Engage with students

Promote curiosity by asking questions. Provide opportunities for students to share and try to get them to engage in conversations.

Promote confidence by handing out tasks. Make students part of the action by incorporating them into discussions or activities.

Give them choices. Encourage students by letting them make some decisions or choices about what happens next.

Help them process and understand the activity. Allow them to share their thoughts, feelings, and emotions to help others understand what is happening.

Deliver the lesson, but don’t worry about being scary. Kids will respond to your enthusiasm and passion for science more than your coin collection.

Meet them at their level. Don’t lower them too much, but adjust to so that you can make eye contact and talk to them.

Answer their questions. You don’t have to have all the answers, so model a sense of learning and curiosity. “That’s a great question! I haven’t thought about that before.” Or “I’ll think about the answer, and share what do you think?”

Translating the science

Know your audience. Talk to students of similar ages—what they are learning in school. Research your peers to get a better understanding of what they know. Consider language and remove jargon. Don’t use terms that students don’t understand with stuff that you do. Thoroughly define any new concepts.

Interpret the science in a way that students already know and what they need to be informed. Provide them with information on something that is clear to them to understand.

Come up with a catchy title. Grab their attention with a fun, catchy title that will get their mind going and create interest.

Practice teaching it. Find someone you can practice your activity with and ask them to test it. What specific things will be challenging and how will you overcome them?

Be creative. Approach your teaching from various angles. Make sure students understand the concept. Be creative! The more they can see the concept in different ways, the better they will understand it. They will be able to see how it applies to their lives and they will be more engaged.

Make the content accessible. Suggest one idea to the most basic concept. These ideas need to be clear and understandable. The lesson needs to be clear and understandable. If it’s a difficult concept, the lesson needs to be broken down into smaller chunks.

Incorporate kinesthetic modeling. Use simple models to put out the concept to a child. The models should be easy to understand and relate to their lives.

Check for understanding. Ask a simple question or follow up. Be sure that students aren’t confusing them by asking questions that require a bit more time or more in-depth answers, or have them keep track of how they do.

Being mindful of some EDI teaching strategies

How do you structure a learning environment to ensure that everyone feels comfortable, safe and welcomed? Here are a few strategies that encourage equity, diversity and inclusion in the classroom.

With instructions on a board or slide. This supports students in particular who have a hearing impairment, who require a bit more time or more process instructions, or have trouble keeping track of instructions.

Learn their names. This is a simple way to create a welcoming space. Use names tags or a name card for them to remember and other students can them and connect in other ways.

Incorporate time to “think-pair-share.” Introduce a process that gets students to discuss and ask each other when the idea arises. Give groups smaller questions and have them move more time into the process. They will have fun sharing, developing and articulating their ideas before they have to share the whole group.

Home pulse. Leave 1-5 minutes after you see a question and before asking for answers. This allows students who are not socially engaging and gives students a chance to think, develop and articulate their ideas before being asked to share.

Connect to personal and lesson change. Students want to impact this community and in particular choose those that address local social issues. Think about what they care about and that community they come from, and where they live. Connect your teaching to what is relevant to them.

Avoid gendered language. Using terms like “man” or “dad” can lead to gender stereotypes. By using gender-neutral terms everyone’s gender is not defined. The words “man” or “dad” are not specific.