Stile

AI-Proof Assessments:

How Socratic seminars can save the day

"That was the most funnest day ever!"

-6th grader at H.B. Lee Middle School

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hello@stileeducation.com

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Socratic seminar overview

The what, how, and why

Overview

Structure of Socratic seminars

Student-driven, structured collaboration that fosters a deeper understanding of diverse perspectives on complex issues.

Format

Participants pair as Coach and Speaker, taking turns in discussion rounds. Speakers sit in an inner circle while Coaches observe from an outer circle, providing feedback. After the first round, they debrief and switch roles and chairs.

5-min: Intro and ground rules

8-min: Inner circle discussion

3-min: Peer coaching

8-min: Outer circle discussion

3-min: Peer coaching

4-min: Inner circle final remarks

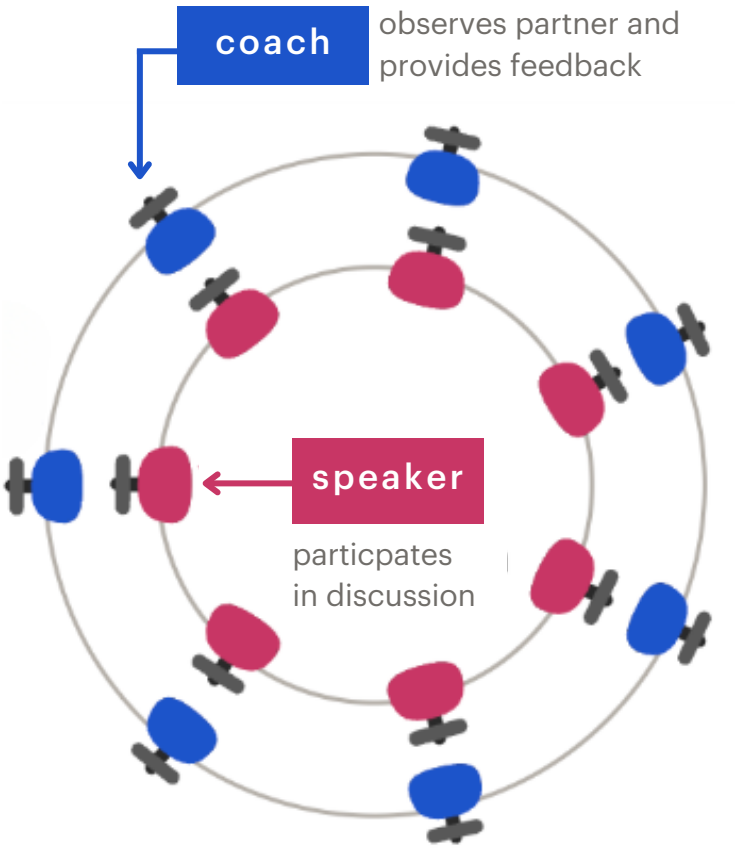
2-min: Peer coaching

4-min: Outer circle final remarks

3-min: Peer coaching and debrief

5-min: Whole class debrief

Classroom arrangement



SEP Alignment

Socratic seminars help students develop key Science and Engineering Practices (SEPs) as per the Next Generation Science Standards (NGSS).

Asking Questions and Defining Problems

Socratic seminars are fundamentally built around question-asking. Students generate questions about scientific phenomena, texts, or data, and consider that different perspectives may answer the questions differently. They research deeply to find answers.

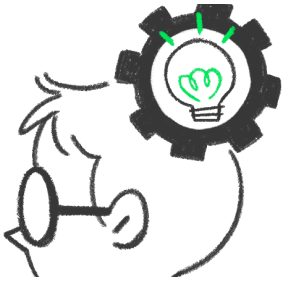
Analyzing and Interpreting Data

Seminars can center on data sets, graphs, or research findings. Students practice interpreting patterns, discussing statistical significance, and evaluating whether data supports specific claims.

Engaging in Argument from Evidence

Seminars offer structured opportunities for students to:

- Argue and evaluate claims from various perspectives
- Critique competing explanations respectfully
- Revise their thinking based on new evidence or perspectives



Obtaining, Evaluating, and Communicating Information

Seminars enhance students' abilities to:

- Critically read scientific texts
- Evaluate the credibility of scientific sources
- Clearly communicate scientific ideas
- Use scientific language with precision

Setup guide

Socratic seminars can feel overwhelming and intimidating to run, but follow the steps below to ensure it's a great time for you and students.

Step 1

Choose your topic

Step 2

Identify stakeholders

Step 3

Student research

Step 4

Run the seminar

Step 5

Debrief and evaluate

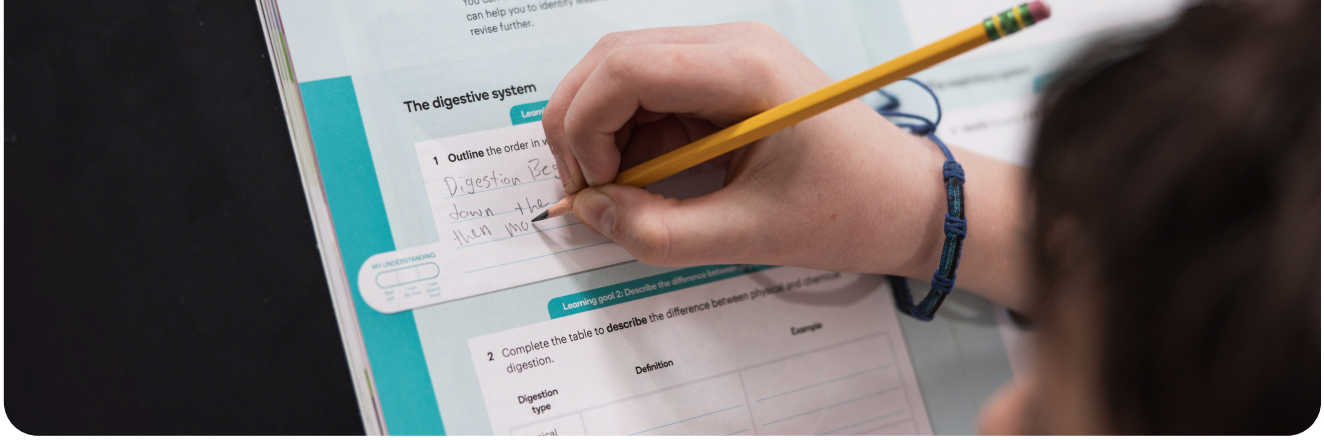
Pre-seminar

Prep for Socratic success

Socratic Seminar Topic Evaluation Checklist

Selecting a strong topic is key. Use this checklist to evaluate your Socratic topic's effectiveness:

Is the Topic Engaging and Relevant?	✓ Does the topic connect to students' lives, experiences, or interests, and spark curiosity? ✓ Is it age-appropriate and accessible for middle school learners?
Does the Topic Encourage Critical Thinking?	✓ Can it be explored through open-ended, thought-provoking questions? ✓ Does it allow for multiple interpretations and deeper reasoning?
Is the Topic Aligned with Learning Goals?	✓ Is it aligned with curriculum standards and learning objectives? ✓ Will it support academic skills like argumentation and evidence-based thinking?
Are There Quality Texts or Resources Available?	✓ Are materials complex yet accessible across reading levels? ✓ Is there a compelling anchor text or resources to ground discussion? (i.e. videos, data sets, text)
Will the Topic Support Inclusive Dialogue?	✓ Can all students engage meaningfully, regardless of background knowledge? ✓ Does it promote respectful dialogue and value every voice?
Is the Topic Manageable Within the Structure?	✓ Is the topic focused, manageable in time, and able to sustain engagement? ✓ Is the scope broad enough for rich conversation but focused enough to stay on track?



Research scaffolds

Graphic organizers and templates

Graphic organizers support students by providing a visual framework that helps them organize their thoughts and ideas.

Details

Graphic organizers facilitate research by simplifying intricate tasks into manageable steps. This enables students to organize their thoughts and concentrate on essential concepts.

They cater to diverse learners by offering a visual framework and encouraging deeper analysis through guided prompts. Ultimately, these tools foster student independence and responsibility, equipping them to engage meaningfully in discussions such as Socratic seminars.

This structured assistance reduces off-task behavior and enhances sustained inquiry by maintaining student focus, structure, and active participation in purposeful learning.

Format options

Many graphic organizers are available to help students with research, and allowing them to choose one that fits their perspective promotes agency and autonomy.

Here are some of our favorites:

- Question & Evidence Chart
- Theme or Central Idea Web
- Concept-Quote-Connection Chart
- Evidence Sort Organizer

Name: Date: Period:

Question and Evidence Chart

Topic:

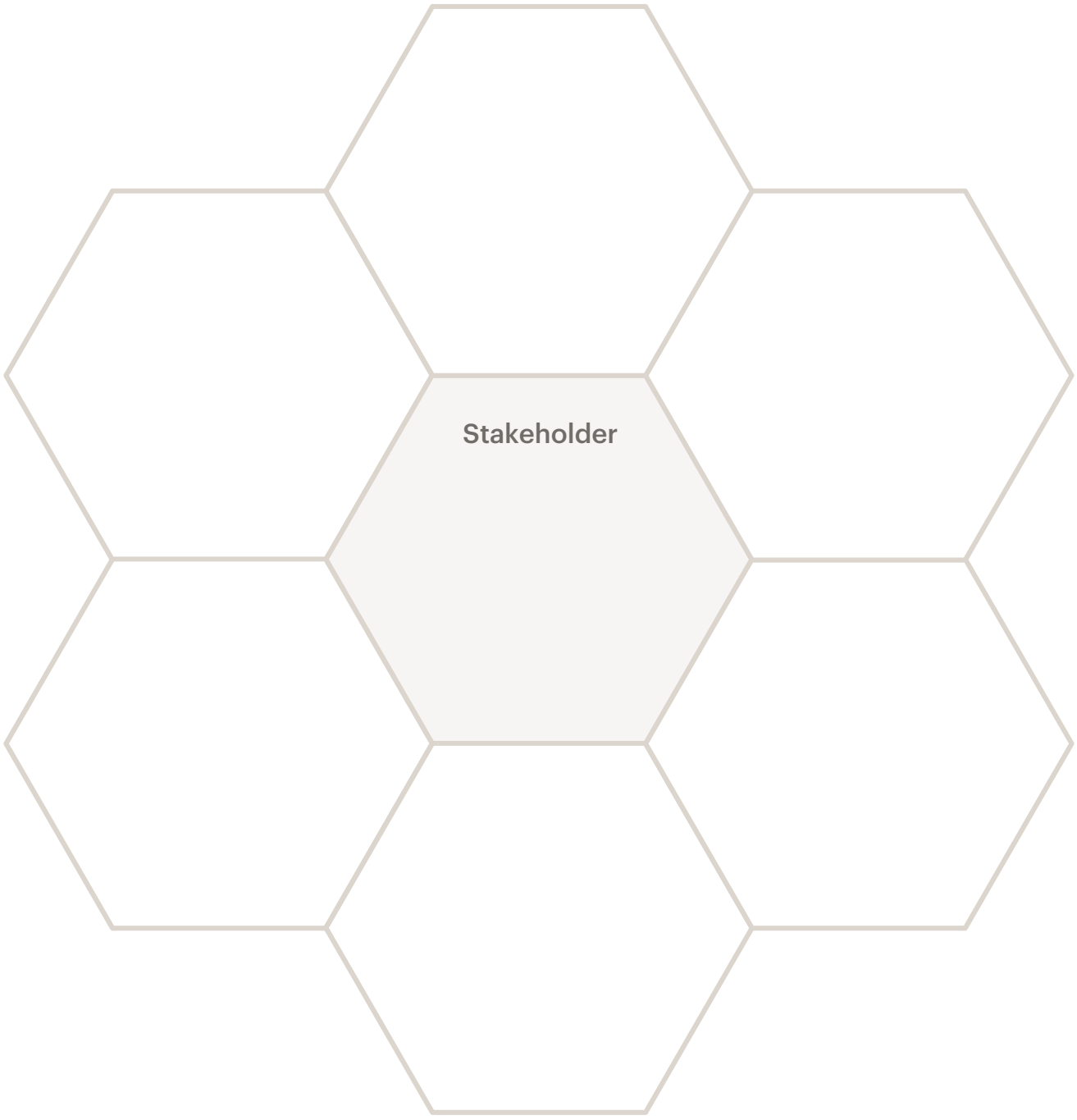
Stakeholder:

Question:	Evidence:
	Source:
Question:	Evidence:
	Source:
Question:	Evidence:
	Source:
Question:	Evidence:
	Source:

Name: Date: Period:

Theme or Central Idea Web

Branching out from the central hexagon, record key details, quotes, data, and events that support and connect to your stakeholder's perspective.



Name: Date: Period:

Concept-Quote-Connection Chart

List key concepts, match them with direct quotes or evidence, and then explain how they connect to broader themes or ideas.

Concept	Quote	Explanation

Name: Date:

Timeline Organizer

> Develop a visual timeline that illustrates a sequence of events related to a specific topic, historical issue, or story.

Date:

Event:

Details:

Significance:

Date:

Event:

Details:

Significance:

Date:

Event:

Details:

Significance:

Date:

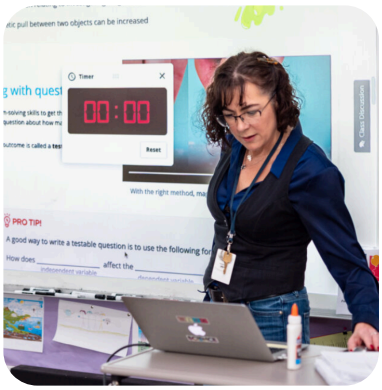
Event:

Details:

Significance:

Prep Like a Pro: Behavior Hacks for Student Research Success

> Transform your classroom research sessions from chaotic to productive with these game-changing strategies:



Push the pace

For students who struggle with time management, infinity equals zero productivity. Shrink timelines to expand focus. When the deadline feels like a sprint, not a marathon, even scattered minds find their stride.

Pro tip: Utilize a visual timer to help students manage their time and pace of their work.

Ally Up for Deep Dives

Match perspective partners who follow the same research rhythm. When students champion the same viewpoint, their partnership becomes an echo chamber of encouragement, not a battlefield of ideas.

Pro tip: Use value lines to effectively pair students on the same or opposite sides of a debate.

Question Quests Before Answer Hunts

Flip the script by having students master the art of questioning before chasing answers. Students who invest in crafting powerful questions first become naturally invested in finding meaningful responses.

Pro tip: Gamify it by awarding points to teams for both the number and depth of their questions.

Seminar time!

Let the conversations flow

Participation tips

Talking chips

> “Airtime agreements" help balance participation and ensure all researchers have equal opportunities to contribute without overshadowing others.

Recommendations

Here are some things that have worked for us to keep the conversation going:

- **Physical talking chips:** Students place the chips in the center of the table with each statement, assisting them with tracking their participation. Candy as a talking chip is always a hit!
- **Talking chip limit:** Set the rules with a chip minimum and maximum—just enough to get everyone talking, but not too much to take over the convo.
- **Model quality input:** Sorry kids, but “idk” doesn’t count! Model to students what strong contributions sound like with clear examples (and a few “meh” ones too), so they know it's all about quality and quantity!

Airtime Agreements

Co-create a set of agreements as a class that everyone will follow to maintain a safe, inclusive, and productive conversation.

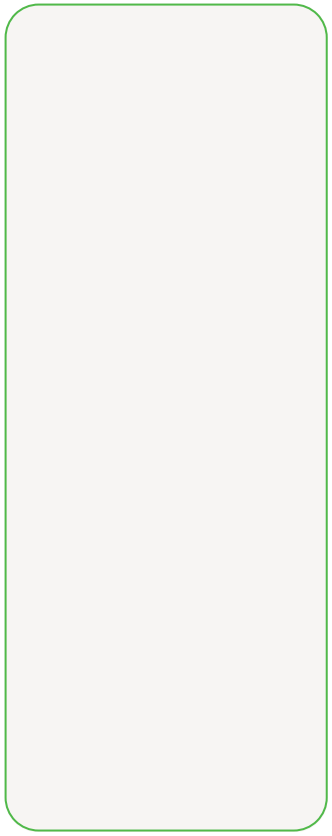
Display these agreements on a large whiteboard or poster paper during the seminar and provide gentle reminders of the agreements if the conversation begins to stray.

Participation tips

Name tent and sentence frames

Students draw and color their name tent to best represent their stakeholder and reference the sentence frames on the back during the discussion.

Write your stakeholder in the box, then create and color images and designs to represent their stance. Fold it in half and place it on your table for the discussion.



Sentence starters:

- "As a [stakeholder], this issue is important to me because..."
- "What stands out most to me, as a [stakeholder], is..."
- "An important detail I found in my research was..."

Response prompts:

- "Adding to __'s point..."
- "I understand your point, but as someone who represents [stakeholder], I see it as..."
- "Can you expand on your point about..."

Participation tips

Peer coaching checklist

> Build a sense of shared responsibility, promote active listening, and reinforce expectations with thorough peer feedback.

Pairing suggestions

Effective student pairing enhances conversations by boosting confidence and fostering a supportive environment.

Here are some methods for pairing students:

- **Same stakeholder:** Students sharing the same stakeholder.
- **Similar perspective:** Students with different stakeholders but aligned on an issue.
- **Goal-aligned:** Students with similar seminar objectives, like asking better questions or using evidence.
- **Logos-Pathos:** Pairing students using logical arguments (logos) with those using emotional appeal (pathos).

Feedback coaching

The checklist is a great conversation starter, but discussing proper feedback methods with students is beneficial.

Use the following prompts to guide constructive feedback discussions.

- What makes feedback useful?
- What does constructive criticism sound like?
- How can you ensure your feedback is not a personal criticism or attack?

Name: **Date:** **Partner:**

Peer Coaching Checklist

> While you're in the role of Coach, use the following checklist to evaluate your partner's performance in the discussion.

- ☐ Uses their notes from pre-work to support their discussion
- ☐ Uses active listening skills (sitting still and calm, good posture, looking at the speaker)
- ☐ Participates in the discussion
- ☐ Makes eye contact while speaking
- ☐ Gives a specific example
- ☐ Ask a question or adds to another speaker's ideas
- ☐ Encourages another participant
- ☐ Interrupts another speaker or dominates the conversation
- ☐ Is not listening or has a conversation on the side

Reflect on your partner's performance as a Speaker and provide some feedback by completing the table.

What did your partner do well?	What could your partner improve on for next time?

Post-seminar

Congrats on a job well done

Post-seminar

Student self-reflection

> Reflection helps learners take ownership of their growth by recognizing strengths, identifying areas for improvement, and setting meaningful goals.

Self-reflection form

Self-reflection forms are valuable tools for students to evaluate their learning, recognize personal growth, and identify areas for improvement. By taking time to reflect on their experiences and performance, students can gain deeper insights into their strengths and challenges.

Utilizing these forms before the next seminar encourages thoughtful goal-setting and helps students come prepared with clear objectives for their continued development. This proactive approach fosters accountability and supports a more meaningful and focused learning experience.

Socratic seminar rubric

Using a rubric for self-reflection helps make assessment more transparent and equitable by clearly outlining expectations and criteria for success.

When students engage with the rubric themselves, they gain a better understanding of where they stand and can set meaningful, personalized goals for growth throughout the year.

Name: **Date:**

Student Self-Reflection Form

> Celebrate success and figure out a game plan for the next seminar by reflecting on your performance in the Socratic seminar.

1. Reflect on how your thinking has changed since the beginning of the lesson. Explain what you used to think and what you think now in the chart below.

I used to think...	But now I think...

2. Use the rating scale to the right to rate yourself on the following:

- I listened carefully to others without interrupting. _____
- I contributed ideas that were thoughtful and on-topic. _____
- I used evidence or examples to support my thinking. _____
- I built on or responded to others' ideas respectfully. _____
- I stayed focused and participated the entire time. _____
- I showed respect for different opinions and voices. _____

Rating Scale:

1- Not yet

2 - Sometimes

3- Often

4- Consistently

Name: Date:

Socratic seminar evaluation rubric

	Pre-work	Particpation	Understanding	Peer and Self-assessment
0	Not shown	Not shown	Not shown	Not shown
1	Identifies perspectives of the stakeholder.	Participates in the discussion.	States the stakeholder's perspective of the topic during the discussion.	Records peer feedback on the Socratic seminar.
2	Describes perspectives of the stakeholder.	Participates in the discussion, making eye contact while speaking.	Describes the stakeholder's perspective during the discussion.	Restates peer feedback as the basis of a self-evaluation.
3	Explains perspectives of the stakeholder using examples.	Participates in the discussion by asking questions or using specific examples.	Compares the stakeholder's perspective to the views of other stakeholders during the discussion.	Compares peer feedback and self-evaluation to assess learning.
4	Evaluates the perspective of the stakeholder by outlining their stance on the topic.	Participates in the discussion, adding to other participants ideas by asking follow up questions or encouraging other participants.	Justifies the stakeholder's perspective during the discussion using examples or evidence.	Reflects upon peer feedback and self-evaluation to create goals for improvement.

The science curriculum that teachers love

From artificial intelligence to robot bees

Students expect the science they learn at school to be modern and relevant to their lives. Stile's units are built around phenomena students *actually* want to learn about, and students do activities that use science and engineering to solve global issues and advance society.

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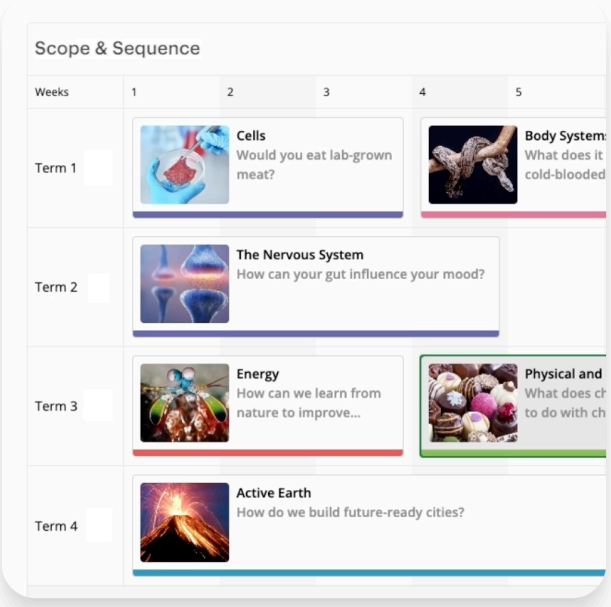
Are we on track for sustainable transport?



It's your curriculum

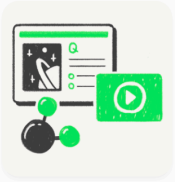
Every district operates in a unique context, with teachers that have developed resources that resonate with the students in the area.

Stile's curriculum specialists work with your teachers to tailor our curriculum to you. We help you incorporate local phenomena, bring in your own resources, and map the scope and sequence to your calendar.

The result? Your very own high quality customized science curriculum.

What's included?

Stile is a complete, comprehensive core curriculum for middle and high school. It's battle tested and highly refined, having been used (and loved!) by thousands of teachers for over 10 years.



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Beautiful, interactive science lessons

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Kits for hands-on learning

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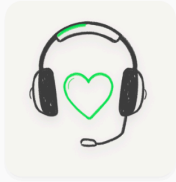
Note-taking and study skills

Planning guides
Helping teachers prep for lessons

Professional learning
The key to evidence-based science teaching

Powerful platform
Customisable, interactive & fun



Responsive support
Support from Curriculum specialists

Instructional materials

Classroom lessons

Relevant and engaging lessons set in the context of real-world discoveries and events, helping spark conversation and debate.

Interactive activities

Open-ended investigations, practical activities, and engineering challenges—risk assessments included!

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Real-life science stories from the year so far, delivered straight to your classroom to keep lessons super fresh.

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Measure student progress, inform your reporting, and easily reflect on how your teaching has been so far.

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Alongside our questions, model answers are embedded into Stile to help you mark student responses, and to help students understand the content.

Escape Room challenges

Escape rooms are a creative and engaging way to challenge your students with puzzles, trivia facts, and scientific knowledge.

Relatable career profiles

Every Stile unit has a career profile of a young professional who guides students through the lessons.

Join a vibrant community of over 1,000 schools that are serious about science

"Stile helped me learn so much more."

Savana
Student, Whittington School

Hands-on science evolved

Give us a call at **323 301 7470**

Email us at **hello@stileeducation.com**

Swing by the office to stay hi!
831 SE Salmon St., Suite 140, Portland, OR 97214

Stile's office is located on the land we now call Portland, Oregon. We recognize and honor the Indigenous peoples on whose ancestral lands we live and work. These include the Willamette Tumwater, Clackamas, Kathlamet, Molalla, Multnomah, and Watlala Chinook Peoples, and the Tualatin Kalapuya, who today are part of the Confederated Tribes of Grand Ronde, along with many other Indigenous communities who made their homes along the Columbia River.