

21st Century Item Writing for WESTEST 2 - Science

Check Here	Area	Use on Test
		The focusing lens of the items should be based upon the interpretation of the skill sets of the CSOs. (It is easy to miss the intended skill set of the CSO. An example: The CSO skill set is to interpret relationships, but the item provided was actually measuring the student's ability to compare graphs.)
153	Test Format	Set the stage with high interest engaging topics; use graphic organizers, Venn diagrams, graphs, etc. that can be completed in the test booklet. ~Students put information into graphs or data collection charts
142	Rigor	Items skill sets that MUST match the rigor of the CSO skill sets. ~The CSO states to interpret, examine or demonstrate, etc. ...your questions drive this type of thinking
137	Language of 21st Century Skills	Use the types of skill sets found in the CSOs that students are expected to be able to use and apply. (Use PISA items as a guide for items to address extrapolation and application.) ~Question skill sets match those of the CSOs
165	21st Century Tools	Use Information, Media and ICT (Information, Communication & Technology) Literacy Skills to develop item stems, answers, and scenarios. For example, you can build your items using <ul style="list-style-type: none"> ▪ appropriate technology tools/scenarios ▪ information and communication technologies ▪ examples of ways to access, manage, integrate and evaluate information ▪ scenarios that might include audio, video, and other media and multimedia and digital tools ▪ item stems, answers, and scenarios that might include electronic probes, iPods, electronic white boards, etc. ▪ snap shots, graphics, and resources with access to online learning communities and resources ~Picture of data collected on computer screen, flat screen TV, GPS, text message, IM, probe, online ad, newspaper ad, etc.
94	Real World Application	Frame language in item to real life experiences and applications in the 21 st Century. Use examples, applications and settings from students' lives, communities and modern workplaces to frame items ~While walking home, John received a text message stating a Category V hurricane was approaching...
106	Critical Thinking	The clear, precise and purposeful use of higher order thinking skills and strategies to include extrapolation and application. ~Questions drive processing information and facilitate drawing conclusion
97	Problem Solving	Identify a problem, evaluate options, propose solutions and evaluate results. Problem solving items built upon the context of the grade level CSOs that align to thinking skills in the objectives. ~Using the scientific method to solve a problem

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		<p>When writing items the areas below are to be used to provide context, formats and scenarios, when appropriate, to the specific content of the CSOs. Please note, Policy 2520.14 will not be part of an alignment study, but certainly these are rich tools and skills to utilize in the manner defined above.</p>
47	Information and Media Literacy	<p>How modern media combines sound, image and text to communicate meaning. <i>~Student went online to find information about a recent event...is the source and information reliable...</i></p>
36	Visual Literacy	<p>Use images to communicate a message. <i>~A diagram of the water cycle</i></p>
42	Communication Skills	<p>Convey messages across cultures and media. <i>~Will students misinterpret what you wrote, using skill sets across international boundaries</i></p>
141	Systems Thinking	<p>Recognize patterns. Understand how parts interact and how they form a whole system. <i>~Picking up trends in data</i></p>
24	Adaptability	<p>Ability to adapt to changing situations and environments while keeping in mind time constraints, budgets, etc. <i>~Questions make students analyze the changing environment or conditions of fires</i></p>
19	Ethical Behavior	<p>Act with integrity. <i>~Use of skepticism in reviewing data...where did your data come from...is it accurate...social accountability</i></p>
10	Social/Personal Accountability	<p>Accepting responsibility for one's own behavior. Understanding common good. <i>~Students being environmentally friendly</i></p>
35	Project Planning and Development	<p>Organize work (projects) and achieve goals. <i>~Willis has to devise a plan to test the river for pollutants</i></p>
57	Global Awareness	<p>Learning from and working with people from diverse cultures, religions and lifestyles. To include "green" environmental issues <i>~Drilling for oil in the Middle East affects environmental decisions in the United States...international issues tied to West Virginia...coal</i></p>
0	Financial, Economic and Business Literacy	<p>Understanding business, economics and finance (personal too). <i>~Relate the development of science to the economics of the U.S....computers, probes, medicine...how have these managed to make us more efficient and cost effective</i></p>
0	Civic Literacy	<p>Understanding one's role in government and how government affects our lives. <i>~Legislative policies influence how science operates</i></p>

Check Here	Area	Use on Test
1	Health and Wellness Literacy	Understanding healthy lifestyles and their benefits. <i>~Questions about healthy living when discussing the human body CSOs or creation of exercise programs and analyzing the data</i>