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| **Support Productive Struggle In Learning Mathematics:****Teacher and Student Actions** |
| **What are teachers doing?** | **What are students doing?** |
| * Anticipating what students might struggle with during a lesson and being prepared to support them productively through the struggle.
* Giving students time to struggle with tasks, and asking questions that scaffold students’ thinking without stepping in to do the work for them.
* Helping students realize that confusion and errors are a natural part of learning, by facilitating discussions on mistakes, misconceptions, and struggles.
* Praising students for their efforts in making sense of mathematical ideas and perseverance in reasoning through problems.
 | * Struggling at times with mathematics tasks but knowing that breakthroughs often emerge from confusion and struggle.
* Asking questions that are related to the sources of their struggles and will help them make progress in understanding and solving tasks.
* Persevering in solving problems and realizing that is acceptable to say, “I don’t know how to proceed here,” but it is not acceptable to give up.
* Helping one another without telling their classmates what the answer is or how to solve the problem.
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National Council of Teachers of Mathematics. (2014). *Principles to actions: Ensuring mathematical success for all*. Reston, VA: Author.

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http://www.nctm.org/principlestoactions

