

The Institute for Arts Integration and STEAM

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5 Best Practices for Connecting STEAM with Special Education

Special Education students oftentimes go to intervention classes in place of arts classes (technology, art, music, etc.). The same also applies to students performing below grade-level in math and reading. This can mean a missed opportunity for engaging these students in a meaningful way.

Here's a list of five best practices for purposefully planning STEAM projects your special needs students in mind.

1. Give Options Rather than a Set Outcome

By providing your students with a rubric and the freedom to produce their own end product, they will surprise you with how creative they can be! This approach prepares our students for life in the real-world office place where projects are more open-ended with professional freedom. My students competing in the social media challenge were highly motivated. They were engaged in the project because they had buy-in to their creative solution.

2. Allow for Wait Time

I have found that one of the most difficult aspects of supervising a STEAM lesson is providing additional wait time, allowing my students to productively struggle, and ignoring my instinct to suggest a given strategy. For instance, remind your students of the tools that they have around the classroom. Encourage them to communicate their ideas or questions to a partner. However, try to avoid jumping in with guided assistance or additional prompting the moment your students begin to struggle. Having a discussion with your class afterwards about the challenges they faced and what they liked about this type of lesson can help them process it as they may be new to this STEAM approach.

3. Make it Concrete, Not Abstract

Many students with special needs, especially those with autism, tend to struggle with figurative language. During one lesson when my group was reading lyrics to a song, several of the students were confused by the phrase "he was as slow as a turtle". Since then, I made an effort of previewing abstract concepts and figurative language with my students.

4. Thinking Maps Can Be Your Best Friends

During the initial planning stage of a project, many students need to organize their thoughts,

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arrange their reading notes, and visualize the bigger picture. This is especially true for students

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who have a difficult time with inferential reasoning. Thinking maps and graphic organizers can help bridge this divide. A flow map (similar to the step by step boxes of a cartoon) can help students recognize or plan out the steps to an experiment or research project. Another timesaving tip is to ask your technology or media teacher (if your school is lucky enough to have one) to align their lessons with an upcoming project in your classroom. The technology teacher at my school trains the students to choose their own graphic organizers on the Vizzle computer program.

5. Align Student Goals and Accommodations with your Lesson

The students' IEPs (Individualized Education Plan) may have goals in math, reading foundational skills, reading comprehension, written language, behavior/self-management, and social/emotional (among others) that could provide useful information for student groupings and the focus of your lesson. For instance, you may need to pre-teach vocabulary, scaffold and model any writing, integrate a math or ELA strategy, purposefully group students for self-management, and/or differentiate any articles based on reading level or provide a text-to-speech option on the computer for students who are reading significantly below grade level.

Check with the special educator if you need a copy of any student's IEP, have any questions, and/or would like to collaborate on planning an upcoming lesson. It takes a village!