

## Appendix D: NGSS and CCSS Standards

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### Next Generation Science Standards (NGSS) and Common Core State Standards (CCSS) in SolidWorks Educational Guides

In the Next Generation Science Standards (NGSS)<sup>1</sup>, there are four main standards that apply to the SolidWorks educational guides. Within these, there are specific performance expectations that are covered within the guides. In the Common Core State Standards (CCSS)<sup>2</sup>, there are four standards that can be found in the SolidWorks guides. These standards can be found in different grade levels in which the complexity of each increase with the grade. By increasing the depth of the topics covered, the SolidWorks guides can also be applied to those higher grade levels. Only one grade level set is shown for simplicity.

SolidWorks has been used to help solve real world problems, some of which can be seen here: [www.Borntodesign.tv](http://www.Borntodesign.tv). The following table shows the different standards that apply to each of the SolidWorks guides.

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1 NGSS Lead States. 2013. Next Generation Science Standards: For States, By States. Washington, D.C. The National Academies Press. <http://www.nextgenscience.org/>

2 National Governors Association for Best Practices, Council of Chief State School Officers. *Common Core State Standards*. National Governors Association for Best Practices, Council of Chief State School Officers, Washington, D.C. 2010. <http://www.corestandards.org/>

	Next Generation Science Standards									Common Core State Standards			
	Engineering Design MS-ETS1-1	Engineering Design MS-ETS1-2	Engineering Design MS-ETS1-3	Engineering Design MS-ETS1-4	Engineering Design HS-ETS1-2	Engineering Design HS-ETS1-4	Human Sustainability HS-ESS3-2	Human Sustainability HS-ESS3-4	Energy MS-PS3-3	ELA-Literacy.RST.6-8.3	ELA-Literacy.RST.6-8.4	Math Content HSN-Q.A.1	Math Content HSG-MG.A.1
Guide	Lesson Numbers									Lesson Numbers			
Bridge Design Project			3, 4		1-7	3, 4				1-9	1-9	1-9	
CAD Student Guide	2, 3, 10	3, 5, 8	3	8, 13	9	12, 13		12		1-12	1-12	3, 8, 9, 10, 13	9, 10
CO <sub>2</sub> Car		3, 4, 5	3, 4, 5	3, 4, 5		3, 4, 5							
Flow Simulation				1						1	1	1	
Motion Simulation										1	1		
Mountainboard										1-9	1-9		
SAE Project	2-7			5-7	2-7	5-7				2-7	2-7	5-7	
Sustainability Brake Assembly			1, 2			1, 2	1, 2	1, 2		1, 2		1, 2	
Sustainable Design - Travel Mug	1, 2	1					1	1	2	1, 2	1, 2		
Windmill Project		1		1			1	1		1, 2	1, 2	1	