

Syllabus Development Guide: AP Environmental Science

To the AP teacher: Please take full advantage of this guide. It is designed to support you as you develop your syllabus for the AP Course Audit. The guide contains the following sections and information:

Curricular Requirements	The curricular requirements are the core elements of the course. Your syllabus must provide clear evidence that each requirement is fully addressed in your course.	Important Considerations	Aligned with the Evaluation Guidelines, these statements provide advice on the type of evidence your syllabus should include.
Scoring Components	Some curricular requirements consist of complex, multi-part statements. These particular requirements are broken down into their component parts and restated as “scoring components”. Reviewers will look for evidence that each scoring component is included in your course.	Reference	As appropriate, references to specific sections of the official AP Course Description or other pertinent publications are included here.
Key Terms	To ensure the clarity of certain terms or expressions that may have multiple meanings, each of these terms is clearly defined.	Samples of Evidence	For each scoring component, three separate samples of evidence are provided. These statements provide either verbatim samples from actual authorized syllabi or clear descriptions of what acceptable evidence should look like.
Evaluation Guidelines	These are the exact guidelines used by reviewers as they evaluate the evidence in your syllabus. Use these to interpret any requirement you may find ambiguous.		

Curricular Requirements	Scoring Components, Key Terms, Evaluation Guidelines, Important Considerations, References and Samples of Evidence			
Curricular Requirement 1: The course provides instruction in each of the following seven content areas outlined in the Course Description: Earth Systems and Resources The Living World Population Land and Water Use Energy Resources and Consumption Pollution Global Change	Scoring Component 1*: The course provides instruction in Earth Systems.			
	*Note Each Curricular Requirement may be subdivided into two or more distinct Scoring Components.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	Scoring Component is clear and explicit. No Evaluation Guideline is needed.	Scoring Component is clear and explicit. No Important Considerations are needed.	For more information see pages 5 through 8 of the AP Environmental Science Course Description
	Samples of Evidence			
	Sample 1	Sample 2	Sample 3	
The syllabus mentions Earth Systems and the four subtopics outlined in the AP Environmental Science Course Description, and provides sufficient resources to demonstrate coverage of the topics.	The syllabus briefly describes a lab(s) and/or fieldwork in Earth Systems and the four subtopics outlined in the AP Environmental Science Course Description.	The syllabus mentions Earth Systems, the four subtopics outlined in the AP Environmental Science Course Description, and provides a list with a brief description of the required lab(s) and/or fieldwork conducted pertaining to these topics.		

Scoring Component 2: The course provides instruction in Earth Resources.				
Curricular Requirement 1 (continued): The course provides instruction in each of the following seven content areas outlined in the Course Description: Earth Systems and Resources The Living World Population Land and Water Use Energy Resources and Consumption Pollution Global Change	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	Scoring Component is clear and explicit. No Evaluation Guideline is needed.	The syllabus should provide evidence of Earth Resources as a subtopic for the course. The syllabus should include a brief list of the major themes outlined in the AP Environmental Science Course Description.	For more information see page 5 of the AP Environmental Science Course Description.
	Samples of Evidence			
Sample 1	Sample 2	Sample 3		
The syllabus mentions Earth Resources, the four subtopics outlined in the AP Environmental Science Course Description, and provides sufficient resources to demonstrate coverage of the topics.	The syllabus briefly describes a lab(s) and/or fieldwork in Earth Resources and the four subtopics outlined in the AP Environmental Science Course Description.	The syllabus mentions Earth Resources, the four subtopics outlined in the AP Environmental Science Course Description, and provides a list with a brief description of the lab(s) and/or fieldwork conducted pertaining to these topics.		

<p>Curricular Requirement 1 (continued): The course provides instruction in each of the following seven content areas outlined in the Course Description:</p> <ul style="list-style-type: none"> Earth Systems and Resources The Living World Population Land and Water Use Energy Resources and Consumption Pollution Global Change 	Scoring Component 3: The course provides instruction in the Living World.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	Scoring Component is clear and explicit. No Evaluation Guideline is needed.	Scoring Component is clear and explicit. No Important Considerations are needed.	For more information see page 5 of the AP Environmental Science Course Description.
	Samples of Evidence			
	Sample 1	Sample 2	Sample 3	
The syllabus mentions the Living World, the five subtopics outlined in the AP Environmental Science Course Description, and provides sufficient resources to demonstrate coverage of the topics.	The syllabus briefly describes a lab(s) and/or fieldwork in the Living World and the five subtopics outlined in the AP Environmental Science Course Description.	The syllabus mentions the Living World, the five subtopics outlined in the AP Environmental Science Course Description, and provides a list with a brief description of the lab(s) and/or fieldwork conducted pertaining to these topics.		

<p>Curricular Requirement 1 (continued): The course provides instruction in each of the following seven content areas outlined in the Course Description:</p> <ul style="list-style-type: none"> Earth Systems and Resources The Living World Population Land and Water Use Energy Resources and Consumption Pollution Global Change 	Scoring Component 4: The course provides instruction in Population.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	Scoring Component is clear and explicit. No Evaluation Guideline is needed.	Scoring Component is clear and explicit. No Important Considerations are needed.	For more information see page 6 of the AP Environmental Science Course Description.
	Samples of Evidence			
	Sample 1	Sample 2	Sample 3	
The syllabus mentions Population, the two subtopics outlined in the AP Environmental Science Course Description, and provides sufficient resources to demonstrate coverage of the topics.	The syllabus briefly describes a lab(s) and/or fieldwork in Population and the two subtopics outlined in the AP Environmental Science Course Description.	The syllabus mentions Population, the two subtopics outlined in the AP Environmental Science Course Description, and provides a list with a brief description of the lab(s) and/or fieldwork conducted pertaining to these topics.		

	Scoring Component 5: The course provides instruction in Land Use.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	Curricular Requirement 1 (continued): The course provides instruction in each of the following seven content areas outlined in the Course Description: Earth Systems and Resources The Living World Population Land and Water Use Energy Resources and Consumption Pollution Global Change	All terminology in the Scoring Component is clear. No clarification is needed.	Scoring Component is clear and explicit. No Evaluation Guideline is needed.	Evidence can be demonstrated through providing instruction for at least three of the following: agriculture, forestry, range land, urbanization, land conservation, sustainability or mining.
Samples of Evidence				
Sample 1		Sample 2	Sample 3	
	The syllabus mentions Land Use, the six subtopics outlined in the AP Environmental Science Course Description, and provides sufficient resources to demonstrate coverage of the topics.	The syllabus briefly describes a lab(s) and/or fieldwork in Land Use and the six subtopics outlined in the AP Environmental Science Course Description.	The syllabus mentions Land Use, the six subtopics outlined in the AP Environmental Science Course Description, and provides a list with a brief description of the lab(s) and/or fieldwork conducted pertaining to these topics.	

Scoring Component 6: The course provides instruction in Water Use.					
<p>Curricular Requirement 1 (continued): The course provides instruction in each of the following seven content areas outlined in the Course Description:</p> <ul style="list-style-type: none"> Earth Systems and Resources The Living World Population Land and Water Use Energy Resources and Consumption Pollution Global Change 	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference	
		All terminology in the Scoring Component is clear. No clarification is needed.	Scoring Component is clear and explicit. No Evaluation Guideline is needed.	Scoring Component is clear and explicit. No Important Considerations are needed.	For more information please see pages 6 and 7 of the AP Environmental Science Course Description.
	Samples of Evidence				
	Sample 1	Sample 2	Sample 3		
	The syllabus mentions Water Use, the subtopic outlined in the AP Environmental Science Course Description, and provides sufficient resources to demonstrate coverage of the topics.	The syllabus briefly describes a lab(s) and/or fieldwork in Water Use and the subtopic outlined in the AP Environmental Science Course Description.	The syllabus mentions Water Use, the subtopic outlined in the AP Environmental Science Course Description, and provides a list with a brief description of the lab(s) and/or fieldwork conducted pertaining to these topics.		

	Scoring Component 7: The course provides instruction in Energy Resources.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	<p>Curricular Requirement 1 (continued): The course provides instruction in each of the following seven content areas outlined in the Course Description:</p> <ul style="list-style-type: none"> Earth Systems and Resources The Living World Population Land and Water Use Energy Resources and Consumption Pollution Global Change 	<p>All terminology in the Scoring Component is clear. No clarification is needed.</p>	<p>Scoring Component is clear and explicit. No Evaluation Guideline is needed.</p>	<p>Evidence can be demonstrated through the syllabus including at least three of the following subtopics: solar energy, hydroelectric power, wind power, solar power, hydrogen power, geothermal power or nuclear power.</p>
Samples of Evidence				
Sample 1	Sample 2	Sample 3		
<p>The syllabus mentions Energy Resources, the seven subtopics outlined in the AP Environmental Science Course Description, and provides sufficient resources to demonstrate coverage of the topics.</p>	<p>The syllabus briefly describes a lab(s) and/or fieldwork in Energy Resources and the seven subtopics outlined in the AP Environmental Science Course Description.</p>	<p>The syllabus mentions Energy Resources, the seven subtopics outlined in the AP Environmental Science Course Description, and provides a list with a brief description of the lab(s) and/or fieldwork conducted pertaining to these topics.</p>		

	Scoring Component 8: The course provides instruction in Energy Consumption.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	<p>Curricular Requirement 1 (continued): The course provides instruction in each of the following seven content areas outlined in the Course Description: Earth Systems and Resources The Living World Population Land and Water Use Energy Resources and Consumption Pollution Global Change</p>	All terminology in the Scoring Component is clear. No clarification is needed.	Scoring Component is clear and explicit. No Evaluation Guideline is needed.	The syllabus should include at least three of the following: sustainability, efficiency, 3Rs, renew-ability, or conservation to demonstrate sufficient evidence.
Samples of Evidence				
	Sample 1	Sample 2	Sample 3	
	The syllabus mentions Energy Consumption, lists the major themes outlined in the AP Environmental Science Course Description, and provides sufficient resources to demonstrate coverage of the topics.	The syllabus briefly describes a lab(s) and/or fieldwork in Energy Consumption and lists the major themes outlined in the AP Environmental Science Course Description.	The syllabus mentions Energy Consumption, lists the major themes outlined in the AP Environmental Science Course Description, and provides a list with a brief description of the lab(s) and/or fieldwork conducted pertaining to these topics.	

	Scoring Component 9: The course provides instruction in Pollution.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	<p>Curricular Requirement 1 (continued): The course provides instruction in each of the following seven content areas outlined in the Course Description:</p> <ul style="list-style-type: none"> Earth Systems and Resources The Living World Population Land and Water Use Energy Resources and Consumption Pollution Global Change 	<p>All terminology in the Scoring Component is clear. No clarification is needed.</p>	<p>Scoring Component is clear and explicit. No Evaluation Guideline is needed.</p>	<p>The syllabus should include at least two of the following: air (indoor and outdoor), water (surface, ground, ocean), noise pollution, or solid waste to demonstrate sufficient evidence.</p>
Samples of Evidence				
Sample 1	Sample 2	Sample 3		
<p>The syllabus mentions Pollution, lists the three major subtopics outlined in the AP Environmental Science Course Description, and provides sufficient resources to demonstrate coverage of the topics.</p>	<p>The syllabus briefly describes a lab(s) and/or fieldwork in Pollution and lists the three major subtopics outlined in the AP Environmental Science Course Description.</p>	<p>The syllabus mentions Pollution, lists the three major subtopics outlined in the AP Environmental Science Course Description, and provides a list with a brief description of the lab(s) and/or fieldwork conducted pertaining to these topics.</p>		

Scoring Component 10: The course provides instruction in Global Change.				
Curricular Requirement 1 (continued): The course provides instruction in each of the following seven content areas outlined in the Course Description: Earth Systems and Resources The Living World Population Land and Water Use Energy Resources and Consumption Pollution Global Change	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	Scoring Component is clear and explicit. No Evaluation Guideline is needed.	The syllabus should include at least two of the following: stratospheric ozone, global temperature change, or biodiversity changes to demonstrate sufficient evidence.	For more information please see page 8 of the AP Environmental Science Course Description.
	Samples of Evidence			
Sample 1	Sample 2	Sample 3		
The syllabus mentions Global Change, lists the three major subtopics outlined in the AP Environmental Science Course Description, and provides sufficient resources to demonstrate coverage of the topics.	The syllabus briefly describes a lab(s) and/or fieldwork in Global Change and lists the three major subtopics outlined in the AP Environmental Science Course Description.	The syllabus mentions Global Change, lists the three major subtopics outlined in the AP Environmental Science Course Description, and provides a list with a brief description of the lab(s) and/or fieldwork conducted pertaining to these topics.		

Curricular Requirement 2: The course provides students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. The curriculum draws upon various scientific disciplines.	Scoring Component 11: The course provides students with the scientific principles required to understand the interrelationships of the natural world and draws upon various scientific disciplines.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	If the syllabus mentions principles, methodology, or the scientific method, then evidence is sufficient.	Scoring Component is clear and explicit. No Important Considerations are needed.	No references to external documents are needed for this Scoring Component.
	Samples of Evidence			
	Sample 1	Sample 2	Sample 3	
In the scientific principles section, the syllabus expresses the hallmarks of science embodied in the scientific method and indicates the use of the scientific method in experimentation.	The syllabus explicitly states that scientific principles and methodology are taught and used throughout the course.	In the introduction, the syllabus states, "The scientific principles and disciplines are an integral part of the course. Students are encouraged throughout the course to consider scientific principles and disciplines when completing activities, and laboratory and/or fieldwork."		

Curricular Requirement 3: The course includes methods for analyzing and interpreting information and experimental data, including mathematical calculations.	Scoring Component 12: The course includes methods for analyzing and interpreting information.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	If the syllabus mentions principles, methodology, or scientific method, then evidence is sufficient. If the syllabus clearly demonstrates data collection (either data collected by the students or from an outside source) and mathematical analysis and interpretation of the data, then evidence is sufficient.	Scoring Component is clear and explicit. No Important Considerations are needed.	No references to external documents are needed for this Scoring Component.
	Samples of Evidence			
	Sample 1	Sample 2	Sample 3	
In the introduction, the syllabus states, "Students learn methods for analyzing and interpreting information." Additionally, the syllabus indicates which activities/fieldwork include methods of analysis and interpretation.	In the laboratory/fieldwork section of the syllabus it states, "All laboratory/fieldwork includes an analysis and an interpretation component." Additionally, the syllabus indicates which activities/fieldwork include methods of analysis and interpretation.	The syllabus explicitly states, "Students are taught methods for analyzing and interpreting information." Additionally, the syllabus indicates which activities/fieldwork include methods of analysis and interpretation.		

Curricular Requirement 3 (continued): The course includes methods for analyzing and interpreting information and experimental data, including mathematical calculations.	Scoring Component 13: The course includes methods for analyzing and interpreting experimental data.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	<p>If the syllabus mentions principles, methodology, or scientific method, then evidence is sufficient.</p> <p>If the syllabus clearly demonstrates data collection (either data collected by the students or from an outside source) and mathematical analysis and interpretation of the data, then evidence is sufficient.</p>	<p>Evidence can be demonstrated through students using mathematical and statistical methods to generate data in lab or field experiments.</p> <p>Evidence that students generate data throughout the course is sufficient to meet this scoring component.</p>	No references to external documents are needed for this Scoring Component.
	Samples of Evidence			
	Sample 1	Sample 2	Sample 3	
In the introduction, the syllabus states, "Students learn methods for analyzing and interpreting experimental data." Additionally, the syllabus indicates which activities/fieldwork include analysis and experimental data.	In the laboratory/fieldwork section of the syllabus it states, "A variety of laboratories/fieldwork include data collection, the application of mathematical analysis by the student and data interpretation." Additionally, the syllabus indicates which laboratories/fieldwork include these methods of analysis and interpretation.	The syllabus explicitly states, "Students are taught methods for analyzing and interpreting information." Additionally, the syllabus indicates which activities/fieldwork include methods of analysis and interpretation.		

<p>Curricular Requirement 3 (continued): The course includes methods for analyzing and interpreting information and experimental data, including mathematical calculations.</p>	Scoring Component 14: The course includes methods for analyzing and interpreting mathematical calculations.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	If the syllabus clearly demonstrates data collection (either data collected by the students or from an outside source) and mathematical analysis and interpretation of the data, then evidence is sufficient.	Scoring Component is clear and explicit. No Important Considerations are needed.	No references to external documents are needed for this Scoring Component.
	Samples of Evidence			
	Sample 1	Sample 2	Sample 3	
In the introduction, the syllabus states, "Students learn methods for analyzing and interpreting mathematical calculations." Additionally, the syllabus indicates which activities/fieldwork include analysis and interpretation of mathematical calculations.	In the laboratory/fieldwork section of the syllabus it states, "A variety of laboratories/fieldwork include data collection, the application of mathematical analysis and interpretation by the student and data interpretation." Additionally, the syllabus indicates which laboratories/fieldwork include these methods of mathematical analysis and interpretation.	The syllabus explicitly states, "Students are taught methods for analyzing and interpreting mathematical calculations." Additionally, the syllabus indicates which activities/fieldwork include methods of mathematical analysis and interpretation.		

<p>Curricular Requirement 4: The course teaches students how to identify and analyze environmental problems, to evaluate the ecological and human health risks associated with these problems, and to critically examine various solutions for resolving or preventing them.</p>	Scoring Component 15: The course teaches students how to identify and analyze environmental problems.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	If the syllabus identifies, analyzes, and evaluates one environmental problem and students determine a resolution, prevention, sustainability, or management of the problem, then evidence is sufficient.	Scoring Component is clear and explicit. No Important Considerations are needed.	No references to external documents are needed for this Scoring Component.
	Samples of Evidence			
	Sample 1	Sample 2	Sample 3	
The syllabus explicitly states, "Students are taught methods for identifying and analyzing environmental problems and learn how to identify resolutions, prevention and sustainability." Additionally, the syllabus indicates which laboratory and/or fieldwork activities include such methods.	In the laboratory and/or fieldwork section of the syllabus it states, "The laboratories and/or fieldwork section includes identification and analysis of environmental problems. Students discuss possible resolutions to the problem and sustainable ways in managing the environmental problem." Additionally, the syllabus indicates which laboratory and/or fieldwork activities include these methods of identifying and analyzing environmental problems.	In the introduction, the syllabus states, "Students learn how to identify and analyze environmental problems." Additionally, the syllabus indicates which laboratory and/or fieldwork activities students participate in that include identification and analysis of environmental problems. For example; <ul style="list-style-type: none"> • Students hold discussions in which they analyze environmental problems, possible resolutions, prevention and sustainable options for managing the environmental problem. • A guest speaker gives a class presentation on environmental problems and holds a class discussion afterwards. • Students participate in public hearings where they analyze environmental problems. 		

<p>Curricular Requirement 4 (continued): The course teaches students how to identify and analyze environmental problems, to evaluate the ecological and human health risks associated with these problems, and to critically examine various solutions for resolving or preventing them.</p>	Scoring Component 16: The course teaches students how to critically examine various solutions for resolving or preventing environmental problems by evaluating the associated ecological risks and human health risks.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	If the syllabus identifies, analyzes, and evaluates one environmental problem and students determine resolution, prevention, sustainability, or management of the problem, then evidence is sufficient.	Scoring Component is clear and explicit. No Important Considerations are needed.	
	Samples of Evidence			
	Sample 1	Sample 2	Sample 3	
The assignments section of the syllabus states, "Students complete a research paper focusing on the risks associated with environmental problems and how to resolve them.	The laboratory and/or fieldwork section of the syllabus includes a description of lab and/or fieldwork relating to evaluating ecological and human health risks.	In the course outline, the syllabus states, "Students prepare for and hold an in-class debate on a case study examining solutions for preventing ecological and human health risks."		

<p>Curricular Requirement 5: The course includes a laboratory and/or field investigation component. A minimum of one class period or its equivalent per week is spent engaged in laboratory and/or field work.</p>	Scoring Component 17: The course includes a laboratory and/or field investigation component. A minimum of one class period, or its equivalent, per week is spent engaged in laboratory and/or fieldwork.			
	Key Term(s)	Evaluation Guideline(s)	Important Consideration(s)	Reference
	All terminology in the Scoring Component is clear. No clarification is needed.	<p>Quite a bit of flexibility must be applied here. A listing of hands-on labs with titles that relevantly correspond to the course topics, along with evidence of the time requirement (average one class per week or equivalent), is sufficient evidence. Labs must be experimental. Field trips alone are not sufficient, and they must support other laboratory experiences.</p> <p>Contradictory evidence will not suffice this scoring component. The number of labs must reflect the number of weeks in the course.</p>	AP Environmental Courses that are one academic school year in length should include evidence of at least 25 laboratory and/or fieldwork activities.	For more information see pages 8 through 10 of the AP Environmental Science Course Description.
	Samples of Evidence			
	Sample 1	Sample 2	Sample 3	
The syllabus includes a laboratory and/or fieldwork section. A list of laboratory and/or fieldwork is included along with a description of the activities/assignments completed. The syllabus demonstrates that the amount of laboratory and/or fieldwork is equivalent to one class period per week.	In the “Laboratory” and/or “Fieldwork” section, the syllabus provides a list of laboratory and/or fieldwork completed on a one class period per week basis and provides a detailed title of the laboratory and/or fieldwork completed.	Each unit in the course outline includes a laboratory and/or fieldwork section. This section includes a list of laboratory and/or fieldwork completed for each unit and the title of the laboratory and/or fieldwork activities. The total number of laboratory and/or fieldwork activities listed in each unit is equivalent to one class period per week.		