

Wee Engineer® and EiE® for Kindergarten Alignment to Science Georgia Standards of Excellence, 2016



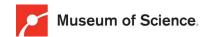






Wee Engineer – One Unit, Four Challenges

Engineering Challenge	Science Concept Connections	Science Georgia Standards of Excellence, Kindergarten
Noisemakers	forcessoundproperties of materials	SKP1.a SKP1.b
Fans	forcesproperties of materials	SKP1.a SKP1.b SKP2.a
Wrecking Balls	weightforce and motionaction and reaction	SKP1.a SKP1.b SKP2.a SKP2.b
Rafts	sinking and floating	SKP1.a SKP1.b SKP1.c



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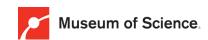






EiE for Kindergarten – Two Units

Unit Science Concept Connections		Science Georgia Standards of Excellence, Kindergarten
Raise the Roof: Designing Shelters	light and shadowthe warming effect of the Sunanimals and animal needs	SKE1.a SKE1.b SKP1.a SKP1.b
Here's the Scoop: Designing Trash Collectors	 the basic needs of living things animal habitats and ecosystems human impact on the environment recycling and environmental stewardship 	SKP1.a SKP1.b SKP1.c

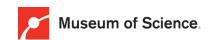




Units with Life Science Topics

Unit	Engineering and		Science	e Georgia Sta	ndards of Exc	cellence	
Offic	Science Fields	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
The Best of Bugs:	Agricultural Engineering	SKP1.a SKL2.a		S2P1.a S2L1.a			
Designing Hand Pollinators	Insects and Plants	SKL2.b		S2L1.a S2L1.c			
Just Passing Through:	Bioengineering		S1L1.b				
Designing Model Membranes	Needs of Organisms		S1L1.c				
No Bones About It:	Biomedical Engineering						
Designing Knee Braces *	Skeletal and Muscular Systems						
A Slick Solution: Cleaning an Oil Spill	Environmental Engineering	SKE2.a		S2E3	S3E1.b	S4L1.a S4L1.b	
Also listed with Earth Science	Ecosystems	SKE2.c		S2P1.a	S3L2.a S3L2.b	S4L1.c S4L1.d	
Thinking Inside the Box:	Package Engineering		S1L1.a S1L1.b				
Designing Plant Packages	Plants		S1L1.c				

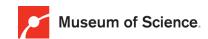
^{*} Designing Knee Braces aligns with the seventh grade Georgia standard S7L2.c.





Units with Earth Science Topics

Unit	Engineering and		Science	Georgia Sta	ndards of Exc	cellence	
Onit	Science Fields	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Catching the Wind: Designing Windmills	Mechanical Engineering Weather	SKP2.a		S2P2.a S2P2.c		S4P3.a	
Also listed with Physical Science	Consen En ales a seles a				0004		
Now You're Cooking: Designing Solar Ovens Also listed with Physical Science	Green Engineering Energy and Energy Resources	SKP1.a		S2E3 S2P1.a	S3P1.a S3P1.b S3P1.c S3L2.b		
A Slick Solution: Cleaning an Oil Spill Also listed with Life Science	Environmental Engineering Ecosystems	SKE2.a SKE2.c		S2E3 S2P1.a	S3E1.b S3L2.a S3L2.b	S4L1.a S4L1.b S4L1.c S4L1.d	
Solid as a Rock: Replicating an Artifact	Materials Engineering Rocks and Minerals	SKE2.a SKE2.b SKP1.a		S2P1.a	S3E1.a	5,2,13	
A Stick in the Mud: Evaluating a Landscape	Geotechnical Engineering Landforms and Maps	SKE2.a SKE2.c		S2E3	S3E1.b		S5E1.a S5E1.c
A Sticky Situation: Designing Walls Also listed with Physical Science	Materials Engineering Earth Materials	SKE2.a SKE2.c SKP1.a		S2P1.a	S3E1.b		S5P1.a
Water, Water Everywhere: Designing Water Filters	Environmental Engineering Water	SKE2.a SKP1.a		S2E3 S2P1.a	S3L2.a S3L2.b	S4E3	





Units with Physical Science Topics

Unit	Engineering and		Science	Georgia Sta	ndards of Exc	cellence		
Onit	Science Fields	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	
An Alarming Idea: Designing	Electrical Engineering		S1P1.e			S4P2.b	S5P2.b	
Alarm Circuits	Electricity		011 1.0			O+1 2.0	S5P2.c	
The Attraction Is Obvious:	Transportation Engineering		S1P2.a			S4P3.a	S5P3.b	
Designing Maglev Systems	Magnets		S1P2.b			54P3.a	33P3.D	
Catching the Wind: Designing Windmills	Mechanical Engineering			S2P2.a				
	Weather	SKP2.a		S2P2.a S2P2.c		S4P3.a		
Also listed with Earth Science	0							
To Get to the Other Side:	Civil Engineering	SKP1.a SKP2.a	S2P1.a	S2P1.a		S4P3.a		
Designing Bridges	Forces	SKF2.a						
Lighten Up: Designing	Optical Engineering		S1P1.a S1P1.b	S2P1.a		S4P1.a		
Lighting Systems	Light		S1P1.b S	32F1.a		S4P1.b		
A Long Way Down:	Aerospace Engineering	SKE2.a		S2P1.a		S4E1.d		
Designing Parachutes	Solar System	SKP1.a SKP2.a		S2P2.b S2P2.c		S4P3.a S4P3.b		
Marvelous Machines:	Industrial Engineering	SKP2.a		S2P2.a		S4P3.a		
Making Work Easier	Simple Machines	SKP2.b		S2P2.b S2P2.c		S4P3.c		
Now You're Cooking:	Green Engineering			0050	S3P1.a			
Designing Solar Ovens		SKP1.a		S2E3 S2P1.a	S3P1.b S3P1.c			
Also listed with Earth Science	Energy				S3L2.b			

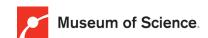
Physical Science continues on next page.





Units with Physical Science Topics, continued

Unit	Engineering and		Science Georgia Standards of Excellence					
Oillt	Science Fields	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	
Sounds Like Fun: Seeing Animal Sounds	Acoustical Engineering Sound	SKP1.a	S1P1.d			S4P2.a		
A Sticky Situation: Designing Walls Also listed with Earth Science	Materials Engineering Earth Materials	SKE2.a SKE2.c SKP1.a		S2P1.a	S3E1.b		S5P1.a	
Taking the Plunge: Designing Submersibles Also listed with Earth Science	Ocean Engineering Sinking and Floating	SKE2.a SKP1.c		S2P1.a				
A Work in Process: Improving a Play Dough Process	Chemical Engineering Process Engineering Solids and Liquids						S5P1.c	



EiE[®] Engineering Essentials™ Museum of Science. Alignment to Science Georgia Standards of Excellence, 2016



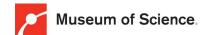
Unit Title	Engineering Field	Suggested	Sc	cience Georg	ia Standard	s of Excellen	ce
Offic Fiction	Linginieering i leid	Grade(s)	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Designing Lighting Systems	Optical Engineering	1, 4	S1P1.a S1P1.b S1P1.c			S4P1.a S4P1.b	
Designing Hand Pollinators	Agricultural Engineering	2		S2P1.a S2L1.a S2L1.c			
Designing Solar Ovens	Green Engineering	3			S3P1.a S3P1.b S3P1.c S3L2.b		
Cleaning an Oil Spill	Environmental Engineering	4				S4L1.a S4L1.b S4L1.c S4L1.d	
Designing Maglev Systems	Transportation Engineering	5	S1P2.a S1P2.b				S5P3.b



EiE[®] Computer Science Essentials™ Alignment to Georgia Standards of Excellence – Computer Science



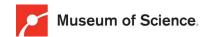
Unit	Concept /	Suggested	Georgia Standards of Excelle		lence – Computer	Science
Onit	Tool Type	Grades	Grade	Grades K–2		es 3–5
Programming Robots	Computing Systems Robotics	K-2	CSS.IDC.K-2.4.5 CSS.CT.K-2.5 CSS.GC.K-2.7.4	CSS.DA.K-2.9.3 CSS.DA.K-2.9.10	CSS.GC.3-5.7.3	
Creating Animations	Algorithms & Programming Visual Programming	K-2	CSS.KC.K-2.2.1 CSS.IDC.K-2.4.5 CSS.CT.K-2.5 CSS.GC.K-2.7.4	CSS.DA.K-2.9.3 CSS.DA.K-2.9.8 CSS.DA.K-2.9.10	CSS.EL.3-5.1.1 CSS.EL.3-5.1.2 CSS.EL.3-5.1.3 CSS.EL.3-5.1.4 CSS.IDC.3-5.4.1 CSS.IDC.3-5.4.2	CSS.CT.3-5.5.1 CSS.CT.3-5.5.2 CSS.CT.3-5.5.3 CSS.CC.3-5.6.1 CSS.CC.3-5.6.2 CSS.GC.3-5.7.3
Building Automated Systems	Computing Systems Visual Computing	2–5	CSS.KC.K-2.2.1 CSS.KC.K-2.2.2 CSS.IDC.K-2.4.5 CSS.CT.K-2.5	CSS.GC.K-2.7.4 CSS.DA.K-2.9.3 CSS.DA.K-2.9.8 CSS.DA.K-2.9.10	CSS.EL.3-5.1.1 CSS.EL.3-5.1.2 CSS.EL.3-5.1.3 CSS.EL.3-5.1.4 CSS.IDC.3-5.4.1 CSS.IDC.3-5.4.2 CSS.CT.3-5.5.1	CSS.CT.3-5.5.2 CSS.CT.3-5.5.3 CSS.CC.3-5.6.1 CSS.CC.3-5.6.2 CSS.GC.3-5.7.3 CSS.GC.3-5.7.5
Designing Computer Games	Impacts of Computing Visual Programming	3–5	CSS.KC.K-2.2.1 CSS.KC.K-2.2.2 CSS.IDC.K-2.4.2 CSS.IDC.K-2.4.5 CSS.CT.K-2.5	CSS.CC.K-2.6.4 CSS.GC.K-2.7.4 CSS.DA.K-2.9.3 CSS.DA.K-2.9.10	CSS.EL.3-5.1.1 CSS.EL.3-5.1.2 CSS.EL.3-5.1.3 CSS.EL.3-5.1.4 CSS.IDC.3-5.4 CSS.CT.3-5.5.1 CSS.CT.3-5.5.2	CSS.CT.3-5.5.3 CSS.CT.3-5.5.4 CSS.CC.3-5.6.1 CSS.CC.3-5.6.2 CSS.GC.3-5.7.3 CSS.GC.3-5.7.5
Analyzing Digital Images	Data & Analysis Visual Programming	3–5	CSS.KC.K-2.2.1 CSS.KC.K-2.2.2 CSS.IDC.K-2.4.2 CSS.IDC.K-2.4.5 CSS.CT.K-2.5	CSS.CC.K-2.6.4 CSS.GC.K-2.7.4 CSS.DA.K-2.9.3 CSS.DA.K-2.9.10	CSS.EL.3-5.1.1 CSS.EL.3-5.1.2 CSS.EL.3-5.1.3 CSS.EL.3-5.1.4 CSS.IDC.3-5.4 CSS.CT.3-5.5.1 CSS.CT.3-5.5.2	CSS.CT.3-5.5.3 CSS.CT.3-5.5.4 CSS.CC.3-5.6.1 CSS.CC.3-5.6.2 CSS.GC.3-5.7.3 CSS.GC.3-5.7.5



EiE® Engineering Adventures Alignment to Science Georgia Standards of Excellence, 2016



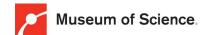
Unit	Engineering Fields and	Science	Georgia Standards of	Excellence
O THIC	Science Connections	Grade 3	Grade 4	Grade 5
Bubble Bonanza: Engineering Bubble Wands	Materials Engineering Matter and Its Interactions			
Go Green: Engineering Recycled Racers	Green Engineering Energy, Forces		S4P3.a S4P3.b S4P3.c	
In Good Hands: Engineering Space Gloves	Materials Engineering Properties of Materials, Energy Transfer	S3P1.a S3P1.c		
Liftoff: Engineering Rockets and Rovers	Aerospace Engineering Forces and Interactions		S4E1.a S4P3.a S4P3.b	
Light Up the Night: An Electrical Engineering Challenge	Electrical Engineering Electric Circuits, Light		S4P1.a S4P1.b S4P1.c S4P2.b	S5P2.b S5P2.c
Music to My Ears: An Acoustical Engineering Challenge	Acoustical Engineering Sound		S4P2.a S4P2.b	



EiE® Engineering Adventures Alignment to Science Georgia Standards of Excellence, 2016



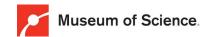
Unit	Engineering Fields and	Science	Science Georgia Standards of Excellence				
Offit	Science Connections	Grade 3	Grade 4	Grade 5			
The Sky's the Limit: Engineering Flying Technologies	Aeronautical Engineering Forces and Interactions		S4P3.a S4P3.b				
Shake Things Up: Engineering Earthquake-Resistant Buildings	Earthquake Engineering Earthquakes		S4P3.a S4P3.b	S5E1.c			
A Slippery Slope: Engineering an Avalanche Protection System	Avalanche Engineering Forces and Interactions		S4P3.b	S5E1.c			
Hop to It: Safe Removal of Invasive Species	Mechanical Engineering Environmental Science	S3L1.b S3L1.c	S4L1.c S4L1.d				
To the Rescue: Engineering Aid Drop Packages	Package Engineering Energy, Forces		S4P3.a S4P3.b				



EiE® Engineering Everywhere Alignment to Science Georgia Standards of Excellence, 2016



Unit	Engineering Field	Science Topics	Science G	eorgia Standards	of Excellence
		•	Grade 6	Grade 7	Grade 8
Don't Runoff: Engineering an Urban Landscape	Environmental Engineering	Natural Resources Earth and Human Activity	S6E3.a S6E3.b S6E6.b		
Food for Thought: Engineering Ice Cream	Process Engineering	Matter Energy Transfer			S8P1.a S8P1.d
Go Fish: Engineering Prosthetic Tails	Biomechanical Engineering	Structures and Function in Animals		S7L2.c	
Growing Up: Engineering Vertical Farms	Agricultural Engineering	Light Photosynthesis Natural Resources	S6E2.c S6E3.b S6E6.a S6E6.b	S7L4.b	
It's in the Bag: Engineering Bioinspired Gear	Materials Engineering Bioinspired Engineering	Structures and Function in Animals		S7L1.a S7L5.b	
Outbreak Alert!: Engineering a Pandemic Response	Biomedical Engineering	Cells, Viruses Public Health		S7L1.a S7L1.b S7L3.a S7L3.b S7L5.a S7L5.b	
Testing the Waters: Engineering a Water Reuse Process	Process Engineering Water Resource Engineering	Natural Resources	S6E6.a S6E6.b	S7L4.c	



EiE® Engineering Everywhere Alignment to Science Georgia Standards of Excellence, 2016



Unit	Engineering Field	Science Topics	Science G	eorgia Standards	of Excellence
	J J	•	Grade 6	Grade 7	Grade 8
Worlds Apart: Engineering Remote Sensing Devices	Remote Sensing Engineering	Light Solar System			S8P4.a S8P4.b S8P4.c S8P4.d S8P4.g
Plants to Plastics: Engineering Bioplastics	Chemical Engineering	Properties of Matter Chemical Reactions			S8P1.a S8P1.c
It's About Time: Engineering Timers	Mechanical Engineering	Physical Science			S8P3.a
Put a Lid on It: Engineering Safety Helmets	Biomechanical Engineering	Forces and Motion Nervous System		S7L2.c	S8P2.a S8P2.b S8P3.a S8P3.b
Here Comes the Sun: Engineering Insulated Homes	Green Engineering	Thermal Energy Transfer Properties of Matter Natural Resources Earth and Human Activity	S6E2.c S6E4.b		