Goal:
We are learning to improve student achievement, well-being and engagement in mathematics.

Worthwhile Mathematical Tasks
The selected tasks and examples support how students view, develop, use and make sense of the mathematics.

We can...
___ begin lessons with good tasks (low-floor/high ceiling; open)

The way mathematical tasks are realized in the classroom and experienced by students depends on the classroom environment, the tools and representations available for them to use, and the nature and focus of classroom discourse. ⁵

We can...
___ form [and use] visibly random groups (#vrg)
___ defront the classroom
___ answer only keep thinking questions
___ use hints and extensions to manage flow⁴
___ foster autonomous actions
___ communicate where a student is and where they are going (descriptive feedback)
___ evaluate what we value (e.g., process over product; group + individual⁴)
___ report out on data; not points (i.e., disaggregate evidence⁴; “What story does the data tell?”)

Non-Threatening Classroom Environment
The classroom community encourages students to think, reason, communicate, reflect upon and critique that which they encounter.

Classroom Discourse
Opportunities are provided for students to justify and explain their thinking; examine conjectures, disagreements & counterarguments.

We can...
___ use verbal instructions
___ facilitate consolidation of students’ thinking by selecting, sequencing, and connecting solutions⁶; negotiate meaning for emerging understandings)
___ communicate where a student is and where they are going
___ encourage students to create meaningful notes (“What matters?” Success Criteria?)

Engaging the Pedagogical System¹, ⁵
Through
Building a Thinking Classroom², ⁷

We can...
___ use vertical non-permanent surfaces (#vnps)
___ encourage students to create meaningful notes (“What matters?” Success Criteria?)
___ assign check your understanding questions (self-assess⁴)
___ communicate where a student is and where they are going (descriptive feedback)

Tools & Representations
Students make their mathematical thinking visible. Representations and/or tools are used to do so, and they help students clarify their understandings.
School Improvement Through a Thinking Classroom – Professional Learning Template for Learning Teams (Mathematics)


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