When accomplished STEM teachers
press students for evidence-based explanations,
they may do one or more of the following:

___ Model what a "good" justification, evaluation, or revision of a model, argument, or idea looks/sounds like (T39) ✪
___ Model what constitutes an evidence-based explanation in STEM disciplines (T40)
___ Model what drawing a conclusion looks/sounds like (T41)
___ Ask many "why?" questions that require justification or elaboration (T2)
___ Ask probing questions and follow-up questions of all students (T5)*
___ Ask questions that cannot easily be reduced to closed questions (T8)
___ Ask questions that will help students go deeper in their explanation (T9)
___ Avoid explaining or evaluating models, arguments, and ideas for students (T23) Δ*
___ Avoid providing, justifying, or confirming conclusions for students (T25) Δ
___ Make clear that all student ideas are "fair game" for examination and discussion (T58) ✪ Δ *
___ Provide just enough information, encouragement or questions to keep students thinking (e.g., praise-prompt-leave interaction) (T87)
___ Take all student ideas and contributions seriously (T82) ✪ *
___ Ask students to clarify and expand on their thinking and the thinking of others (T104)
___ Consistently clarify and expand on student thinking (T93)
___ Hold students accountable to asking and responding to challenging questions (T112)
___ Provide consistent, diverse opportunities for students to consider the reasonableness of their explanations (T114)
___ Provide consistent, diverse opportunities to offer evidence-based explanations (T118)

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

___ Articulating why they agree or disagree with a presented/shared claim (S21) ✪
___ Clearly expecting and ready to be asked questions about their thinking (S45) ✪ *
___ Initiating talk with other students (S49)
___ Making and defending all evaluative claims with mathematical or scientific evidence (S6) ✪
___ Repeating and/or following-up their own or others' questions until satisfied with peers' answers (S56) ✪
___ Using language support structures (e.g., sentence stems, word lists, etc.) to start and participate in small group conversation (S40) Δ*
___ Using non-judgemental language (i.e. focusing on ideas, not people sharing them) (S41) Δ*

Evidence Checklist	**Core Practice:** Facilitate Productive STEM Discourse

When accomplished STEM teachers
press students for evidence-based explanations,
they may do one or more of the following:

ALWAYS		**STRATEGICALLY**	
More Straightforward:	*More Challenging:*	*More Straightforward:*	*More Challenging:*
___ Ask many "why?" questions that require justification or elaboration (T2) ___ Ask probing questions and follow-up questions of all students (T5)* ___ Ask questions that cannot easily be reduced to closed questions (T8) ___ Ask students to clarify and expand on their thinking and the thinking of others (T104)	___ Avoid explaining or evaluating models, arguments, and ideas for students (T23) Δ* ___ Avoid providing, justifying, or confirming conclusions for students (T25) Δ ___ Take all student ideas and contributions seriously (T82) ✪* ___ Provide just enough information, encouragement or questions to keep students thinking (e.g., praise-prompt-leave interaction) (T87) ___ Consistently clarify and expand on student thinking (T93)	___ Model what constitutes an evidence-based explanation in STEM disciplines (T40) ___ Model what drawing a conclusion looks/sounds like (T41) ___ Model what a "good" justification, evaluation, or revision of a model, argument, or idea looks/sounds like (T39) ✪ ___ Make clear that all student ideas are "fair game" for examination and discussion (T58) ✪ Δ *	___ Provide consistent, diverse opportunities for students to consider the reasonableness of their explanations (T114) ___ Ask questions that will help students go deeper in their explanation (T9) ___ Hold students accountable to asking and responding to challenging questions (T112) ___ Provide consistent, diverse opportunities to offer evidence-based explanations (T118)

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___ Articulating why they agree or disagree with a presented/shared claim (S21) ✪
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___ Making and defending all evaluative claims with mathematical or scientific evidence (S6) ✪
___ Repeating and/or following-up their own or others' questions until satisfied with peers' answers (S56) ✪
___ Using language support structures (e.g., sentence stems, word lists, etc.) to start and participate in small group conversation (S40) Δ*
___ Using non-judgemental language (i.e. focusing on ideas, not people sharing them) (S41) Δ*