

Jeffrey Dier

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Chapter 10

1. Equity, diversity and achievement gaps deal with science. Science learners are diverse and each learner should have an equal opportunity to learn science. Some of these learners do not have this and this causes achievement gaps in learning like on standardized tests. This has nothing to do with the ability of the child in science.
2. Science can be effectively taught in an inclusive classroom by creating a classroom that is nurturing and supportive and fosters mutual respect, self-esteem, self-efficacy and resilience; understands and addresses student's needs as learners; use multisensory, thematic and/or cross disciplinary approaches; encourage collaboration not competition; use cooperative learning strategies; provide lessons that are developmentally appropriate to the student; employ authentic assessment methods; revisit and apply DCIs, CCCs, and SEPs over time; have high expectations for all students; encourage students to be responsible for their own learning; and actively engage students in inquiry and other constructionist approaches.
3. Teaching a student with disabilities, you must take into mind their regular and IEP goals. Disabling conditions can be those who are cognitive, emotional and physical. Accommodations are based on their disability. These activities can include alternative or multisensory activities, allowing extra time, teaching study skills, graphic organizers, behavior modification plans and arranging technology to aid sense and for instructional purposes.

4. Gifted and talented students are intelligent, creative and interested in some topics. They may not be interested in science, but if they are, they ask a lot of questions. They can do unstructured explorations, engage in enrichment activities, challenging in areas where growth is needed, and listening and responding to their interests while ensuring that they have a firm foundation of basic concept and skills.
5. Instructional strategies that best enable students from linguistically and culturally diverse backgrounds to learn science are hands on science teaching and learning activities, sheltered instruction, speak slowly and use gestures, and teach strategies like notetaking skills and mnemonics. It is important to be familiar because linguistic diversity is growing in the United States and it is a big chance that a teacher will come into contact with someone who is culturally and linguistically diverse.