



What do the SMPs “look like/sound like?”

| SMP # | I SEE STUDENTS WHO: | I SEE TEACHERS WHO: |
|---|---|---|
| 1. Make sense of problems and persevere in solving them | <ul style="list-style-type: none"> Analyze information Formulate a plan Show patience Persist | <ul style="list-style-type: none"> Pose rich, open-ended tasks Probe with questioning Foster “grit” and perseverance Foster a collaborative environment |
| 2. Reason abstractly and quantitatively | <ul style="list-style-type: none"> Relate real world quantities with mathematical notation Relate symbols, numbers, models, words and graphs | <ul style="list-style-type: none"> Pose complex tasks Situate problems in real world contexts Move flexibly between concrete, visual and abstract representations |
| 3. Construct viable arguments and critique the reasoning of others | <ul style="list-style-type: none"> Listen for information Use mathematical evidence in discourse and explaining thinking Question others | <ul style="list-style-type: none"> Foster a safe, collaborative environment Model discourse Facilitate discourse with minimal involvement |
| 4. Model with mathematics | <ul style="list-style-type: none"> Connect numbers and symbols Use representations (written and manipulative) to model Use technology efficiently and appropriately | <ul style="list-style-type: none"> Pose real-world problems and tasks Foster use of and mathematical models Provide and enable use of appropriate tools |
| 5. Use appropriate tools strategically | <ul style="list-style-type: none"> Identify relevant resources Use tools to explore and understand mathematics Articulate why they chose a tool | <ul style="list-style-type: none"> Provide students with appropriate tools Support student use of tools to explore and understand mathematics |
| 6. Attend to precision | <ul style="list-style-type: none"> Use mathematical vocabulary Give thought to units and labels Calculate accurately and efficiently | <ul style="list-style-type: none"> Give explicit instruction and expectations Use precise terminology at all times |
| 7. Look for and make use of structure | <ul style="list-style-type: none"> Use underlying mathematical concepts to detect structures or patterns Apply what they know about prior mathematics to generalize solutions | <ul style="list-style-type: none"> Encourage students to step back and view problems holistically Elicit responses from multiple students to uncover mathematical structures |
| 8. Look for and express regularity in repeated reasoning | <ul style="list-style-type: none"> Articulate patterns and relationships Generalize mathematical relationships based on problem solving and discourse | <ul style="list-style-type: none"> Allow students to formulate ideas based on observations and mathematical conjecture Pose problems and tasks that are not based solely on rules or procedures |