Science Curriculum Review Worksheets

Table 1. ACT Science College and Career Readiness Standards for Score Range 13-15

Science College and Career Readiness Standards			For each skill, knowledge, or process:		
			Is it **included** in your Science curriculum?	At what grade level (or in which course) are students **first introduced** to it?	At what grade level (or in which course) are students **expected to demonstrate proficiency**?
IOD	201	Select one piece of data from a simple data presentation (e.g., a simple food web diagram)			
IOD	202	Identify basic features of a table, graph, or diagram (e.g., units of measurement)			
IOD	203	Find basic information in text that describes a simple data presentation			
SIN	201	Find basic information in text that describes a simple experiment			
SIN	202	Understand the tools and functions of tools used in a simple experiment			
EMI	201	Find basic information in a model (conceptual)			

Table 2. ACT Science College and Career Readiness Standards for Score Range 16-19

Science College and Career Readiness Standards			For each skill, knowledge, or process:		
			Is it **included** in your Science curriculum?	At what grade level (or in which course) are students **first introduced** to it?	At what grade level (or in which course) are students **expected to demonstrate proficiency**?
IOD	301	Select two or more pieces of data from a simple data presentation			
IOD	302	Understand basic scientific terminology			
IOD	303	Find basic information in text that describes a complex data presentation			
IOD	304	Determine how the values of variables change as the value of another variable changes in a simple data presentation			
SIN	301	Understand the methods used in a simple experiment			
SIN	302	Understand the tools and functions of tools used in a complex experiment			
SIN	303	Find basic information in text that describes a complex experiment			
EMI	301	Identify implications in a model			
EMI	302	Determine which models present certain basic information			

Table 3. ACT Science College and Career Readiness Standards for Score Range 20-23

Science College and Career Readiness Standards			**For each skill, knowledge, or process:**		
			Is it **included** in your Science curriculum?	At what grade level (or in which course) are students **first introduced** to it?	At what grade level (or in which course) are students **expected to demonstrate proficiency**?
IOD	401	Select data from a complex data presentation (e.g., a phase diagram)			
IOD	402	Compare or combine data from a simple data presentation (e.g., order or sum data from a table)			
IOD	403	Translate information into a table, graph, or diagram			
IOD	404	Perform a simple interpolation or simple extrapolation using data in a table or graph			
SIN	401	Understand a simple experimental design			
SIN	402	Understand the methods used in a complex experiment			
SIN	403	Identify a control in an experiment			
SIN	404	Identify similarities and differences between experiments			
SIN	405	Determine which experiments utilized a given tool, method, or aspect of design			
EMI	401	Determine which simple hypothesis, prediction, or conclusion is, or is not, consistent with a data presentation, model, or piece of information in text			
EMI	402	Identify key assumptions in a model			
EMI	403	Determine which models imply certain information			
EMI	404	Identify similarities and differences between models			

Table 4. ACT Science College and Career Readiness Standards for Score Range 24-27

Science College and Career Readiness Standards			For each skill, knowledge, or process:		
			Is it **included** in your Science curriculum?	At what grade level (or in which course) are students **first introduced** to it?	At what grade level (or in which course) are students **expected to demonstrate proficiency**?
IOD	501	Compare or combine data from two or more simple data presentations (e.g., categorize data from a table using a scale from another table)			
IOD	502	Compare or combine data from a complex data presentation			
IOD	503	Determine how the values of variables change as the value of another variable changes in a complex data presentation			
IOD	504	Determine and/or use a simple (e.g., linear) mathematical relationship that exists between data			
IOD	505	Analyze presented information when given new, simple information			
SIN	501	Understand a complex experimental design			
SIN	502	Predict the results of an additional trial or measurement in an experiment			
SIN	503	Determine the experimental conditions that would produce specified results			
EMI	501	Determine which simple hypothesis, prediction, or conclusion is, or is not, consistent with two or more data presentations, models, and/or pieces of information in text			
EMI	502	Determine whether presented information, or new information, supports or contradicts a simple hypothesis or conclusion, and why			
EMI	503	Identify the strengths and weaknesses of models			
EMI	504	Determine which models are supported or weakened by new information			
EMI	505	Determine which experimental results or models support or contradict a hypothesis, prediction, or conclusion			

Table 5. ACT Science College and Career Readiness Standards for Score Range 28-32

Science College and Career Readiness Standards			For each skill, knowledge, or process:		
			Is it **included** in your Science curriculum?	At what grade level (or in which course) are students **first introduced** to it?	At what grade level (or in which course) are students **expected to demonstrate proficiency**?
IOD	601	Compare or combine data from a simple data presentation with data from a complex data presentation			
IOD	602	Determine and/or use a complex (e.g., nonlinear) mathematical relationship that exists between data			
IOD	603	Perform a complex interpolation or complex extrapolation using data in a table or graph			
SIN	601	Determine the hypothesis for an experiment			
SIN	602	Determine an alternate method for testing a hypothesis			
EMI	601	Determine which complex hypothesis, prediction, or conclusion is, or is not, consistent with a data presentation, model, or piece of information in text			
EMI	602	Determine whether presented information, or new information, supports or weakens a model, and why			
EMI	603	Use new information to make a prediction based on a model			
IOD	601	Compare or combine data from a simple data presentation with data from a complex data presentation			
IOD	602	Determine and/or use a complex (e.g., nonlinear) mathematical relationship that exists between data			
IOD	603	Perform a complex interpolation or complex extrapolation using data in a table or graph			
SIN	601	Determine the hypothesis for an experiment			
SIN	602	Determine an alternate method for testing a hypothesis			
EMI	601	Determine which complex hypothesis, prediction, or conclusion is, or is not, consistent with a data presentation, model, or piece of information in text			
EMI	602	Determine whether presented information, or new information, supports or weakens a model, and why			
EMI	603	Use new information to make a prediction based on a model			

Table 6. ACT Science College and Career Readiness Standards for Score Range 33-36

Science College and Career Readiness Standards			For each skill, knowledge, or process:		
			Is it **included** in your Science curriculum?	At what grade level (or in which course) are students **first introduced** to it?	At what grade level (or in which course) are students **expected to demonstrate proficiency**?
IOD	701	Compare or combine data from two or more complex data presentations			
IOD	702	Analyze presented information when given new, complex information			
SIN	701	Understand precision and accuracy issues			
SIN	702	Predict the effects of modifying the design or methods of an experiment			
SIN	703	Determine which additional trial or experiment could be performed to enhance or evaluate experimental results			
EMI	701	Determine which complex hypothesis, prediction, or conclusion is, or is not, consistent with two or more data presentations, models, and/or pieces of information in text			
EMI	702	Determine whether presented information, or new information, supports or contradicts a complex hypothesis or conclusion, and why			