

Strategies for Teaching Students with Special Needs

Introduction

Digital media is particularly well suited to support many students with special needs. In some cases, structured learning environments are available specifically to address the needs of learning disabled students. In other cases, special needs students are mainstreamed in classrooms and may or may not have instructional assistants for additional support. Thus it is up to each teacher to determine the classroom management strategies that are appropriate for his or her classroom and students. The ideas provided below are general tips for supporting students with special needs through digital media and inquiry-based learning. The focus of these strategies is on students with physical disabilities or moderate learning disabilities.

Physical Disabilities

Students with physical disabilities typically already have some classroom modifications in place to account for their particular needs. Text-reading software programs for visually impaired students or captioned videos and interactives for hearing impaired students are common tools that allow students with physical disabilities to participate fully in classroom activities. For visually impaired students, Discovery Education eBooks can be a useful tool. Discovery Education Explorations can be particularly useful for hearing impaired students who may have greater difficulty getting content from non-captioned videos. Keep in mind that for many hearing-impaired students, American Sign Language, not English, is their first language. Thus complex readings and even captioned media materials may be somewhat difficult for these students to use, much as English-language materials would be a challenge for any English language learner.

Learning Disabilities

An inquiry approach using the “5E” model (Engage, Explore, Explain, Elaborate, Evaluate) is an important tool for helping students develop critical thinking skills and understanding the scientific process. In many cases the skills needed for successful inquiry will require additional support for learning disabled (LD) students. The table below describes possible challenges for learning disabled students engaging in inquiry and tips for providing support.

Inquiry Stage	Possible Challenge for LD Students	Strategies or Tips
Engage	Open inquiry and even guided inquiry can be overwhelming for many LD students. Students who are particularly interested in the subject matter may have difficulty focusing attention and transitioning from engagement to exploration.	<ul style="list-style-type: none"> Utilize Assignment Builder to provide a directed inquiry approach for specific students in which they are provided with a detailed procedure or specific set of questions to answer as they proceed to exploration.
Explore	Students may have difficulty focusing on the important ideas and in separating main ideas from key details and key details from interesting details. In addition, students with attention problems may have difficulty focusing attention during an activity, particularly one that invites them to examine multiple options, such as in a Virtual Lab.	<ul style="list-style-type: none"> Provide graphic organizers such as spider maps, tables, or cause-and-effect maps as appropriate to guide students in note-taking as they explore. Model for students how to take notes while watching a video or working through a reading passage. Show students how they can stop, start, and repeat a video clip so they can view materials as many times as necessary or stop to take notes. Allow students to explore the different buttons and links in an interactive or Virtual Lab for several minutes before actually starting the activity. Set a stopwatch or timer and tell students they have x minutes to click through the activity before they actually begin.
Explain	Students may have difficulty expressing their ideas verbally or in flowing text. They may also have difficulty summarizing the concepts which were presented differently in the various resources.	<ul style="list-style-type: none"> Provide a Main Ideas and Details graphic organizer for students to use to summarize all their notes. Model for students how to find the overall main concepts by looking for ideas that repeat in their notes (i.e., concepts covered in multiple resources). Take full advantage of the online medium by allowing students to re-watch videos, re-read passages, or re-do activities multiple times. The variety of available Discovery Education

		<p>resources makes it possible for students who learn differently to approach the content in the ways they learn best.</p> <ul style="list-style-type: none"> • Provide sentence frames to support students in describing what they learned.
Extend	Students may have difficulty seeing connections between pieces of information or in applying skills to a novel scenario or situation.	<ul style="list-style-type: none"> • Add linking questions to student worksheets to fill in more tightly any potential logic gaps. Linking questions should lead students through each thought process required, tying one idea directly to another.
Evaluate	Some students may physically have difficulties writing legible text.	<ul style="list-style-type: none"> • Allow students to type reports or answers to questions rather than writing them out. • Allow students to use sketches and diagrams to explain their thinking. • Provide sentence frames to support students in demonstrating what they learned.