

Mathematical Processes
PROBLEM SOLVING - LOOK FORs

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| PROBLEM SOLVING: | |
| <i>Students will develop, select, apply, and compare a variety of problem-solving strategies as they pose and solve problems and conduct investigations, to help deepen their mathematical understanding.</i> | |
| Planning | Understand the problem |
| | Try different techniques and strategies |
| | Generate some examples |
| | Ask thoughtful questions |
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| Collecting data related to the problem | Take and record measurements |
| | Search the Internet for secondary data |
| | Check that data being gathered are appropriate to the inquiry at hand |
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| Selecting and applying a problem-solving strategy | <i>Include some of the following strategies:</i> |
| | Draw a diagram or picture |
| | Make a simpler but similar problem |
| | Create a mathematical model |
| | Work backward |
| | Use a formula |
| | Look for a pattern |
| | Guess and check |
| | Make and state assumptions |
| | Make a scale drawing or use technology |
| | Make an organized list |
| | Use logical reasoning |
| | Consider alternative strategies or blend strategies |
| | Monitor progress and revise, as necessary |
| Ask if the answer is reasonable | |
| Consider extensions/variations to the problem | |

