



STRATEGIES TO LOOK FOR WHEN SELECTING A SCIENCE CURRICULUM

(DEFINITIONS AND EXAMPLES)

Strategy	Definition	Examples
Computer Assisted Instruction (CAI)	Computer programs or high-tech equipment provide content instruction to students to enable them to meet standards and goals. Sample features— <i>independent instruction for student; may measure student skill and progress; interactive; immediate feedback.</i>	<p>Independent computer-guided instruction for students, text to speech, computer-generated feedback features.</p> <p>Example: Students using a multimedia computer software program that has animations, video, and sound to identify parts of the body. Software programs like this often include a computer-generated quiz as a way for students to test their knowledge of the body, providing feedback to students when they mark correct and incorrect answers.</p>
Adapted Books/Texts	Texts and general education materials are modified.	<p>Low-technology materials (e.g., stickers, fabric, glue, highlighting).</p> <p>High-technology materials (e.g., talking switches, communication devices, talking books software, textbooks on tape, Braille, sign language, voice recognition software, sign language on videotape).</p>

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Learning Strategies	Techniques, principles, or rules help students acquire, store, use, and retrieve information in various settings. According to the National Dissemination Center for Children with Disabilities or NICHCY (1997a), learning strategies generally fall into two categories— (1) cognitive and (2) metacognitive.	<p>Cognitive strategies are usually task specific and may include tasks such as taking notes, making an outline, and asking questions.</p> <p>Metacognitive strategies are self-regulation techniques and may include goal-setting, self-monitoring, and self-questioning.</p> <p>Cognitive Example: Students are asked to create a flowchart demonstrating the flow of energy from producers to tertiary consumers.</p> <p>Metacognitive Example: Students are given supplies and asked to design a rocket that will travel the farthest distance. At the end of the activity, students are asked to explain their rocket design, why they designed the rocket as they did, and what they would do differently in the future to increase the distance their rocket travels.</p>
Grouping Strategies	After assessing students' needs, teachers plan activities using various types of groups to ensure that students' needs and interests are targeted.	<p>Student pairings, smaller teacher-led groups, and multiple grouping (varying the grouping from day to day) formats.</p> <p>Example: On day 1, students are randomly placed into groups of four to discuss the origin of the three rock types (igneous, sedimentary, and metamorphic and where the rocks can be found. The next day students work in pairs to classify several randomly assorted rocks from each rock type.</p>

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Peer Assisted Learning Strategies	Students interact through “coach/player” pairings in structured cooperative-learning activities.	Students support each other through frequent oral interaction, feedback, and reinforcement. Example: Students examine the parts of a flower under a microscope and then quiz each other on the parts and their functions.								
Curriculum Based Measurement (CBM)	CBM is a valid and reliable form of curriculum based assessment. CBM monitors academic progress in basic skills with short (1–3 minute) probes of reading, spelling, mathematics, and writing fluency. The student’s progress is measured against self and class. CBM allows for data-based decision making through a multiple-step process involving testing, analysis, and planning.	<p>Example: Students are asked to match specific words from a genetics unit with their correct definitions using the CBM matching probe below.</p> <table border="1"> <thead> <tr> <th>Scientific Word</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>DNA</td> <td>a different form of the same gene</td> </tr> <tr> <td>Mutation</td> <td>deoxyribonucleic acid, the genetic material all life is based on</td> </tr> <tr> <td>Allele</td> <td>a change in the genetic code that sometimes alters the outward appearance of the individual</td> </tr> </tbody> </table> <p>Please click here or see attachment entitled <i>Science CBM Probe Example</i> for a more comprehensive probe.</p>	Scientific Word	Definition	DNA	a different form of the same gene	Mutation	deoxyribonucleic acid, the genetic material all life is based on	Allele	a change in the genetic code that sometimes alters the outward appearance of the individual
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