

- **Shows** work (uses writing, charts, diagrams, models, etc.)
- **Organizes** complex ideas
- **Contributes** to class discussion, the development of ideas and solving of problems
- **Connects** contributions to what others have said or done (This goes with....; I agree with....; I disagree with...; I think I see what ... means by ...; Another way of saying that might be....)
- **Respects** other people and ideas; i.e. works hard to understand other views, asks questions, paraphrases, etc.

Procedural Competence (strategies)

- Uses established procedures appropriately and accurately; considers *reasonableness* of answers

Conceptual Understanding **(big ideas)**

- Understands connections between various mathematical topics (e.g. connections between multiplication and division; linear relations and proportionality)
- Considers alternative ideas
- Tolerates ambiguity
- Willing to try own ideas before seeking help

Reasoning:

- Develops mathematical conjectures;
- Tests examples and counter-examples;
- Tries to explain *why* observed patterns are true and under what conditions they hold

Problem Solving:

- Develops a plan, modifies it as needed, simplifies if possible;
- Identifies sub-problems and relates them back to the main problem;
- Considers strengths and weaknesses of various strategies and how strategies are related

Modeling / Mathematizing:

- Describes situations mathematically (i.e. “mathematizes” rather than applies a teacher-given tool);
- Considers strengths / weaknesses of model
- Generalizes models of individual situations to models that work in a variety of situations

Inquiry

Knowledge

***Mathematical* Work Habits**

Establishing and Supporting *Mathematical* Community

Communication

Strong Work in Mathematics

- Uses appropriate mathematical terminology and notation