12 PRACTICES TO ENHANCE PRIMARY SCIENCE LEARNING

How can teachers introduce science into their classrooms with intention and confidence?

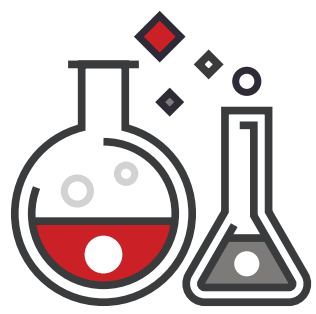
Common depictions of scientists in lab coats do little to address a critical and sometimes overlooked area of science education: the starting point. Research shows that what students experience in primary school has a significant impact on their success when pursuing science at university or as a career. With only a few intentional adjustments to the usual approaches, primary teachers can foster and strengthen students' ability to think like scientists.

Re-frame the meaning of science.

Science is more than test tubes and beakers: it encompasses 21st-century skills like critical thinking, collaboration, creativity, and communication, skills that will serve us in any profession or trade.

Make learning active.

Emphasize hands-on learning and student-talk to help your pupils retain knowledge longer, learn deeper, and maintain engagement. **Remember:** hands-on learning is supposed to be messy.



Strengthen students' academic skills.

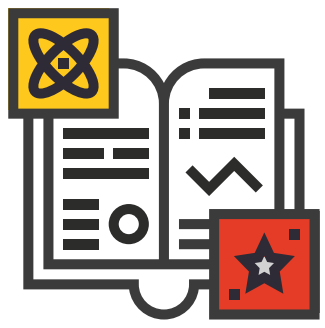
University STEM studies require specific maths and science coursework in secondary school. Success in these classes depends on the foundations laid in primary school. Make every school day matter and lay the groundwork for their scientific curiosity.

Make learning social.

Collaborative work not only helps students learn faster at greater depth, but also makes it fun. Humans are social by nature and good communication is a 21st-century skill—enhance this skill with social learning.

Use the language of science.

There are opportunities to use the language of science every day; weave them into your lesson plans to ensure they become a natural part of your students' language rather than just academic language.

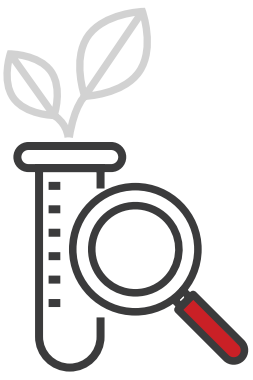


Guard against unintentional bias.

Despite all of our attempts to be fair, bias—even if unintentional—still exists, calling for all of us to be especially mindful of what and how we communicate to all our students.

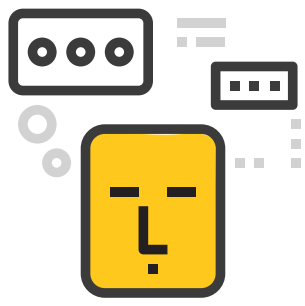
Connect to the students' world.

Engaging learning is meaningful learning. Make efforts to connect what students learn in the classroom with what they experience throughout the day.



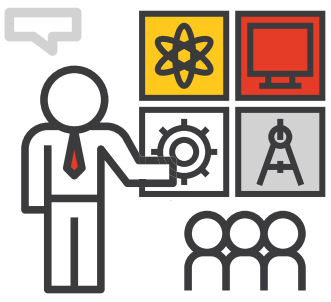
Add a dash of science to your current lessons.

Rather than label a leaf diagram; gather real ones to observe and compare. An ongoing goal is to pro-actively teach students to look for crosscutting concepts such as cause and effect, patterns, and systems across science and other content areas.



Require more than parroting.

Move beyond rote learning by asking students to explain their thinking and identify areas of confusion. Help them explain concepts in their own words without simply repeating what they have read or heard others say.

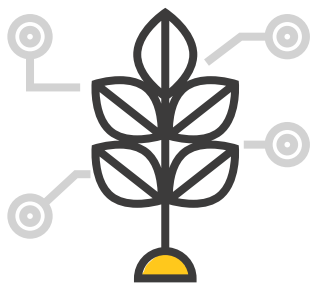


Get comfortable with science and maths.

We have to understand content well to teach it well. Many primary teachers are apprehensive about their own maths and science skills. Master them to teach succinctly and clearly without excessive teacher talk.

Start with the standards.

While standards can be better understood within the context of a meaningful whole, exciting activities that fail to adequately address required standards have very little value. The most effective educators have internalized the standards their students are responsible for mastering.



Keep growing.

How many of these strategies are you already implementing? Have you discovered your teaching is a lot more science than you even knew? Keep growing—and your students will grow right along with you.

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3P Learning

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