Grade: 8 (Pre-Intermediate)

Subject: Physics School Year: 2018-2019

Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
https://scien	eworld.	scholastic.co	m/pages/topics	e/images/newto /physics.htm nd-motion-asses		 Describe and identify variables that change an object's speed, directions and both, so as forces that cause the change in motion; Explain and analyse graphs on Motion in terms of frames reference depicting motion and future motion; Create a graph devised from data of moving objects and their interactions including: position-/velocity-time graphs. Analyze data and Produce conclusions from Laboratory Experiment And/or, perform skills related to: Acquisitive (Listening, Inquiring, Observing, Reviewing, Contrasting, Searching), Organizational (Recording, Evaluating, 	 Worksheets Video Analysis Group Presentations (Posters, PPT, Video, etc) Collaborative Discussions Case- Analysis/Problem Solving Graphic Organizers Research Paper Question- Answering p.17- 20 (set questions/lesson) Experiments #s 1- 2 (Pre-/Post- discussions) Think-Pair Share: p. 25, #w 1-3 (last day) 	 ➤ Weekly/Monthly Quizzes (To Be Announced) ➤ Pre-Diagnostic Test ➤ Activity ¹ ➤ Activity ² ➤ Activity³
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Grade: 8 (Pre-Intermediate) Subject: Physics School Year: 2018-2019

Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
	4	PS.5.8A	Motion at	Motion	Acceleration	 Use data to recognize how a change in force 	WorksheetsVideo Analysis	> Weekly / Monthly
			the Macroscopi c level		Slowing Things Down	(greater/less) might affect the position, direction of motion, or speed of an object, e.g.	Presentations (Posters, PPT, Video, etc)	Quizzes Activity ⁴ Activity ⁵ Activity ⁶
					Stopping a Car	ramps and balls);	Collaborative Discussions	➤ Activity ⁷
		PS.6.8A	Forces Affecting Motion		Newton's Laws of Motion	Inquire and describe how the acceleration of a body is dependent on its mass and the net applied	Case- Analysis/Problem SolvingGraphic	
					Friction	force (Newton's Second Law);	Organizers Research Paper	
					Gravity, Falling and Air Resistance	➤ Describe, identify and Illustrate Newton's laws of Motion: qualitative and quantitatively drawing vector examples.	 Question- Answering pp. 21- 24 (set questions/lesson) Experiments #s 3 to 5 (Pre-/Post- discussions) Think-Pair Share: 	
September						➤ Demonstrate that an object in motion that is unaffected by a force will continue to move at constant speed and in a straight line (Newton's 1st Law)	p. 17 #s 4-6 (last day)	
						> Analyze data and		
tps://www.	doe.k12. ernrese	de.us/Page/s	550 edia.org/ubiso	ience/images/	newton summative	Produce conclusions pdfrom Laboratory		
tps://sciend	eworld.	cholastic.co	m/pages/topics	/physics.html php?title=laws		Experiment		
riculum M	apping					 And/or, perform skills related to: Acquisitive 		Page 2 of 18

Grade: 8 (Pre-Intermediate) Subject: Physics School Year: 2018-2019

Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
	4	PS.5.8A	Forces Affecting Motion	Forces	Forces	Use data to recognize how a change in force (greater/less) might affect the position,	WorksheetsVideo AnalysisGroupPresentations	 Weekly /Monthly Quizzes Activity 8
Oct.			Wotton		Various Kinds of Forces	direct the position, direction of motion, or speed of an object, e.g. ramps and balls);	(Posters, PPT, Video, etc) Collaborative Discussions	> Activity ⁹
						Inquire & describe how the acceleration of a body is dependent on	Case- Analysis/Proble m Solving	 Activity¹⁰ Activity ¹¹
					Effect of Force on the Motion of	its mass & the net applied force	GraphicOrganizers	Activity
		PS.6.8A			Objects	(Newton's Second Law);	Research PaperQuestion-Answering pp.	> Activity 12
						Describe, identify & Illustrate Newton's laws of Motion:	7-8 (Set Questions/lesso n)	
					Elasticity and	qualitative and quantitatively drawing	Experiments # 6 (Pre-/Post-	
					Springs	vector examples.	discussions) ➤ Think-Pair	
					More about Springs	Demonstrate an object in motion that is unaffected by a force will continue to move at constant speed and in a straight line	Share: p. 15 #s 1-2 (last day)	

⁸ https://study.com/academy/practice/quiz-worksheet-hooke-s-law-the-spring-constant.html

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https://www.khanacademy.org/science/ap-physics-1/ap-work-and-energy/spring-potential-energy-and-hookes-law-ap/e/elastic-potential-energy-ap1

¹⁰ https://www.tes.com/teaching-resource/hooke-s-law-worksheet-with-answers-11551183

¹¹ https://www.tes.com/teaching-resource/hooke-s-law-worksheet-for-gcse-11257378

¹² https://www.rtmsd.org/Page/17804

Grade: 8 (Pre-Intermediate)

Subject: Physics School Year: 2018-2019

Month # of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
					(Newton's 1 st Law)		
					 Discover the effects of forces on springs and communicate findings. 		
					 Analyze data and Produce conclusions from Laboratory Experiment 		
					And/or, perform skills related to: Acquisitive (Listening, Inquiring, Observing, Reviewing, Contrasting, Searching), Organizational (Recording, Demonstrating, Experimenting, Evaluating, Analysing, Comparing), Manipulative (Experimenting & Graphing), and Communicative (Discussing, asking questions, Discussing, Explaining, Reporting).		

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Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
Nov.	4	PS.6.8A	Forces Affecting Motion	Forces	Mass, Weight and Gravity	 Explain the effect of gravity on falling objects (e.g., g= 9.8m/s2, object dropped on earth and on moon); Explain that the force of gravity gets stronger the closer one gets to an object and decreases the further away one gets from it. Distinguish the effect of Gravitational forces Between pairs of objects (i.e., earth and objects). 	Discussions Case- Analysis/Proble m Solving Graphic Organizers Research Paper Question- Answering pp. 9-11 (Set	➤ Weekly/Monthly Quizzes (To Be Announced) ➤ Activity 13 ➤ Activity 14 ➤ Activity 15 ➤ Activity 16
						 objects (i.e., earth and objects on the surface, earth and moon, Earth and sun). Explain that the Earth's Gravitational force pulls any object toward it. Determine the possible Weights on various places (e.g., Earth, 	n) ➤ Experiments # 7	➤ Activity ¹⁶ ➤ Activity ¹⁷ Final Term Exams (To Be Announced)

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¹³ https://quizlet.com/subject/science-test-6th-grade-gravity-motion/

https://betterlesson.com/lesson/638056/mass-versus-weight-travel-to-other-planets

https://www.tes.com/teaching-resource/balanced-forces-worksheet-3000639

¹⁶ https://www.bbc.com/education/guides/zrcmn39/test

¹⁷ https://www.educationquizzes.com/us/middle-school-6th-7th-and-8th-grade/science/

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Subject: Physics School Year: 2018-2019

Mars, and others). Explain the tenets of Balance and Stability, so as Liquid Pressure; analyse the drawing's suggested proportions. Analyze data and Produce conclusions from Laboratory Experiment And/or, perform skills related to: Acquisitive (Listening, Inquiring, Observing, Reviewing, Contrasting, Searching), Organizational (Recording, Demonstrating, Experimenting, Experimenting, Evaluating, Analysing, Comparing), Manipulative (Experimenting & Grophing), and Communicative (Discussing, asking questions, Discussing, Explaining, Reporting).

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Grade: 8 (Pre-Intermediate) **Subject: Physics** School Year: 2018-2019

Month	# of Days	Core Standard	Strand	Topic	Content	Skills Activities Assessments
Dec.	2	PS.3.8B	Forces Affecting Motion	Forces	Pressure in Liquids	 Explain the application of the Pressure's basic formula on various cases; Perform experiments and projects with Worksheets Video Analysis Quizzes (To Be Announced) Presentations (Posters, PPT, Video, etc) Activity¹⁹ Activity²⁰ Activity²¹ Activity²¹
		PS.6.4A			Hydraulic Machines	simple machines to demonstrate the relationship between forces and distance. Illustrate quantitatively Mechanical advantage of Simple machines. Relate the principle of Braking Forces on brake fluids/lubricants. Activity ²² Analysis/Proble m Solving Graphic Organizers Research Paper Question- Answering pp. 13-14 (Set Questions/lesso n) Experiments # 8 (Pre-/Post- discussions) Think-Pair Share: p. 15 #s 6-7
						And/or, perform skills related to: Acquisitive (Listening, Inquiring,

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¹⁸ http://wothtv.com/post/pressure-force-area-worksheet.html

¹⁹ https://www.helpteaching.com/questions/Physics/Grade_6

²⁰ https://www.saddlespace.org/whittakerm/science/cms_page/view/7795367

²¹ https://www.ck12.org/physics/Fluid-Pressure-in-Physics/

http://quizzes.howstuffworks.com/quiz/hydraulic-machine-quiz

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Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
						Observing, Reviewing, Contrasting, Searching), Organizational (Recording, Demonstrating, Experimenting, Evaluating, Analysing, Comparing), Manipulative (Experimenting & Graphing), and Communicative (Discussing, asking questions, Discussing, Explaining, Reporting).		
Jan.	2	PS.4.8A& C	Forms of Energy	Energy, Work & Fuels	Types of Energy Work & Energy Solids, Liquids, Gasses	 Explain that these forms/types of energy have its unique characteristics and application in daily live; Manipulate the Work 	 Worksheets Video Analysis Group Presentations (Posters, PPT,	 Weekly/Monthly Quizzes Pre-Test Activity²³ Activity²⁴ Activity²⁵ Activity²⁶ Activity²⁷
	2	PS.1.4D	Properties of Matter	Solids, Liquids &	Density	formula on given scenarios or cases;	Case- Analysis/Proble	➤ Activity ²⁸

²³ http://sbsciencematters.com/6th/physical-energy/6.1FormsofEnergy.pdf

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²⁴ https://betterlesson.com/lesson/634002/energy-summative-assessment-answering-the-essential-question

²⁵ http://www.physicsclassroom.com/calcpad/energy/problems

²⁶ https://www.thatquiz.org/tq/previewtest?U/A/V/8/E7D41399382136

https://www.havefunteaching.com/resource/science/solid-liquid-gas-worksheet-2/

²⁸ https://www.pinterest.com/pin/313703930265385673/

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Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
	Days	PS.1.8D PS.1.4E PS.1.8E		Gasses	Measuring Density	 Analyse Nutritional Chart/Table Labels on each comestible product; Identify, compare, and sort objects by similar or different physical properties (e.g., size, shape, color, texture, smell, weight). Use the logic, scientific inquiry and formula (Density = Mass / Volume) to measure the required component of an object (solid, liquid and 	m Solving > Graphic Organizers	Activity ²⁹
						gas with same or different mass. Analyze data and Produce conclusions from Laboratory Experiment And/or, perform skills related to: Acquisitive (Listening, Inquiring,		

https://betterlesson.com/lesson/637562/measurement-density
 https://sites.google.com/site/6thgradephysicalscienceesler/unit-3

³¹ https://quizlet.com/59792656/6th-grade-science-mass-volume-density-flash-cards/

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Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
						Observing, Reviewing, Contrasting, Searching), Organizational (Recording, Demonstrating, Experimenting, Evaluating, Analysing, Comparing), Manipulative (Experimenting & Graphing), and Communicative (Discussing, asking questions, Discussing, Explaining, Reporting).		
Feb.	3	PS.1.12A PS3.12A PS.1.8.D PS.1.4.D	Properties of Matter	Solids,	The Kinetic Theory of Matter Using the Kinetic Theory Molecular Motion & Temperature	 Explain and list the kinetic theory models under which state from ideal behavior of molecules; Demonstrate how energy can be transferred from one object to another 	 Worksheets Video Analysis Group Presentations (Posters, PPT,	➤ Weekly/Monthly Quizzes ➤ Activity ³² ➤ Activity ³³ ➤ Activity ³⁴ ➤ Activity ³⁵ ➤ Activity ³⁶ ➤ Activity ³⁷ ➤ Activity ³⁸

³²https://spweb.tbaisd.k12.mi.us/sites/home/instructionalresources/science/pk8resources/6th%20Grade/6th%20Grade%20Unit%201%20Energy%20In%20Action%2

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³³ https://quizizz.com/admin/quiz/5827d24a0a0d754977e8ff58

https://www.proprofs.com/quiz-school/story.php?title=potential-kinetic-energy

https://www.teacherspayteachers.com/Browse/Search:kinetic%20energy%206th%20grade

³⁶ https://quizlet.com/subject/science-test-6th-grade-chapter-6-thermal-energy/

³⁷ http://mrcrowder.us/2011-3rd-quarter-assignments-6th-grade-physical-science/

Grade: 8 (Pre-Intermediate)

Subject: Physics School Year: 2018-2019

Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
Month			Strand	Liquids & Gasses	Changing State	during collisions or movement; Describe the movement of individual particles and verify the conservation of matter during the phase changes (e.g., evaporating liquids, conduction of solids & boiling liquids); Explain the effect of increased and decreased thermal energy on the motion & arrangement of molecules. Analyze data and Produce conclusions from Laboratory Experiment And/or, perform skills related to: Acquisitive (Listening, Inquiring, Observing, Reviewing, Contrasting, Searching),	m Solving Graphic Organizers Research Paper Question- Answering pp. 29-32 (Set Questions/lesso n) Experiments #10 (Pre-/Post- discussions) Think-Pair Share: p. 33, #s 3-6 (last day)	Assessments
						Organizational (Recording,		

³⁸ http://mrcrowder.us/2011-3rd-quarter-assignments-6th-grade-physical-science/

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Month	# of Days	Core Standard	Strand	Topic	Content	Skills Activities Assessments
Mar.	4	PS.3.4B	Properties	Solids,	Heat	Demonstrating, Experimenting, Evaluating, Analysing, Comparing), Manipulative (Experimenting & Graphing), and Communicative (Discussing, asking questions, Discussing, Explaining, Reporting). Explain that thermal Worksheets Weekly/ Monthly
		PS.3.8B (MOET- aligned- VN Curriculu	of Matter	Liquids & Gasses	Heat Conductivity	energy (heat) moves more rapidly in thermal conductors (e.g., metal pan) than in insulators (e.g., plastic handle); Describe the effectiveness of different insulating Posters, PPT, Video, etc) Collaborative Discussions Case- Analysis/Proble m Solving Video Analysis Activity ⁴⁰ Activity ⁴¹ Activity ⁴² Mid-Term Exams Mid-Term Exams
		m)			Convection and Thermal Radiation	and conducting materials with respect to thermal energy (heat) flow. Describe how thermal energy (heat) is Graphic Organizers Research Paper Question- Answering (Teacher's discretion to

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³⁹³⁹ https://quizizz.com/admin/quiz/5846c956fb1b18ee1bfc9c68

https://www.helpteaching.com/questions/Heat_Transfer/Grade_6
https://betterlesson.com/lesson/634002/energy-summative-assessment-answering-the-essential-question

⁴² https://www.pinterest.com/pin/403494447836240920/?lp=true

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Subject: Physics School Year: 2018-2019

Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
						transferred by conduction, convection, and radiation, & how heat conduction differs in conductors and insulators; Explain how thermal energy (heat) consists of the random motion & vibrations of atoms and molecules & is measured by temperature. Analyze data and Produce conclusions from Laboratory Experiment And/or, perform skills related to: Acquisitive (Listening, Inquiring,	construct-the contents are parallelly aligned with MOET curr.) Experiments # 11 (Pre-/Post-discussions) Think-Pair Share	
						Observing, Reviewing, Contrasting, Searching), Organizational (Recording, Demonstrating, Experimenting,		
						Evaluating, Analysing, Comparing), Manipulative (Experimenting &		

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Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
						Graphing), and Communicative (Discussing, asking questions, Discussing, Explaining, Reporting).		
Apr.	2	ESS.1.8A	Objects in the universe	The Solar System	The Solar System The Planets of the	Describe how different stars can be seen at different times of the year & planets change their positions against the background of stars	 Worksheets Video Analysis Group Presentations (Posters, PPT, Video, etc) Collaborative 	 ➤ Weekly/Monthly Quizzes ➤ Activity⁴³ ➤ Activity⁴⁴ ➤ Activity⁴⁵ ➤ Activity⁴⁶ ➤ Activity
		ESS.1.8D			Solar System	 Explain that billions of galaxies form most of the visible mass in the universe; 	Discussions: how to remember planets' order Case- Analysis/Proble m Solving	Final Term Exams (To Be Announced)
						Explain that nine planets of varied sized, composition, & surface features move around the sun in elliptical orbits;	➤ Graphic Organizers ➤ Research Paper ➤ Question- Answering pp. 104-105 (Set Questions/lesso	

https://www.helpteaching.com/questions/Solar_System/Grade_6
 https://www.mcas.k12.in.us/site/handlers/filedownload.ashx?moduleinstanceid=21643&dataid=21637&FileName=ISI%20Online%20Assessments.pdf

https://spweb.tbaisd.k12.mi.us/sites/home/instructionalresources/science/pk8resources/5th%20Grade%20Unit%202%20Solar%20System%20Asses sment%20Oakland%20Resource.doc

https://www.doe.k12.de.us/Page/550

Grade: 8 (Pre-Intermediate) Subject: Physics School Year: 2018-2019

Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
						the planets in terms of size relative to the earth's surface and atmospheric features, relative distance from the sun, & ability to support life. Analyze data and Produce conclusions from Laboratory Experiment And/or, perform skills related to: Acquisitive (Listening, Inquiring, Observing, Reviewing, Contrasting, Searching), Organizational (Recording, Demonstrating, Experimenting, Experimenting, Evaluating, Analysing, Comparing), Manipulative (Experimenting & Graphing), and Communicative (Discussing, asking questions, Discussing, Explaining, Reporting).	> Think-Pair Share: p.113, # 4	
May	4	ESS.1.4B	Objects in	The Solar	Days, Months,	> Use models to	➤ Worksheets	➤ Weekly/Monthly

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Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
	T			T				
			the	System	Years	demonstrate how the	Video Analysis	Quizzes
		ESS.1.8B	universe		The Seasons	revolution of the Earth	Group	> Activity ⁴⁷
						around the sun	Presentations	► Activity ⁴⁸
					The Moon-the	produces the yearly	(Posters, PPT,	➤ Activity ⁴⁹
		ESS.1.4C			Earth's Satellite	cycle;	Video, etc)	➤ Activity ⁵⁰
							Collaborative	➤ Activity ⁵¹
		ESS.1.8A				Use a model to	Discussions	➤ Activity ⁵²
						demonstrate & explain	➤ Case-	► Activity ⁵³
						that because the Earth	Analysis/Proble	► Activity ⁵⁴
						is title relative to the	m Solving	>Activity ⁵⁵
					A Star called the	plane of the Earth's	➤ Graphic	➤ Post-Diagnostic
					Sun	yearly orbit around the	Organizers	Test
					Gravity-Keeping	sun, sunlight, falls more	Research Paper	➤ Mid-/Final Term
					the Planets in	intensely on different	Question-	Exams (To Be
					Orbit	parts of the earth	Answering	Announced)
		ESS.1.4C				during the year, so as its	pp.106-112 (Set	,
						surface produces the	Questions/lesso	
						planet's seasons and	n)	
					Bullets, Missiles,	weather patterns;	> Think-Pair	
		ESS.1.8A			Satellites	,	Share: p.113, #s	
						Demonstrate the	1, 2, 3, 5, 6	
						phases of the moon by	_, _, _, _, _	
						showing the alignment		

⁴⁷ https://www.pinterest.com/pin/45036064995045649/?lp=true

http://www.bsisd.esc18.net/documents/Lesson%20Ideas/LESSONS%20&%20RESOURCES/SCIENCE/6th%20Gr/Science Grade 06 Unit 08 Exemplar Lesson 0 Gravity.pdf

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⁴⁸ https://www.havefunteaching.com/resources/worksheets/science-worksheets/seasons-of-the-year-worksheets/

⁴⁹ https://www.google.com.vn/url?sa=i&rct=i&g=&esrc=s&source=images&cd=&ved=2ahUKEwiS8drdhvibAhULAogKHQBrC-

MQjhx6BAgBEAM&url=https%3A%2F%2Fwww.pinterest.com%2Fpin%2F152770612336137835%2F&psig=AOvVaw3QlxUwtzXZFTkJ4zXzB72p&ust=153033350677 9317

⁵⁰ https://quizlet.com/34058000/sun-moon-and-earth-systems-test-6th-grade-flash-cards/

⁵¹ https://www.scribd.com/doc/312363164/6th-grade-space-test

⁵² http://www.guizmoz.com/tests/Children-Tests/a/6th-Grade-Sun-Test.asp

https://www.proprofs.com/quiz-school/storv.php?title=nze2mti2mc0m

⁵⁵ https://www.teachervision.com/satellites/what-are-satellites-space-probes

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Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
						of the earth, moon, and		
		ESS.1.4C				sun;		
						> Research and write		
						about the Solar System's Sun, and in		
						doing so, a group would		
						be assigned to present		
						the information;		
						Present information,		
						significances and examples about		
						artificial satellites		
						orbiting around earth's		
						atmosphere.		
						Analyze data and		
						Produce		
						conclusions from Laboratory Experiment		
						And/or, perform skills		
						related to: Acquisitive		
						(Listening, Inquiring,		
						Observing, Reviewing,		
						Contrasting,		
						Searching), Organizational		
						(Recording,		
						Demonstrating,		
						Experimenting,		
						Evaluating, Analysing,		
						Comparing),		
						Manipulative (Experimenting &		
						Graphing), and		
						Communicative		

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Month	# of Days	Core Standard	Strand	Topic	Content	Skills	Activities	Assessments
						(Discussing, asking questions, Discussing, Explaining, Reporting).		

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