



## Citizen Science Skills Rubric

In the educational setting, observation rubrics define skills that you expect students to demonstrate, and assign indicators that show those skills at different levels of achievement. This tool provides a ready-to-use and a customizable rubric.

### Ready-to-Use Citizen Science Skills Rubric

Skill/Knowledge	Value			Points
	<i>Novice (1 point)</i>	<i>Apprentice (2 Points)</i>	<i>Expert (3 points)</i>	
<i>Making observations and asking questions</i>	<ul style="list-style-type: none"> <li>• Required consistent prompting to identify visual/sensory observations</li> <li>• Described observations incompletely</li> <li>• Made very basic predictions</li> </ul>	<ul style="list-style-type: none"> <li>• Required some prompting to identify observations</li> <li>• Identified some things of interest and opportunities for investigation</li> <li>• Made some predictions</li> </ul>	<ul style="list-style-type: none"> <li>• Made observations without prompting</li> <li>• Described observations in writing</li> <li>• Identified things of interest or ideas for future investigation</li> <li>• Made predictions based on observational evidence</li> </ul>	
<i>Planning and executing investigations</i>	<ul style="list-style-type: none"> <li>• Required step-by-step assistance and guidance to complete tasks</li> <li>• Project was incomplete or late</li> </ul>	<ul style="list-style-type: none"> <li>• Required some assistance to approach and complete tasks</li> <li>• Completed project with some distraction</li> </ul>	<ul style="list-style-type: none"> <li>• Used a sophisticated strategy to approach and complete the tasks</li> <li>• Completed project on time and with minimal distraction</li> </ul>	
<i>Collecting and analyzing data</i>	<ul style="list-style-type: none"> <li>• Collected some initial data with assistance</li> <li>• Data are incomplete, disorganized or have not been analyzed</li> </ul>	<ul style="list-style-type: none"> <li>• Imprecise data have been collected or some errors are present in collection or calculation</li> </ul>	<ul style="list-style-type: none"> <li>• Data are complete and precise</li> <li>• All relevant details have been recorded</li> <li>• Demonstrated understanding of how to use data collection tools</li> <li>• Analysis has been performed</li> </ul>	



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Skill/Knowledge	Value			Points
	Novice (1 point)	Apprentice (2 Points)	Expert (3 points)	
<i>Developing and using scientific models</i>	<ul style="list-style-type: none"> <li>No connections have been made between investigation and larger scientific ideas</li> </ul>	<ul style="list-style-type: none"> <li>Identified trends that were not always consistent with observations</li> <li>Larger connections between ideas were not present or incomplete</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrated understanding of key science concepts</li> <li>Took clear logical steps</li> <li>Identified connections between observations and larger phenomena</li> </ul>	
<i>Engaging in argument from evidence and constructing explanations</i>	<ul style="list-style-type: none"> <li>Required assistance to identify basic trends or larger concepts</li> <li>Reasoning is incomplete or incorrect</li> </ul>	<ul style="list-style-type: none"> <li>Exhibited basic reasoning skills and some understanding of larger concepts</li> <li>Made basic interpretations of data</li> <li>Required assistance to develop conclusions from observable evidence</li> </ul>	<ul style="list-style-type: none"> <li>Employed complex reasoning and demonstrated understanding of cause and effect</li> <li>Provided clear, effective explanations</li> <li>Developed conclusions that were supported by data and raised new questions</li> </ul>	
<i>Sharing findings</i>	<ul style="list-style-type: none"> <li>Required assistance to communicate information or clearly represent findings</li> <li>Shared incomplete information</li> </ul>	<ul style="list-style-type: none"> <li>Communicated basic findings using one form of expression</li> <li>Shared general information with community/audience</li> </ul>	<ul style="list-style-type: none"> <li>Communicated ideas clearly using multiple channels or forms of expression (written, spoken, etc.)</li> <li>Created innovative or interesting ways to represent information (videos, public service announcements, etc.)</li> <li>Made information accessible and interesting to community/audience</li> </ul>	



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## Customized Citizen Science Skills Rubric

**Directions:** Use this template to create a customized rubric. Skills and knowledge are based on the Science Process Skills. Fill in the observable actions based on the ability levels of “novice”, “apprentice” and “expert.”

Skill/Knowledge	Value			Points
	Novice (1 point)	Apprentice (2 Points)	Expert (3 points)	
<i>Making observations and asking questions</i>				
<i>Planning and executing investigations</i>				
<i>Collecting and analyzing data</i>				
<i>Developing and using scientific models</i>				
<i>Engaging in argument from evidence and constructing explanations</i>				
<i>Sharing findings</i>				



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