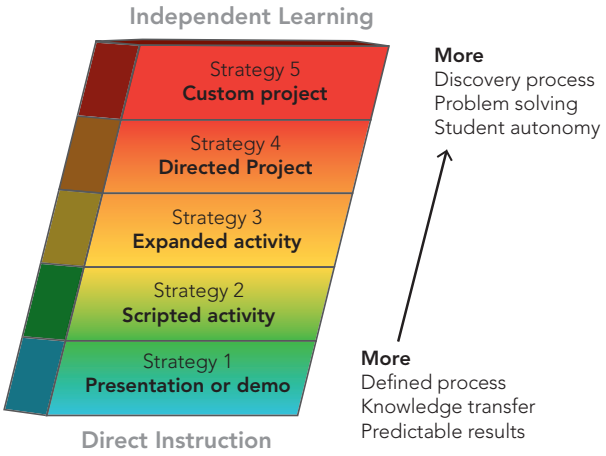
Instructional Use of GIS



Strategy	Features
1. Presentation or demonstration	• The presenter conducts a preplanned presentation with GIS to highlight facts or concepts, demonstrate a process, or stimulate discussion. • The teacher can employ an interactive style of questioning and prompting to guide student discovery and coordinate content. • 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. • The data, procedures, and questions are provided, and the movement tends to be linear toward a predetermined result. • The script may support analytical thinking, but questions not central to the activity's mission are avoided 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. They follow their own ideas, exploring without a prescribed pathway. • 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. • 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, minimizing time spent searching for an appropriate task. • 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 preselected 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. • Teachers guide students to independently tackle 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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