



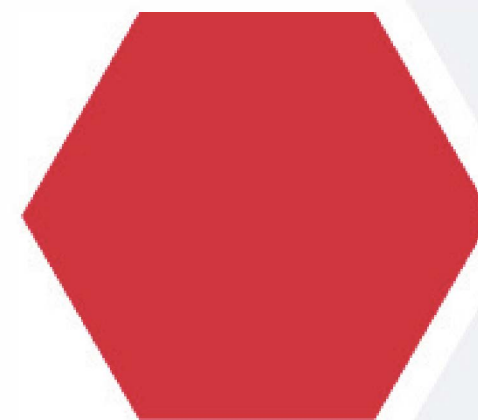
Versatile Lessons for Versatile Classrooms™

Exploring Inquiry and Inclusion:

Unlocking the Potential of EB's in the
Science Classroom

Angie Maxey

University of St. Thomas





Versatile Lessons for Versatile Classrooms™



STAT Chat Sponsor

Booth 214

Thursday, November 9, 11 a.m. – 5 p.m.


Friday, November 10, 9 a.m. – 5 p.m.

Saturday, November 11, 8 a.m. – 12 p.m.

Workshops

The Multilingual Scientist: Nurturing Inquiry and Language Development With ELPS in Diverse Classrooms

Thursday, 11/9 | 11:30 am - 12:30 pm | Room 332CF

 **Angie Maxey** | Unlock the potential of emergent bilingual students as multilingual scientists through immersive strategies aligned with ELPS that promote inquiry-based learning and language growth.

Bridging Skills and Content: Connect the Practices and Recurring Themes and Concepts With Discourse

Friday, 11/10 | 2:00 pm - 3:00 pm | Room 372BE

 **Elizabeth “Liz” McMillan** | Explore how to guide students through active connections of science concepts with Scientific and Engineering Practices and Recurring Themes & Concepts. Join us for a research-based, collaborative workshop to authentically proceed through a 3D lesson, complete with active learning and teacher actions for enhanced classroom discussions.



What's in a Name?

- How did it feel to be greeted by name?
- Did it have any impact on your mood or comfort level?
- How did you get your name?



How did you get your name?

- My name originated from...
- The inspiration for my name comes from...
- My parents chose my name because...



Acceptance

Inclusion

Welcoming

Motivated

Supported

Connection

Representation

**The Power of
Belonging**



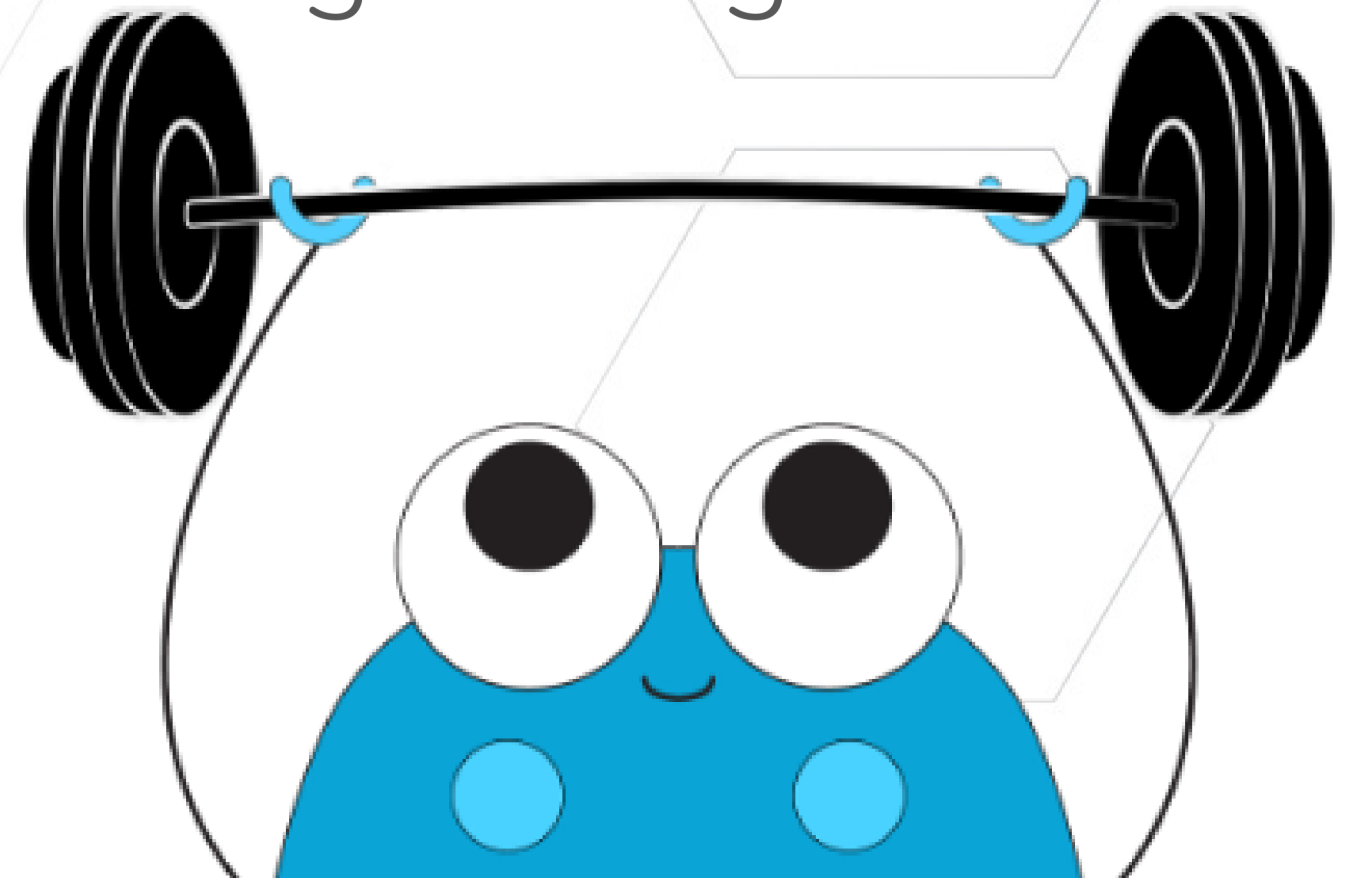
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Emergent Bilingual

Emergent bilinguals, who are often referred to as English Language Learners (ELLs) or English Learners (ELs), are students who are continuing to develop their home language while also learning an additional language.

Why this Change in Terminology?

Instead of highlighting gaps and deficits, it is more constructive to adopt an **asset-based approach** that centers on the knowledge and abilities these students possess in both languages—and how we can leverage these strengths. The term "emergent bilingual" signifies this crucial shift in viewpoint.



Cultivating Belonging in the STEM Classroom

Reflect on Unconscious Bias:

- Engage in regular self-reflection on unconscious biases that may affect your teaching. Engage in discussions about bias in STEM and work collaboratively to address and overcome these challenges.

Promote Collaborative Learning:

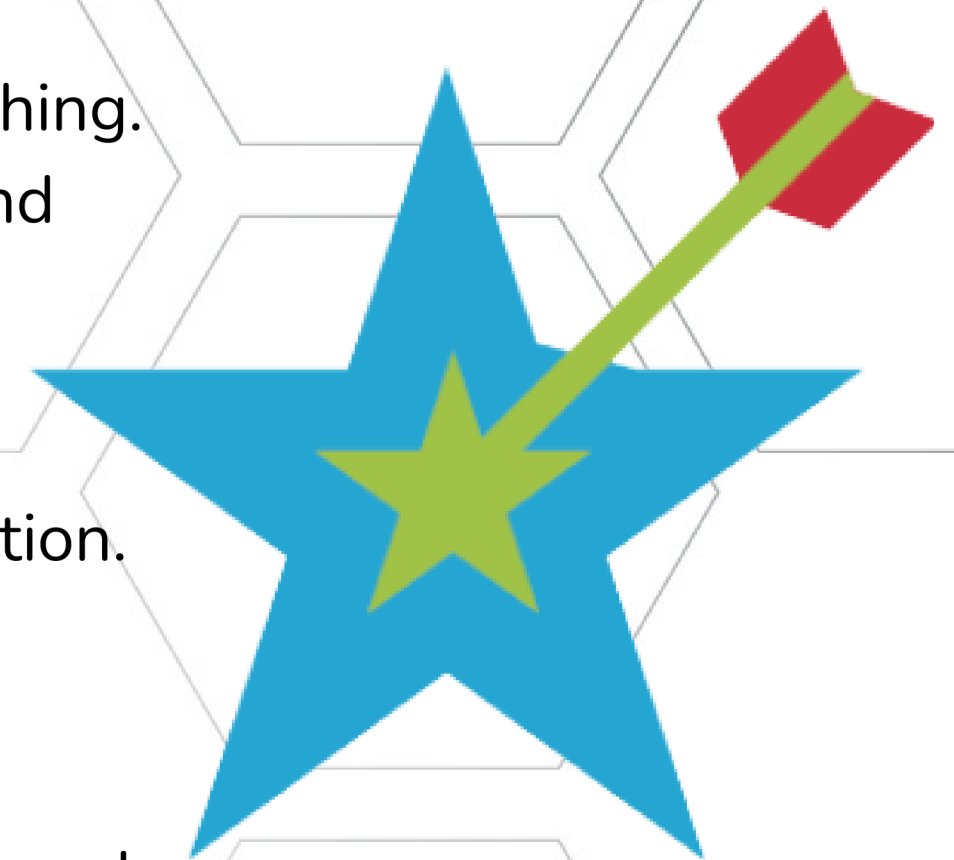
- Incorporate group activities and projects that encourage teamwork and collaboration. This helps students connect with their peers and feel part of a community.

Provide Personalized Feedback:

- Offer personalized and constructive feedback that highlights individual strengths and areas for growth. This helps students feel seen and valued.

Incorporate Belonging Interventions:

- Integrate specific activities or interventions aimed at fostering a sense of belonging, such as the sharing of personal stories, collaborative projects, or peer mentorship programs.



English Language Proficiency Standards (ELPS)

- **Learning Strategies**
- **Listening**
- **Speaking**
- **Reading**
- **Writing**



Inquiry-Based Learning

In the context of teaching science, inquiry-based learning focuses on students **actively investigating scientific phenomena**, asking questions, making observations, and developing explanations for natural phenomena.

What Is Happening?



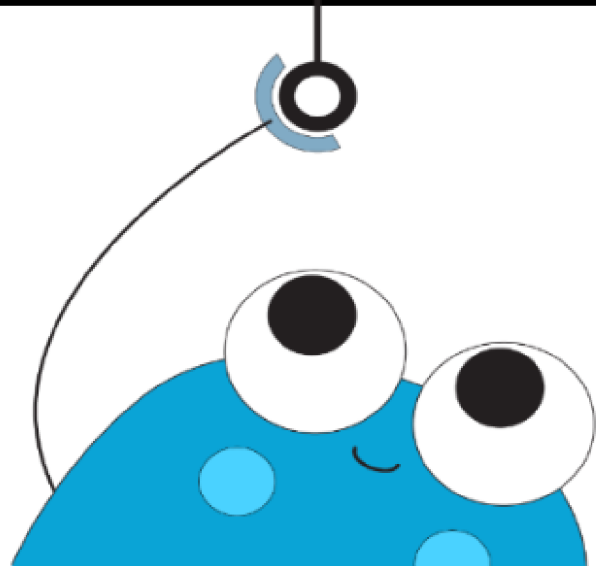
Observe Phenomena

Sometimes scientists learn concepts through *phenomena*, or observable events.

Instructions: Observe this image. Record as many observations as you can.

observing phenomena in a science classroom can provide an excellent opportunity for students to express personal experiences and share their understanding.

Image Credit: Unsplash / Kiona



Slide 4

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Inquiry Meets Inclusion

Inquiry

- students actively investigating scientific phenomena,
- asking questions,
- making observations, and
- developing explanations for natural phenomena.

Inquiry Meets Inclusion

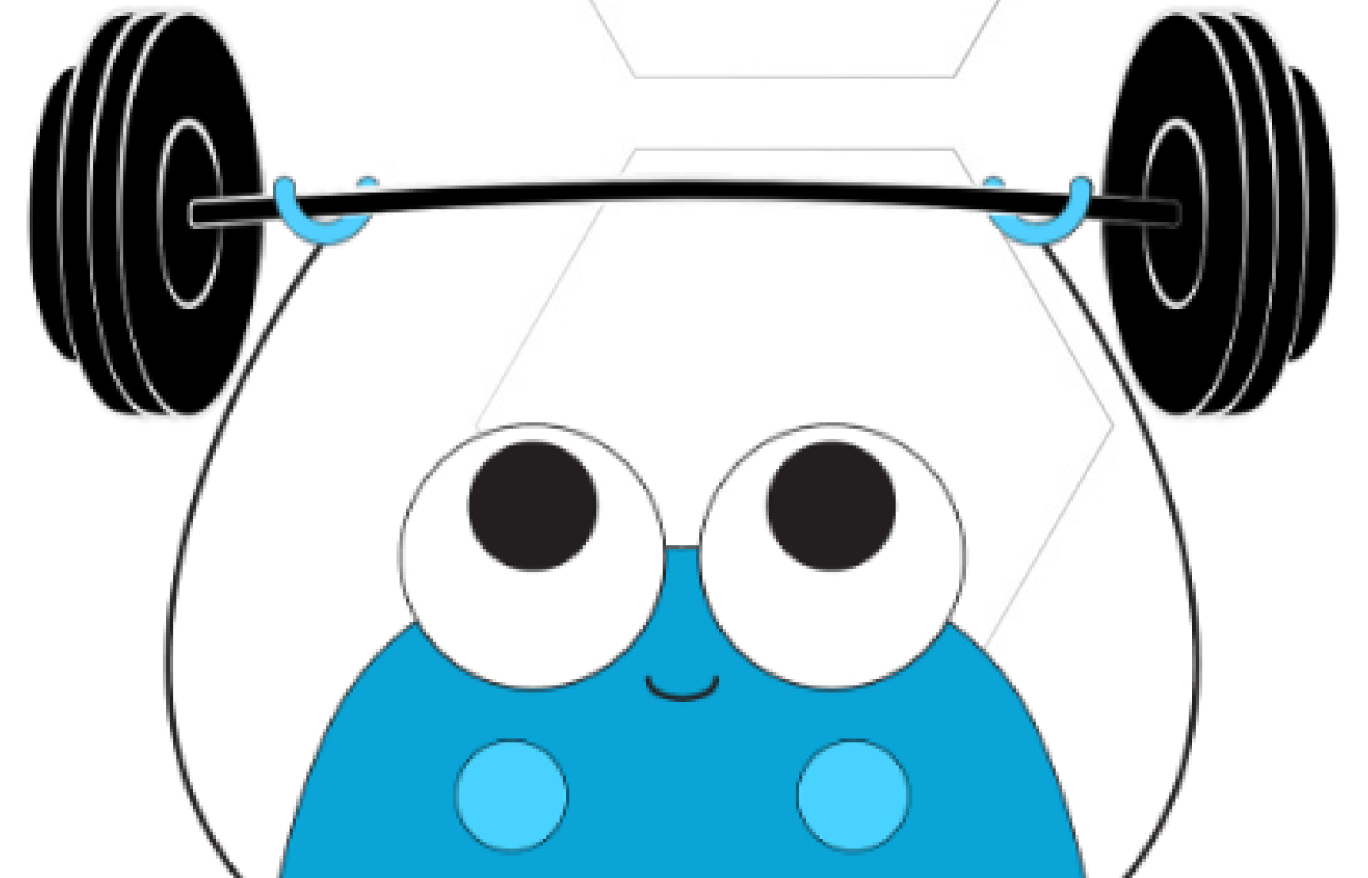
- **Personalizing Learning:** Allowing students to connect their personal experiences during inquiry.
- **Collaborative Inquiry:** Students can work in groups, bringing together their diverse skills, experiences, and knowledge when exploring phenomena.
- **Diverse Problem-Solving Approaches:** Students may approach problem-solving in different ways
- **Valuing Multiple Perspectives:** Teachers can explicitly emphasize the value of multiple perspectives in understanding and interpreting phenomena.

Inclusion

- Refers to the degree to which students feel the classroom is welcoming to different groups.
 - ethnic groups
 - gender
 - disability

Key Takeaway

Inquiry and inclusion
are not mutually
exclusive.



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