

When accomplished STEM teachers  
**anticipate a wide variety of student strategies and thinking**  
 they may do one or more of the following:

<input type="checkbox"/> Anticipate and validate different ideas and ways of expressing those ideas (T84) Δ
<input type="checkbox"/> Anticipate and validate myriad ways of making sense of, solving, explaining, and justifying ideas (T85) Δ
<input type="checkbox"/> Pose questions, puzzling events, tasks, and activities that have multiple entry points (T98) Δ
<input type="checkbox"/> Pose questions, puzzling events, tasks, and activities that have multiple methods for making sense of or solving them (T99) ⚡ Δ *
<input type="checkbox"/> Pose questions, puzzling events, tasks, and activities that have multiple solutions, explanations or justifications (T100) Δ
<input type="checkbox"/> Anticipate and create space for common errors and misconceptions to arise and be explored (T136) Δ
<input type="checkbox"/> Have plans in place for students who demonstrate mastery early that relate to learning goals (T152) Δ
<input type="checkbox"/> Ask a variety of students to share ideas, when appropriate (T1) ⚡
<input type="checkbox"/> Make and test conjectures about students' current understanding (T22)
<input type="checkbox"/> Demonstrate and reinforce the use of shared knowledge and terms (e.g., ground a discussion in shared knowledge and terms) (T44)
<input type="checkbox"/> Ascribe ownership for students' ideas in exposition, when appropriate (e.g., "Tenaya's theory") (T77) ⚡
<input type="checkbox"/> Invite and expect all students to evaluate their ideas by comparing them to the ideas of others (T79)
<input type="checkbox"/> Provide scientific or mathematical expertise, background, or vocabulary only when no other student can do so (T81) Δ
<input type="checkbox"/> Provide consistent, diverse opportunities for students to process information in multiple formats (T116)
<input type="checkbox"/> Provide students with time to think or write carefully about a posed question before engaging with others' ideas (T119) ⚡ *
<input type="checkbox"/> Create and protect space for students to make decisions about how they will engage with each other (T148) Δ
<input type="checkbox"/> Create and protect space for students to make decisions about how they will engage with the content (T149) Δ
<input type="checkbox"/> Assess students' understanding in multiple formats (verbally, in writing, publicly, non-verbally) during lesson (T14)

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

<input type="checkbox"/> Comparing and contrasting ideas (S24)
<input type="checkbox"/> Providing all or a majority of the new information and ideas that emerge (S35)
<input type="checkbox"/> Sharing their ideas in forms/ways they choose (S36)
<input type="checkbox"/> Analyzing and interpreting data effectively (S1)



When accomplished STEM teachers **anticipate a wide variety of student strategies and thinking** they may do one or more of the following:

ALWAYS	STRATEGICALLY	
	<i>More Straightforward:</i>	<i>More Challenging:</i>
<p>___ Pose questions, puzzling events, tasks, and activities that have multiple entry points (T98) Δ</p> <p>___ Pose questions, puzzling events, tasks, and activities that have multiple methods for making sense of or solving them (T99) ⚡ Δ *</p> <p>___ Pose questions, puzzling events, tasks, and activities that have multiple solutions, explanations or justifications (T100) Δ</p> <p>___ Provide scientific or mathematical expertise, background, or vocabulary only when no other student can do so (T81) Δ</p> <p>___ Provide consistent, diverse opportunities for students to process information in multiple formats (T116)</p> <p>___ Anticipate and validate different ideas and ways of expressing those ideas (T84) Δ</p> <p>___ Anticipate and validate myriad ways of making sense of, solving, explaining, and justifying ideas (T85) Δ</p> <p>___ Anticipate and create space for common errors and misconceptions to arise and be explored (T136) Δ</p> <p>___ Assess students' understanding in multiple formats (verbally, in writing, publicly, non-verbally) during lesson (T14)</p>	<p>___ Ask a variety of students to share ideas, when appropriate (T1) ⚡</p> <p>___ Ascribe ownership for students' ideas in exposition, when appropriate (e.g., "Tenaya's theory") (T77) ⚡</p> <p>___ Provide students with time to think or write carefully about a posed question before engaging with others' ideas (T119) ⚡ *</p> <p>___ Demonstrate and reinforce the use of shared knowledge and terms (e.g., ground a discussion in shared knowledge and terms) (T44)</p> <p>___ Have plans in place for students who demonstrate mastery early that relate to learning goals (T152) Δ</p>	<p>___ Create and protect space for students to make decisions about how they will engage with each other (T148) Δ</p> <p>___ Create and protect space for students to make decisions about how they will engage with the content (T149) Δ</p> <p>___ Invite and expect all students to evaluate their ideas by comparing them to the ideas of others (T79)</p> <p>___ Make and test conjectures about students' current understanding (T22)</p>

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

___ Comparing and contrasting ideas (S24)
___ Providing all or a majority of the new information and ideas that emerge (S35)
___ Sharing their ideas in forms/ways they choose (S36)
___ Analyzing and interpreting data effectively (S1)