Evidence Checklist

When accomplished STEM teachers

predict and capitalize on students' errors and misconceptions,

they may do one or more of the following:

Create and maintain a classroom culture of growth and learning from others (T27) $\bigcirc \Delta$

Name models, arguments, and ideas as typical or common (T70)

Anticipate and validate different ideas and ways of expressing those ideas (T84) Δ

Anticipate and validate myriad ways of making sense of, solving, explaining, and justifying ideas (T85) Δ

Anticipate and create space for common errors and misconceptions to arise and be explored (T136) Δ

Avoid focusing on right and wrong answers (T24)

Avoid providing, justifying, or confirming conclusions for students (T25) Δ

Actively foster a growth mindset (T32) O*

Explicitly encourage and celebrate scientific/mathematical risk-taking and bravery (T29)

Make the examination of errors and misconceptions a consistent part of classroom work (T33)

Call out their own mistakes and model their use as learning opportunities (T43)

Invite and expect all students to share developing and incomplete ideas (T80) 👁*

Actively discuss errors and misconceptions (T103)

Create and protect space for incorrect or incomplete ideas to be examined and discussed (T106)*

Explicitly focus students' attention on common/typical models, arguments, explanations, and ideas (T127)

Use typical or common student ideas strategically (T130)

Adjust next steps in instruction based on errors and misconceptions that arise (T146)

Circle back to students who made errors or held misconceptions to assess how their thinking has changed (T20) 🗘*

Use errors and misconceptions as formative assessment (T19)

In these classrooms we expect to see a diverse range of students...

Answering questions with confidence (S10)
Building more complete/accurate understandings from current understandings (S22)
Demonstrating a growth mindset and belief that learning often requires hard work (S43) 🛇 *
Identifying and analyzing mistakes and misconceptions (S28)
Spontaneously asking questions about and building on each others' ideas (S37) Δ^*
Taking risks (S66)



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they may do one or more of the following:

ALWAYS		STRATEGICALLY	
More Straightforward: Invite and expect all students to share developing and incomplete ideas (T80) ♥* Explicitly encourage and celebrate scientific/mathem atical risk-taking and bravery (T29)	More Challenging: Create and maintain a classroom culture of growth and learning from others (T27) $\bigcirc \Delta$ Actively foster a growth mindset (T32) $\bigcirc *$ Avoid providing, justifying, or confirming conclusions for students (T25) Δ Avoid focusing on right and wrong answers (T24) Anticipate and validate different ideas and ways of expressing those ideas (T84) Δ Anticipate and validate myriad ways of making sense of, solving, explaining, and justifying ideas (T85) Δ Anticipate and create space for common errors and misconceptions to arise and be explored (T136) Δ Call out their own mistakes and model their use as learning opportunities (T43) Make the examination of errors and misconceptions a consistent part of classroom work (T33) Actively discuss errors and misconceptions (T103) Use errors and misconceptions as formative	More Straightforward: Name models, arguments, and ideas as typical or common (T70) Explicitly focus students' attention on common/typical models, arguments, explanations, and ideas (T127) Circle back to students who made errors or held misconceptions to assess how their thinking has changed (T20) ♥*	More Challenging:
	assessment (T19)		

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