

Critical Thinking and Problem Solving Rubric

Ability to recognize and define a question or issue, integrate and analyze relevant data and resources, and engage in creating and implementing innovative ideas to achieve the most effective conclusion or resolution.

Collaborative Problem Solving

-Defining the Problem

-Generating Alternative Solutions

-Evaluating and Selecting an Alternative

-Implementing and Following Up on the Solution

| | Dimensions; Other Rubrics | Beginning 1 | Developing 2 | Accomplished 3 | Exemplary 4 | Score |
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| | <p>[Also see Critical Thinking and Problem Solving” Rubrics from the following organizations and universities:</p> <ul style="list-style-type: none"> •AAC&U Critical Thinking Value Rubric •AAC&U Problem Solving Value Rubric •Boise State University Problem Solving Rubric •Foundation for Critical Thinking QEP Critical Thinking Rubric •Lane Community College Critical Thinking and Problem Solving Rubric •Lawrence Technological University Critical Thinking Rubric •Northeastern Illinois University Critical Thinking Rubric •Rollins College Critical Thinking Rubric | | | | | |

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| Collaborative Problem Solving (CPS): Defining the Problem | <ul style="list-style-type: none"> •Rollins College Problem Solving Rubric •Texas A&M University Critical Thinking Rubric •UNC Wilmington Critical Thinking Rubric •University of Northern Iowa Critical Thinking Rubric •Washington State University Critical Thinking Rubric •Washington State University Critical and Integrative Thinking Rubric] | | | | | |
| | [Also see “Creative Thinking” rubrics from other organizations and universities: <ul style="list-style-type: none"> •AAC&U Creative Thinking Value Rubric] | | | | | |
| | [Also see “Inquiry and Analysis” rubrics from other organizations and universities: <ul style="list-style-type: none"> •AAC&U Inquiry and Analysis Value Rubric •Clemson University Analytical Skills Rubric] | | | | | |
| | | <ul style="list-style-type: none"> •Never diagnoses the situation so that the group’s focus in on the problem not just its symptoms •Never uses helpful techniques at this stage including flowcharts to identify the expected steps of | <ul style="list-style-type: none"> •Rarely diagnoses the situation so that the group’s focus in on the problem not just its symptoms •Rarely uses helpful techniques at this stage including flowcharts to identify the expected steps of | <ul style="list-style-type: none"> •Sometimes diagnoses the situation so that the group’s focus in on the problem not just its symptoms •Sometimes uses helpful techniques at this stage including flowcharts to identify the | <ul style="list-style-type: none"> •Almost always diagnoses the situation so that the group’s focus in on the problem not just its symptoms •Almost always uses helpful techniques at this stage including flowcharts to identify the | |

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| | | <p>a process and cause-and-effect diagrams to define and analyze root causes</p> <ul style="list-style-type: none"> •Never involves interested parties using factual information •Never compares expectations to reality •Never focuses on root causes of a problem •Never reviews and documents how processes currently work •Never evaluates the possible impact of new tools and other changes in the development of a model of “what should be” | <p>a process and cause-and-effect diagrams to define and analyze root causes</p> <ul style="list-style-type: none"> •Rarely involves interested parties using factual information •Rarely compares expectations to reality •Rarely focuses on root causes of a problem •Rarely reviews and documents how processes currently work •Rarely evaluates the possible impact of new tools and other changes in the development of a model of “what should be” | <p>expected steps of a process and cause-and-effect diagrams to define and analyze root causes</p> <ul style="list-style-type: none"> •Sometimes involves interested parties using factual information •Sometimes compares expectations to reality •Sometimes focuses on root causes of a problem •Sometimes reviews and documents how processes currently work •Sometimes evaluates the possible impact of new tools and other changes in the development of a model of “what should be” | <p>expected steps of a process and cause-and-effect diagrams to define and analyze root causes</p> <ul style="list-style-type: none"> •Almost always involves interested parties using factual information •Almost always compares expectations to reality •Almost always focuses on root causes of a problem •Almost always reviews and documents how processes currently work •Almost always evaluates the possible impact of new tools and other changes in the development of a model of “what should be” |
| <p>CPS: Generating Alternative Solutions</p> | | <ul style="list-style-type: none"> •Never postpones the selection of one solution until several alternatives have been proposed •Never has a standard with which to compare the characteristics of the final solution thereby allowing evaluation of different intended results offered by alternatives •Never collects good information about the process/implementation | <ul style="list-style-type: none"> •Rarely postpones the selection of one solution until several alternatives have been proposed •Rarely has a standard with which to compare the characteristics of the final solution thereby allowing evaluation of different intended results offered by alternatives •Rarely collects good information about the process/implementation | <ul style="list-style-type: none"> •Sometimes postpones the selection of one solution until several alternatives have been proposed •Sometimes has a standard with which to compare the characteristics of the final solution thereby allowing evaluation of different intended results offered by alternatives •Sometimes collects good information about the process/implementation | <ul style="list-style-type: none"> •Almost always postpones the selection of one solution until several alternatives have been proposed •Almost always has a standard with which to compare the characteristics of the final solution thereby allowing evaluation of different intended results offered by alternatives •Almost always collects good information about the process/implementation |

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| | | <p>stages involved with each alternative</p> <ul style="list-style-type: none"> •Never develops a road map for investigating alternatives using brainstorming and team problem-solving techniques | <p>implementation stages involved with each alternative</p> <ul style="list-style-type: none"> •Rarely develops a road map for investigating alternatives using brainstorming and team problem-solving techniques | <p>information about the process/ implementation stages involved with each alternative</p> <ul style="list-style-type: none"> •Sometimes develops a road map for investigating alternatives using brainstorming and team problem-solving techniques | <p>the process/ implementation stages involved with each alternative</p> <ul style="list-style-type: none"> •Almost always develops a road map for investigating alternatives using brainstorming and team problem-solving techniques | |
| CPS: Evaluating and Selecting an Alternative | | <ul style="list-style-type: none"> •Never considers the extent to which a particular alternative will solve the problem without causing other unanticipated problems •Never considers the extent to which all the individuals involved will accept the alternative •Never considers the extent to which the alternative fits within organizational constraints | <ul style="list-style-type: none"> •Rarely considers the extent to which a particular alternative will solve the problem without causing other unanticipated problems •Rarely considers the extent to which all the individuals involved will accept the alternative •Rarely considers the extent to which the alternative fits within organizational constraints | <ul style="list-style-type: none"> •Sometimes considers the extent to which a particular alternative will solve the problem without causing other unanticipated problems •Sometimes considers the extent to which all the individuals involved will accept the alternative •Sometimes considers the extent to which the alternative fits within organizational constraints | <ul style="list-style-type: none"> •Almost always considers the extent to which a particular alternative will solve the problem without causing other unanticipated problems •Almost always considers the extent to which all the individuals involved will accept the alternative •Almost always considers the extent to which the alternative fits within organizational constraints | |
| CPS: Implementing and Following Up on the Solution | | <ul style="list-style-type: none"> •Never calls upon decision-makers to ask that the solution be implemented by a team •Never sells the solutions to others •Never facilitates the implementation by involving the | <ul style="list-style-type: none"> •Rarely calls upon decision-makers to ask that the solution be implemented by a team •Rarely sells the solutions to others •Rarely facilitates the implementation by involving the | <ul style="list-style-type: none"> •Sometimes calls upon decision-makers to ask that the solution be implemented by a team •Sometimes sells the solutions to others •Sometimes facilitates the implementation | <ul style="list-style-type: none"> •Almost always calls upon decision-makers to ask that the solution be implemented by a team •Almost always sells the solutions to others •Almost always facilitates the | |

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| | <p>efforts of others as a way of minimizing resistance to subsequent changes</p> <ul style="list-style-type: none"> •Never builds in feedback channels into the implementation of the solution to produce continuous monitoring and testing of actual events against expectations •Never updates solution to respond to future changes | <p>efforts of others as a way of minimizing resistance to subsequent changes</p> <ul style="list-style-type: none"> •Rarely builds in feedback channels into the implementation of the solution to produce continuous monitoring and testing of actual events against expectations •Rarely updates solution to respond to future changes | <p>by involving the efforts of others as a way of minimizing resistance to subsequent changes</p> <ul style="list-style-type: none"> •Sometimes builds in feedback channels into the implementation of the solution to produce continuous monitoring and testing of actual events against expectations •Sometimes updates solution to respond to future changes | <p>implementation by involving the efforts of others as a way of minimizing resistance to subsequent changes</p> <ul style="list-style-type: none"> •Almost always builds in feedback channels into the implementation of the solution to produce continuous monitoring and testing of actual events against expectations •Almost always updates solution to respond to future changes |
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Collaborative problem solving portions of this rubric derived from *The Executive Guide to Improvement and Change* by G. Dennis Beecroft, Grace L. Duffy, and John W. Moran, 2003
<http://asq.org/learn-about-quality/problem-solving/overview/overview.html>