Curriculum

Objective Number	NGSS Grades 3-5 ● = Fully covered ◐ = Partially covered	Simple Machines											
		Gears			Wheels and Axles			Levers			Pulleys		
		1. Principle Models: Gears	2. Main Activity: Merry-Go-Round	3. Problem-Solving Activity: Popcorn Cart	1. Principle Models: Wheels and Axles	2. Main Activity: Go-Cart	3. Problem-Solving Activity: Wheelbarrow	1. Principle Models: Levers	2. Main Activity: Catapult	3. Problem-Solving Activity: Railroad Crossing Gate	1. Principle Models: Pulleys	2. Main Activity: Crazy Floors	3. Problem-Solving Activity: Crane
Disciplinary Core Ideas: Physical Science													
1	MS-PS2 Motion and Stability: Forces and Interactions	◐	●	●	●	●	●	●	●	◐	●	●	●
Crosscutting Concepts													
1	Patterns	◐										◐	
2	Cause and effect: Mechanism and explanation	●	●	◐		●	◐	●	●	●	●	●	●
3	Scale, proportion, and quantity	●			●								
4	Systems and system models		◐	●	◐	●	◐		●	●	◐	●	◐
5	Energy and matter: Flows, cycles, and conservation												
6	Structure and Function			●	◐	◐	●		●	◐		◐	●
7	Stability and change	◐	●	●	●	●	●	●	●	◐		◐	●
Science and Engineering Practices													
1	Asking questions and Defining Problems	●	●	●	●	●	●	●	●	●	●	●	●
2	Developing and using models	●	●	●	●	●	●	●	●	●	●	●	●
3	Planning and carrying out investigations	●	●	●	●	●	●	●	●	●	●	●	●
4	Analyzing and interpreting data	●	●	●	●	●	●	●	●	●	●	●	●
5	Using mathematics, Informational and Computer Technology, and computational thinking	◐	◐	◐	◐	●	◐		●		◐		
6	Constructing explanations and designing solutions	●	●	●	●	●	●	●	●	●	●	●	●
7	Engaging in argument from evidence	◐	●	●	◐	●	●	◐	●	●	◐	●	●
8	Obtaining, evaluating, and communicating information	●	●	●	●	●	●	●	●	●	●	●	●

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Mathematical Practice													
MP1	Make sense of problems and persevere in solving them.	◐	●	●	◐	●	●	◐	●	●	◐	●	●
MP2	Reason abstractly and quantitatively.			●		●	●		●	●			◐
MP3	Construct viable arguments and critique the reasoning of others.		●	●		◐	◐		●	●		●	●
MP4	Model with mathematics.	●			●	●			●				
MP5	Use appropriate tools strategically.	●	●	●	●	●	◐	●	●	●	●	●	●
MP6	Attend to precision.	●	●	●	●	●	●	●	●	●	●	●	●
MP7	Look for and make use of structure.		●	●	◐	●	●	◐	●	●	◐	●	●
MP8	Look for and express regularity in repeated reasoning.	◐		◐		●			●			◐	
Measurement & Data													
3.MD.B.4	Generate measurement data by measuring lengths					●	●		●				
4.MD.A.2	Use the four operations to solve word problems involving distance.					◐	◐		◐				
Writing Standards													
W.3.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	●	●		●	●		●	●		●	●	
W.3.7	Conduct short research projects that build knowledge about a topic.			●			●			●			●
W.3.8	Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.			◐			◐			◐			◐
W.4.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	●	●		●	●		●	●		●	●	
W.4.7	Conduct short research projects that build knowledge through investigation of different aspects of a topic.			●			●			●			●
W.4.8	Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.			◐			◐			◐			◐
W.5.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	●	●		●	●		●	●		●	●	
W.5.7	Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.			●			●			●			●
W.5.8	Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.			◐			◐			◐			◐

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Speaking and Listening													
SL.3.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.	●	●	●	●	●	●	●	●	●	●	●	●
SL.3.3	Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐
SL.3.4	Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐
SL.4.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.	●	●	●	●	●	●	●	●	●	●	●	●
SL.4.3	Identify the reasons and evidence a speaker provides to support particular points.	●	●	●	●	●	●	●	●	●	●	●	●
SL.4.4	Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.		◐	◐		◐	◐		◐	◐		◐	◐
SL.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.	●	●	●	●	●	●	●	●	●	●	●	●
SL.5.3	Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.		◐	◐		◐	◐		◐	◐		◐	◐
SL.5.4	Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.		◐	●		◐	●		◐	●		◐	●
SL.5.5	Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.			◐			◐			◐			◐