



OFFICE OF SUPERINTENDENT OF PUBLIC INSTRUCTION  
Division of Assessment and Student Information

# Defining the Domain: Washington State



# Overall Claim

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The student effectively applies science and engineering practices and crosscutting concepts to explain phenomena and design solutions to problems in the natural and the designed world.



# Sub-Claims/Reporting Strands

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- The student understands physical systems as demonstrated through the application of the Science and Engineering practices and the Crosscutting Concepts.
- The student understands Earth and space systems as demonstrated through the application of the Science and Engineering practices and the Crosscutting Concepts.
- The student understands living systems as demonstrated through the application of the Science and Engineering practices and the Crosscutting Concepts.



# Contributing thinking

- Multidimensional standards needed multidimensional subscores
- Disentangling the dimensions for reporting is counter to item cluster development expectations
- Anticipated that subscores for each dimension would not be differentiated sufficiently



# Test Structure

Grades 5 & 8	Common for all Students	Stand Alone Items	Total	Field Test	
	Item Clusters 1 through 5	8 to 13 items		Item Cluster 6	Stand Alone Items
Points	20-30	12-18	40	4-6	2-3
Time (Minutes)	60	15	75	12	3

Grade High School	Common for all Students	Stand Alone Items	Total	Field Test	
	Item Clusters 1 through 6	8 to 13 items		Item Cluster 7	Stand Alone Items
Points	24-42	12-18	50	4-7	2-3
Time (Minutes)	90	15	105	15	5



# Coverage Specifications – Grade 5 Example

Dimension	Item Clusters	Stand-Alone Items	Overall
<b>DCI domains</b>	A PE from each DCI domain (ESS, PS, LS, and ETS) must be represented in at least one item cluster.	An additional 2 PEs from each DCI domain (ESS, PS, and LS) must be represented.	Each DCI domain (ESS, PS, and LS) must be represented by at least 7 points.
<b>SEP coverage</b>	A minimum of 3 SEPs	Used to increase SEP coverage to achieve overall expectations.	A minimum of 5 SEPs must be represented.
<b>CCC coverage</b>	A minimum of 2 CCCs	Used to increase CCC coverage to achieve overall expectations.	A minimum of 4 CCCs must be represented.

Note: All 45 PEs in grades 3-5 could be covered in three years with this design.