

Main Criteria: Forward Education
Secondary Criteria: Wyoming Content and Performance Standards
Subjects: Mathematics, Science, Technology Education
Grades: 11, 12, Key Stage 4

Forward Education

Autonomous Electric Vehicles of the Future

Wyoming Content and Performance Standards

Mathematics

Grade 11 - Adopted: 2018

CONTENT STANDARD		Standards for Mathematical Practices
------------------	--	--------------------------------------

BENCHMARK	1	Make sense of problems and persevere in solving them.
BENCHMARK	2	Reason abstractly and quantitatively.
BENCHMARK	3	Construct viable arguments and critique the reasoning of others.
BENCHMARK	4	Model with mathematics.
BENCHMARK	8	Look for and express regularity in repeated reasoning.

CONTENT STANDARD		Algebra
------------------	--	---------

BENCHMARK		Algebra - Creating Equations
GRADE LEVEL EXAMPLE	A.CED.G.	Create equations that describe numbers or relationships.

EXPECTATION	A.CED.G.2.	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
-------------	------------	---

CONTENT STANDARD		Algebra
------------------	--	---------

BENCHMARK		Algebra - Reasoning with Equations and Inequalities
GRADE LEVEL EXAMPLE	A.REI.H.	Understand solving equations as a process of reasoning and explain the reasoning.

EXPECTATION	A.REI.H.1.	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
-------------	------------	---

CONTENT STANDARD		Functions
------------------	--	-----------

BENCHMARK		Functions - Interpreting Functions
GRADE LEVEL EXAMPLE	F.IF.C.	Analyze functions using different representations.

EXPECTATION	F.IF.C.7.	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.
-------------	-----------	---

EXPECTATION	F.IF.C.7A.	Graph linear and quadratic functions and show intercepts, maxima, and minima.
-------------	------------	---

CONTENT STANDARD		Functions
BENCHMARK		Functions - Linear, Quadratic, and Exponential Models
GRADE LEVEL EXAMPLE	F.LE.F.	Construct and compare linear, quadratic, and exponential models and solve problems.
EXPECTATION	F.LE.F.1.	Distinguish between situations that can be modeled with linear functions and with exponential functions.
EXPECTATION	F.LE.F.1A	Verify that linear functions grow by equal differences over equal intervals and that exponential functions grow by equal factors over equal intervals.

CONTENT STANDARD		Geometry
BENCHMARK		Geometry - Expressing Geometric Properties with Equations
GRADE LEVEL EXAMPLE	G.GPE.L	Use coordinates to prove simple geometric theorems algebraically.
EXPECTATION	G.GPE.L.5.	Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).

**Wyoming Content and Performance Standards
Mathematics
Grade 12 - Adopted: 2018**

CONTENT STANDARD		Standards for Mathematical Practices
BENCHMARK	1	Make sense of problems and persevere in solving them.
BENCHMARK	2	Reason abstractly and quantitatively.
BENCHMARK	3	Construct viable arguments and critique the reasoning of others.
BENCHMARK	4	Model with mathematics.
BENCHMARK	8	Look for and express regularity in repeated reasoning.

CONTENT STANDARD		Algebra
BENCHMARK		Algebra - Creating Equations
GRADE LEVEL EXAMPLE	A.CED.G.	Create equations that describe numbers or relationships.
EXPECTATION	A.CED.G.2.	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

CONTENT STANDARD		Algebra
BENCHMARK		Algebra - Reasoning with Equations and Inequalities
GRADE LEVEL EXAMPLE	A.REI.H.	Understand solving equations as a process of reasoning and explain the reasoning.

EXPECTATION	A.REI.H.1.	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
CONTENT STANDARD		Functions
BENCHMARK		Functions - Interpreting Functions
GRADE LEVEL EXAMPLE	F.IF.C.	Analyze functions using different representations.
EXPECTATION	F.IF.C.7.	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

EXPECTATION F.IF.C.7A. Graph linear and quadratic functions and show intercepts, maxima, and minima.

CONTENT STANDARD		Functions
BENCHMARK		Functions - Linear, Quadratic, and Exponential Models
GRADE LEVEL EXAMPLE	F.LE.F.	Construct and compare linear, quadratic, and exponential models and solve problems.
EXPECTATION	F.LE.F.1.	Distinguish between situations that can be modeled with linear functions and with exponential functions.

EXPECTATION F.LE.F.1A. Verify that linear functions grow by equal differences over equal intervals and that exponential functions grow by equal factors over equal intervals.

CONTENT STANDARD		Geometry
BENCHMARK		Geometry - Expressing Geometric Properties with Equations
GRADE LEVEL EXAMPLE	G.GPE.L.	Use coordinates to prove simple geometric theorems algebraically.

EXPECTATION G.GPE.L.5. Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).

Wyoming Content and Performance Standards

Science

Grade 11 - Adopted: 2016

CONTENT STANDARD		PHYSICAL SCIENCE
BENCHMARK	HS-PS1.	Matter and Its Interactions

GRADE LEVEL EXAMPLE HS-PS1-4. Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.

CONTENT STANDARD		PHYSICAL SCIENCE
BENCHMARK	HS-PS3.	Energy

GRADE LEVEL EXAMPLE HS-PS3-3. Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

CONTENT STANDARD		PHYSICAL SCIENCE
BENCHMARK	HS-PS4.	Waves and Their Applications in Technologies for Information Transfer

GRADE LEVEL EXAMPLE HS-PS4-2. Evaluate the advantages and disadvantages of using digital transmission and storage of information.

CONTENT STANDARD		LIFE SCIENCE
BENCHMARK	HS-LS2.	Ecosystems: Interactions, Energy, and Dynamics

GRADE LEVEL EXAMPLE HS-LS2-7. Evaluate and assess impacts on the environment and biodiversity in order to refine or design a solution for detrimental impacts or enhancement for positive impacts.

CONTENT STANDARD		EARTH AND SPACE SCIENCE
BENCHMARK	HS-ESS2.	Earth's Systems

GRADE LEVEL EXAMPLE HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.

CONTENT STANDARD		EARTH AND SPACE SCIENCE
BENCHMARK	HS-ESS3.	Earth and Human Activity

GRADE LEVEL EXAMPLE HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

GRADE LEVEL EXAMPLE HS-ESS3-2. Evaluate competing design solutions for developing, managing, and using energy and mineral resources based on cost-benefit ratios.

GRADE LEVEL EXAMPLE HS-ESS3-3. Use computational tools to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.

GRADE LEVEL EXAMPLE HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

GRADE LEVEL EXAMPLE HS-ESS3-6. Use the results of a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

CONTENT STANDARD		ENGINEERING DESIGN
BENCHMARK	HS-ETS1.	Engineering, Technology, & Applications of Science

GRADE LEVEL EXAMPLE HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

GRADE LEVEL EXAMPLE HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

GRADE LEVEL EXAMPLE	HS-ETS1-3.	Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.
---------------------	------------	--

Grade 11 - Adopted: 2012

CONTENT STANDARD	RST.11-12.	Reading Standards for Literacy in Science and Technical Subjects
BENCHMARK		Key Ideas and Details

GRADE LEVEL EXAMPLE	RST.11-12.2.	Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
---------------------	--------------	---

GRADE LEVEL EXAMPLE	RST.11-12.3.	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
---------------------	--------------	---

CONTENT STANDARD	RST.11-12.	Reading Standards for Literacy in Science and Technical Subjects
BENCHMARK		Craft and Structure

GRADE LEVEL EXAMPLE	RST.11-12.4.	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.
---------------------	--------------	--

GRADE LEVEL EXAMPLE	RST.11-12.5.	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.
---------------------	--------------	---

CONTENT STANDARD	RST.11-12.	Reading Standards for Literacy in Science and Technical Subjects
BENCHMARK		Integration of Knowledge and Ideas

GRADE LEVEL EXAMPLE	RST.11-12.9.	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
---------------------	--------------	---

CONTENT STANDARD	RST.11-12.	Reading Standards for Literacy in Science and Technical Subjects
BENCHMARK		Range of Reading and Level of Text Complexity

GRADE LEVEL EXAMPLE	RST.11-12.10.	By the end of grade 12, read and comprehend science/technical texts in the grades 11-12 text complexity band independently and proficiently.
---------------------	---------------	--

CONTENT STANDARD	WHST.11-12.	Writing Standards for Literacy in Science and Technical Subjects
BENCHMARK		Text Types and Purposes
GRADE LEVEL EXAMPLE	WHST.11-12.2.	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.

EXPECTATION	WHST.11-12.2(d)	Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.
-------------	-----------------	--

CONTENT STANDARD	WHST.11-12.	Writing Standards for Literacy in Science and Technical Subjects
BENCHMARK		Production and Distribution of Writing

GRADE LEVEL EXAMPLE	WHST.11-12.4.	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
---------------------	---------------	--

GRADE LEVEL EXAMPLE	WHST.11-12.6.	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
---------------------	---------------	--

Wyoming Content and Performance Standards

Science

Grade 12 - Adopted: 2016

CONTENT STANDARD		PHYSICAL SCIENCE
BENCHMARK	HS-PS1.	Matter and Its Interactions

GRADE LEVEL EXAMPLE	HS-PS1-4.	Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.
---------------------	-----------	---

CONTENT STANDARD		PHYSICAL SCIENCE
BENCHMARK	HS-PS3.	Energy

GRADE LEVEL EXAMPLE	HS-PS3-3.	Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.
---------------------	-----------	---

CONTENT STANDARD		PHYSICAL SCIENCE
BENCHMARK	HS-PS4.	Waves and Their Applications in Technologies for Information Transfer

GRADE LEVEL EXAMPLE	HS-PS4-2.	Evaluate the advantages and disadvantages of using digital transmission and storage of information.
---------------------	-----------	---

CONTENT STANDARD		LIFE SCIENCE
BENCHMARK	HS-LS2.	Ecosystems: Interactions, Energy, and Dynamics

GRADE LEVEL EXAMPLE	HS-LS2-7.	Evaluate and assess impacts on the environment and biodiversity in order to refine or design a solution for detrimental impacts or enhancement for positive impacts.
---------------------	-----------	--

CONTENT STANDARD		EARTH AND SPACE SCIENCE
BENCHMARK	HS-ESS2.	Earth's Systems

GRADE LEVEL EXAMPLE	HS-ESS2-4.	Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
---------------------	------------	--

CONTENT STANDARD		EARTH AND SPACE SCIENCE
BENCHMARK	HS-ESS3.	Earth and Human Activity

GRADE LEVEL EXAMPLE	HS-ESS3-1.	Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
---------------------	------------	---

GRADE LEVEL EXAMPLE	HS-ESS3-2.	Evaluate competing design solutions for developing, managing, and using energy and mineral resources based on cost-benefit ratios.
GRADE LEVEL EXAMPLE	HS-ESS3-3.	Use computational tools to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.
GRADE LEVEL EXAMPLE	HS-ESS3-4.	Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.
GRADE LEVEL EXAMPLE	HS-ESS3-6.	Use the results of a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

CONTENT STANDARD		ENGINEERING DESIGN
BENCHMARK	HS-ETS1.	Engineering, Technology, & Applications of Science

GRADE LEVEL EXAMPLE	HS-ETS1-1.	Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.
GRADE LEVEL EXAMPLE	HS-ETS1-2.	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
GRADE LEVEL EXAMPLE	HS-ETS1-3.	Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

Grade 12 - Adopted: 2012

CONTENT STANDARD	RST.11-12.	Reading Standards for Literacy in Science and Technical Subjects
BENCHMARK		Key Ideas and Details

GRADE LEVEL EXAMPLE	RST.11-12.2.	Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
GRADE LEVEL EXAMPLE	RST.11-12.3.	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CONTENT STANDARD	RST.11-12.	Reading Standards for Literacy in Science and Technical Subjects
BENCHMARK		Craft and Structure

GRADE LEVEL EXAMPLE	RST.11-12.4.	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.
GRADE LEVEL EXAMPLE	RST.11-12.5.	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.

CONTENT STANDARD	RST.11-12.	Reading Standards for Literacy in Science and Technical Subjects
BENCHMARK		Integration of Knowledge and Ideas

GRADE LEVEL EXAMPLE	RST.11-12.9.	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
---------------------	--------------	---

CONTENT STANDARD	RST.11-12.	Reading Standards for Literacy in Science and Technical Subjects
BENCHMARK		Range of Reading and Level of Text Complexity

GRADE LEVEL EXAMPLE	RST.11-12.10.	By the end of grade 12, read and comprehend science/technical texts in the grades 11-12 text complexity band independently and proficiently.
---------------------	---------------	--

CONTENT STANDARD	WHST.11-12.	Writing Standards for Literacy in Science and Technical Subjects
BENCHMARK		Text Types and Purposes
GRADE LEVEL EXAMPLE	WHST.11-12.2.	Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

EXPECTATION	WHST.11-12.2(d)	Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.
-------------	-----------------	--

CONTENT STANDARD	WHST.11-12.	Writing Standards for Literacy in Science and Technical Subjects
BENCHMARK		Production and Distribution of Writing

GRADE LEVEL EXAMPLE	WHST.11-12.4.	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
---------------------	---------------	--

GRADE LEVEL EXAMPLE	WHST.11-12.6.	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
---------------------	---------------	--

**Wyoming Content and Performance Standards
Technology Education
Grade 11 - Adopted: 2020**

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		Computer Science Practices
GRADE LEVEL EXAMPLE	1	Fostering an Inclusive Computing Culture

EXPECTATION	1.1.	"Include the unique perspectives of others and reflect on one's own perspectives when designing and developing computational products."
-------------	------	---

EXPECTATION	1.2.	Address the needs of diverse end users during the design process to produce artifacts with broad accessibility and usability.
-------------	------	---

EXPECTATION	1.3.	"Employ self- and peer-advocacy to address bias in interactions, product design, and development methods."
-------------	------	--

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		Computer Science Practices

GRADE LEVEL EXAMPLE	3	Recognizing and Defining Computational Problems
----------------------------	----------	--

EXPECTATION 3.2. Decompose complex real-world problems into manageable subproblems that could integrate existing solutions or procedures.

EXPECTATION 3.3. Evaluate whether it is appropriate and feasible to solve a problem computationally.

CONTENT STANDARD		Wyoming Computer Science Content Standards
-------------------------	--	---

BENCHMARK		Computer Science Practices
------------------	--	-----------------------------------

GRADE LEVEL EXAMPLE	4	Developing and Using Abstractions
----------------------------	----------	--

EXPECTATION 4.2. Evaluate existing technological functionalities and incorporate them into new designs.

EXPECTATION 4.3. Create modules and develop points of interaction that can apply to multiple situations and reduce complexity.

CONTENT STANDARD		Wyoming Computer Science Content Standards
-------------------------	--	---

BENCHMARK		Computer Science Practices
------------------	--	-----------------------------------

GRADE LEVEL EXAMPLE	5	Creating Computational Artifacts
----------------------------	----------	---

EXPECTATION 5.1. Plan the development of a computational artifact using an iterative process that includes reflection on and modification of the plan, taking into account key features, time and resource constraints, and user expectations.

EXPECTATION 5.2. Create a computational artifact for practical intent, personal expression, or to address a societal issue.

CONTENT STANDARD		Wyoming Computer Science Content Standards
-------------------------	--	---

BENCHMARK		Computer Science Practices
------------------	--	-----------------------------------

GRADE LEVEL EXAMPLE	6	Testing and Refining Computational Artifact
----------------------------	----------	--

EXPECTATION 6.1. Systematically test computational artifacts by considering all scenarios and using test cases.

CONTENT STANDARD		Wyoming Computer Science Content Standards
-------------------------	--	---

BENCHMARK		HS Computer Science Standards
------------------	--	--------------------------------------

GRADE LEVEL EXAMPLE	AP.A.	Algorithms
----------------------------	--------------	-------------------

EXPECTATION 1. L1.AP.A.0 Create a prototype that uses algorithms (e.g., searching, sorting, finding shortest distance) to provide a possible solution for a real-world problem relevant to the student.

EXPECTATION 2. L1.AP.A.0 Describe how artificial intelligence algorithms drive many software and physical systems.

CONTENT STANDARD		Wyoming Computer Science Content Standards
-------------------------	--	---

BENCHMARK		HS Computer Science Standards
GRADE LEVEL EXAMPLE	AP.M.	Modularity

EXPECTATION L2.AP.M.01. Construct solutions to problems using student-created components, such as procedures, modules, and/or objects.

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		HS Computer Science Standards
GRADE LEVEL EXAMPLE	AP.PD.	Program Development

EXPECTATION L1.AP.PD.01. Plan and develop programs by analyzing a problem and/or process, developing and documenting a solution, testing outcomes, and adapting the program for a variety of users.

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		HS Computer Science Standards
GRADE LEVEL EXAMPLE	IC.C.	Culture

EXPECTATION L1.IC.C.02. Test and refine computational artifacts to reduce bias and equity deficits.

EXPECTATION L1.IC.C.03. Demonstrate how a given algorithm applies to problems across disciplines.

**Wyoming Content and Performance Standards
Technology Education
Grade 12 - Adopted: 2020**

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		Computer Science Practices
GRADE LEVEL EXAMPLE	1	Fostering an Inclusive Computing Culture

EXPECTATION 1.1. "Include the unique perspectives of others and reflect on one's own perspectives when designing and developing computational products."

EXPECTATION 1.2. Address the needs of diverse end users during the design process to produce artifacts with broad accessibility and usability.

EXPECTATION 1.3. "Employ self- and peer-advocacy to address bias in interactions, product design, and development methods."

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		Computer Science Practices
GRADE LEVEL EXAMPLE	3	Recognizing and Defining Computational Problems

EXPECTATION	3.2.	Decompose complex real-world problems into manageable subproblems that could integrate existing solutions or procedures.
-------------	------	--

EXPECTATION	3.3.	Evaluate whether it is appropriate and feasible to solve a problem computationally.
-------------	------	---

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		Computer Science Practices
GRADE LEVEL EXAMPLE	4	Developing and Using Abstractions

EXPECTATION	4.2.	Evaluate existing technological functionalities and incorporate them into new designs.
-------------	------	--

EXPECTATION	4.3.	Create modules and develop points of interaction that can apply to multiple situations and reduce complexity.
-------------	------	---

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		Computer Science Practices
GRADE LEVEL EXAMPLE	5	Creating Computational Artifacts

EXPECTATION	5.1.	Plan the development of a computational artifact using an iterative process that includes reflection on and modification of the plan, taking into account key features, time and resource constraints, and user expectations.
-------------	------	---

EXPECTATION	5.2.	Create a computational artifact for practical intent, personal expression, or to address a societal issue.
-------------	------	--

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		Computer Science Practices
GRADE LEVEL EXAMPLE	6	Testing and Refining Computational Artifact

EXPECTATION	6.1.	Systematically test computational artifacts by considering all scenarios and using test cases.
-------------	------	--

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		HS Computer Science Standards
GRADE LEVEL EXAMPLE	AP.A.	Algorithms

EXPECTATION	L1.AP.A.0 1.	Create a prototype that uses algorithms (e.g., searching, sorting, finding shortest distance) to provide a possible solution for a real-world problem relevant to the student.
-------------	-----------------	--

EXPECTATION	L1.AP.A.0 2.	Describe how artificial intelligence algorithms drive many software and physical systems.
-------------	-----------------	---

CONTENT STANDARD		Wyoming Computer Science Content Standards
BENCHMARK		HS Computer Science Standards

GRADE LEVEL EXAMPLE	AP.M.	Modularity
----------------------------	--------------	-------------------

EXPECTATION L2.AP.M.01. Construct solutions to problems using student-created components, such as procedures, modules, and/or objects.

CONTENT STANDARD		Wyoming Computer Science Content Standards
-------------------------	--	---

BENCHMARK		HS Computer Science Standards
------------------	--	--------------------------------------

GRADE LEVEL EXAMPLE	AP.PD.	Program Development
----------------------------	---------------	----------------------------

EXPECTATION L1.AP.PD.01. Plan and develop programs by analyzing a problem and/or process, developing and documenting a solution, testing outcomes, and adapting the program for a variety of users.

CONTENT STANDARD		Wyoming Computer Science Content Standards
-------------------------	--	---

BENCHMARK		HS Computer Science Standards
------------------	--	--------------------------------------

GRADE LEVEL EXAMPLE	IC.C.	Culture
----------------------------	--------------	----------------

EXPECTATION L1.IC.C.02. Test and refine computational artifacts to reduce bias and equity deficits.

EXPECTATION L1.IC.C.03. Demonstrate how a given algorithm applies to problems across disciplines.