

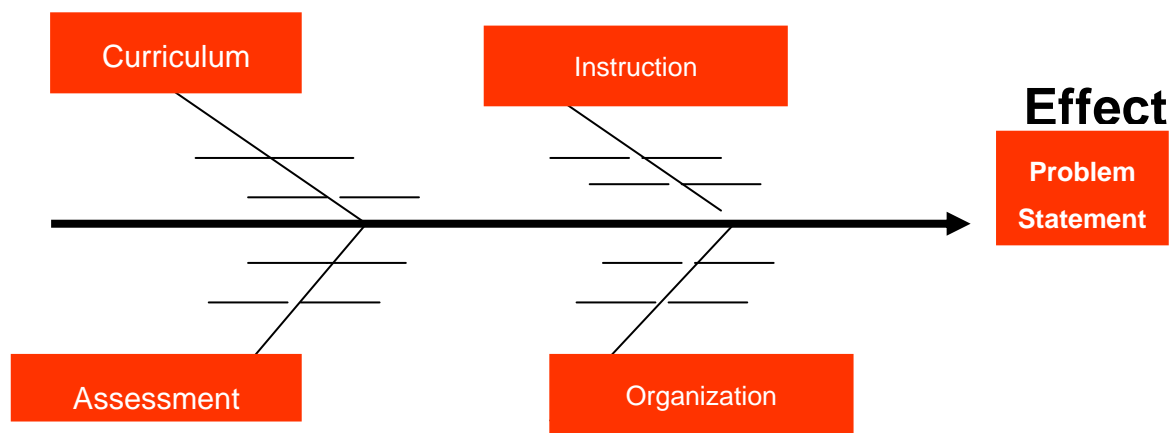
Job Aid – Analyzing Causes	
Step	Action
<p><b>Familiarize yourself with key terms related to Analyzing Causes</b></p>	<p><b>The Five Whys</b> – The practice of asking, five times, why the failure has occurred in order to get to the root cause/causes of the problem</p> <p><b>The Fishbone Diagram</b> – An analysis tool that provides a systematic way of looking at effects and the causes that create or contribute to those effects....also known as The Cause-and-Effect Diagram.</p> <p><b>Solution Jumping</b> – Assuming causes to a stated problem without considering root causes or performance factors</p> <p><b>Essential Question</b> – The primary question that will frame the problem...in The Five Whys process, the essential question should begin with “Why”</p> <p><b>Brainstorming</b> - A group creativity technique designed to generate a large number of ideas related to an issue, problem or solution</p> <p><b>Current State</b> (aka “As-Is”) – A summary statement that clearly defines the state of the problem at the onset of the analysis</p> <p><b>Desired State</b> (aka “To-Be”) – A summary statement that clearly defines the optimum, ideal state when the problem is solved</p> <p><b>Major Bones</b> – A feature of The Fishbone Diagram...topics or categories that help you organize primary ideas...in education, may include curriculum, instruction, assessment, professional learning, organizational effectiveness/internal processes, etc.</p> <p><b>Small Bones</b> – A feature of the Fishbone Diagram... actionable causes that are added to the major bones to provide details and substance to the primary topics</p> <p><b>Hot Spots</b> – Small bones in a Fishbone Diagram that are recurrent or that fit into more than one category</p> <p><b>SMART Performance Measures</b> – Measurable indicators that will enable you to increase performance....should be developed into SMART goals that comprise the action plan and meet the criteria of Smart, Measurable, Attainable, Relevant, and Time-oriented (or Trackable).</p> <p><b>Team-based Improvement</b> – Root cause analysis is ideally conducted by a team of persons related to the problem, in order to leverage the synergy of the variety of knowledge, skills, strengths and perspectives</p>

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<b>State the purpose of Root Cause Analysis</b>	<p>The purpose of root cause analysis is to provide a problem solving method aimed at identifying the root causes of problems or events.</p> <p>Root Cause Analysis is dependent upon the premise that problems are best solved when the <u>root causes</u> are identified / confirmed by data are eliminated – rather than solving “symptoms” that are easily observed on a superficial level.</p>
<b>Establish norms for Root Cause Analysis</b>	<p>Quick tips” for successful root cause analysis include:</p> <ul style="list-style-type: none"> <li>• Avoid solution jumping</li> <li>• All persons should participate</li> <li>• All answers are correct / valid</li> <li>• Avoid negative or sarcastic body language / comments</li> <li>• Follow effective brainstorming techniques (such as rapid responses, round robin participation, recording of responses)</li> </ul>
<b>Begin with The Five Whys tool / activity</b>	<p>The Five Whys is a quality tool that often begins the root cause analysis process:</p> <ol style="list-style-type: none"> <li>1. State the question in the form of a question beginning with “Why....?” that <u>does not list causes</u> of the problem</li> <li>2. Solicit responses using brainstorming techniques that the team agrees will take them to a deeper level of thinking</li> <li>3. Write all responses on chart paper</li> <li>4. Using a “stem” from one of the responses to craft the next “Why...” question, being sure to use one that is:             <ul style="list-style-type: none"> <li>○ within the team’s authority, and it has the autonomy to impact</li> <li>○ sufficiently broad to challenge dialogue within the team so that the discussion can be expanded</li> <li>○ but, will not cause the team to go off-topic</li> </ul> </li> <li>5. Continue this process for approximately 5 “Why” questions. (The number 5 is not magic; it may take fewer or more....the rule of thumb is to stop when you have sufficient and varied responses to address the issue)</li> <li>6. Select one or two cause(s) for further study which appears to be validated by data you have collected.             <ul style="list-style-type: none"> <li>○ If no data can be collected, identify solutions to test on a small scale before large-scale implementation.</li> </ul> </li> </ol>

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Step	Action
<b>Conduct Root Cause Analysis using the FISHBONE DIAGRAM tool / activity</b>	<p>The Fishbone Diagram may be used alone, or in conjunction with other quality tools such as The Five Whys.</p> <p>Note: The Five Whys tool may be used first to generate varied and diverse concepts that build the major and small “bones” of The Fishbone Diagram.</p>

**Probable Causes**



1. Draw a Fishbone Diagram on chart paper (or, on a wall using post-it notes)
  2. Write the problem in the form of a statement that defines the gap in performance (but does not list causes of the problem)
  3. Label the “major bones” (categories of causes) by either...
    - Using responses from a previous tool such as The Five Whys
    - Using education-specific categories such as Curriculum, Assessment, Instruction, Organization
    - Using organizational basics such as People, Processes, Technology, Policies, Materials, Equipment, Procedures, Facilities, Training, etc.
- (continued next page)*

<b>Job Aid – Analyzing Causes</b>	
<b>Step</b>	<b>Action</b>
<b>Conduct Root Cause Analysis using the FISHBONE DIAGRAM tool / activity (continued)</b>	<ol style="list-style-type: none"> <li>4. Lead the participants to fill in the “small bones” on the diagram with possible causes related to each category represented by the “major bones” (again using responses from The Five Whys, if available)</li> <li>5. Draw lines and circles to identify items repeated or related to more than one major bone (for example, training could be reflected in Curriculum, Instruction, Professional Learning and Budget / Funding) - these become “hot spots”.</li> <li>6. List “hot spots” on chart paper as they become evident</li> <li>7. Prioritize the Hot Spots and develop SMART performance measures for them</li> </ol>
<b>Explain the link between Root Cause Analysis and Performance Measures</b>	<p>Performance Measures are indicators of achievement that help to establish goals to increase performance; and may include data such as test scores, attendance staff statistics or other indicators that describe various levels of achievement. Goals are set to increase performance based on instructional or organizational needs.</p> <p>The use of good performance measures leads to the setting of SMART Goals. You can identify whether performance measures and goals are “SMART” by whether they meet these criteria:</p> <ul style="list-style-type: none"> <li>• Specific</li> <li>• Measurable</li> <li>• Attainable</li> <li>• Relevant</li> <li>• Attainable</li> <li>• Time-oriented / Trackable</li> </ul>