



Texas Essential Knowledge and Skills (TEKS) for Science Correlation to *PhD Science*™

Green indicates that <i>PhD Science</i> ™ fully addresses the standard within the grade level.
Blue indicates that <i>PhD Science</i> covers the standard but in a different grade level.
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Key: Module (M), Lesson (L)

PhD Science Level 3

The Grade 3 Texas Essential Knowledge and Skills (TEKS) for Science are almost entirely covered by the Level 3 *PhD Science* curriculum. Standards 3(2), 3(3), 3(7), and 3(8) are partially covered but not in the detail specified. Standard 3(1) is not covered by *PhD Science*. A detailed analysis of alignment appears in the table below.

Grade 3 Knov	vledge and Skills		Aligned PhD
			Science Lessons
3.1 Scientific	Investigation and Reasoning		
The student co	onducts classroom and outdoor investigations following home and school	saf	fety procedures and
environmenta	lly appropriate practices. The student is expected to		
А	demonstrate safe practices as described in Texas Education Agency–		
	approved safety standards during classroom and outdoor		
	investigations using safety equipment as appropriate, including safety		
	goggles or chemical splash goggles, as appropriate, and gloves; and		
В	make informed choices in the use and conservation of natural		
	resources by recycling or reusing materials such as paper, aluminum		
	cans, and plastics.		
3.2 Scientific	Investigation and Reasoning		
The student us	ses scientific practices during laboratory and outdoor investigations. The	stu	dent is expected to
А	plan and implement descriptive investigations, including asking and		Level 3 M1 L21–L25
	answering questions, making inferences, and selecting and using		Level 3 M2 L21–L25
	equipment or technology needed, to solve a specific problem in the		Level 3 M3 L12–L13
	natural world;		Level 3 M3 L19–L20
			Level 3 M4 L23–L27
В	collect and record data by observing and measuring using the metric		
	system and recognize differences between observed and measured		
	data;		
С	construct maps, graphic organizers, simple tables, charts, and bar		Level 3 M1 L4–L15
	graphs using tools and current technology to organize, examine, and		Level 3 M1 L19–L20
	evaluate measured data;		Level 3 M1 L27–L29
			Level 3 M2 L3–L8
			Level 3 M2 L16–L19
			Level 3 M3 L4–L8





			Level 3 M3 L14–L20
			Level 3 M4 L4–L9
D	analyze and interpret patterns in data to construct reasonable		Level 3 M1 L4–L15
	explanations based on evidence from investigations;		Level 3 M1 L19–L20
			Level 3 M1 L27–L29
			Level 3 M2 L3–L8
			Level 3 M2 L16–L19
			Level 3 M3 L4–L8
			Level 3 M3 L14–L20
			Level 3 M4 L4–L9
E	demonstrate that repeated investigations may increase the reliability of results; and		
F	communicate valid conclusions supported by data in writing, by		Level 3 M1 L11–L17
	drawing pictures, and through verbal discussion.		Level 3 M2 L13–L15
			Level 3 M2 L20–L21
			Level 3 M4 L22
3.3 Scientific	investigation and reasoning. The student knows that information, critic	al t	hinking, scientific
problem solvir	ng, and the contributions of scientists are used in making decisions. The s	tud	ent is expected to
А	analyze, evaluate, and critique scientific explanations by using		Level 3 M1 L4–L15
	evidence, logical reasoning, and experimental and observational		Level 3 M1 L19–L20
	testing;		Level 3 M1 L27–L29
			Level 3 M2 L3-L8
			Level 3 M2 L16–L19
			Level 3 M3 L4–L8
			Level 3 M3 L14-L20
			Level 3 M4 L4-L9
В	represent the natural world using models such as volcanoes or the		Level 3 M1 L1–L3
	Sun, Earth, and Moon system and identify their limitations, including		Level 3 M1 L19-L20
	size, properties, and materials; and		Level 3 M2 L1–L3
			Level 3 M2 L6–L12
			Level 3 M2 L22–L25
			Level 3 M3 L7-L11
			Level 3 M3 L21–L25
			Level 3 M4 L1–L3
			Level 3 M4 L17–L18
			Level 3 M4 L23-L27
С	connect grade-level appropriate science concepts with the history of		
	science, science careers, and contributions of scientists.		
3.4 Scientific	investigation and reasoning. The student knows how to use a variety o	f to	ols and methods to
conduct science	e inquiry. The student is expected to		
	collect, record, and analyze information using tools, including		Level 3 M1 L1–L3
	cameras, computers, hand lenses, metric rulers, Celsius		Level 3 M1 L21–L26
	thermometers, wind vanes, rain gauges, pan balances, graduated		Level 3 M2 L1–L2
	cylinders, beakers, spring scales, hot plates, meter sticks, magnets,		Level 3 M3 L1–L3
	collecting nets, notebooks, and Sun, Earth, and Moon system models;		Level 3 M3 L12–L13
	timing devices; and materials to support observation of habitats of		Level 3 M4 L1–L3
	organisms such as terrariums and aquariums.		Level 3 M4 L7–L9
			Level 3 M4 L15–L16
			Level 3 M4 L19-L30





3.5 Matter ar	d energy. The student knows that matter has measurable physical prop	erti	es and those
properties det	ermine how matter is classified, changed, and used. The student is expec	ted	
Α	measure, test, and record physical properties of matter, including		Level 5 M1 L1–L4
	temperature, mass, magnetism, and the ability to sink or float;		Level 5 M1 L9
			Level 5 M1 L11–L17
			Level 5 M1 L23–L26
В	describe and classify samples of matter as solids, liquids, and gases		Level 5 M1 L5
	and demonstrate that solids have a definite shape and that liquids		Level 5 M1 L9-L10
	and gases take the shape of their container;		Level 5 M1 L17
С	predict, observe, and record changes in the state of matter caused by		Level 5 M1 L9-L17
	heating or cooling such as ice becoming liquid water, condensation		Level 5 M1 L23–L26
	forming on the outside of a glass of ice water, or liquid water being		
	heated to the point of becoming water vapor; and		
D	explore and recognize that a mixture is created when two materials		Level 5 M1 L1–L2
	are combined such as gravel and sand or metal and plastic paper		Level 5 M1 L13–L26
	clips.		
3.6 Force, mo	tion, and energy. The student knows that forces cause change and that	ene	ergy exists in many
	dent is expected to		
Α	explore different forms of energy, including mechanical, light, sound,		Level 4 M2 L1-L5
	and thermal in everyday life;		Level 4 M2 L10-L11
			Level 4 M2 L24-L26
В	demonstrate and observe how position and motion can be changed		Level 3 M4 L10-L18
	by pushing and pulling objects such as swings, balls, and wagons; and		Level 3 M4 L28-L30
С	observe forces such as magnetism and gravity acting on objects.		Level 3 M4 L1–L9
			Level 3 M4 L19–L21
			Level 3 M4 L28-L30
3.7 Earth and	space. The student knows that Earth consists of natural resources and it	:s sı	urface is constantly
changing. The	student is expected to		
А	explore and record how soils are formed by weathering of rock and		Level 5 M2 L12-L14
	the decomposition of plant and animal remains;		
В	investigate rapid changes in Earth's surface such as volcanic		Level 4 M1 L6-L11
	eruptions, earthquakes, and landslides; and		Level 4 M1 L25-L27
С	explore the characteristics of natural resources that make them		
	useful in products and materials such as clothing and furniture and		
	how resources may be conserved.		
3.8 Earth and	space. The student knows there are recognizable patterns in the natura	lwo	orld and among
	sky. The student is expected to		-
A	observe, measure, record, and compare day-to-day weather changes		Level 3 M1 L1–L15
	in different locations at the same time that include air temperature,		Level 3 M1 L19–L20
	wind direction, and precipitation;		Level 3 M1 L27–L29
В	describe and illustrate the Sun as a star composed of gases that		Level 5 M4 L18–L19
	provides light and thermal energy;		Level 5 M4 L24–L26
С	construct models that demonstrate the relationship of the Sun, Earth,		Level 5 M4 L1–L2
•	and Moon, including orbits and positions; and		Level 5 M4 L5–L17
	,		Level 5 M4 L20–L26
D	identify the planets in Earth's solar system and their position in		
_	relation to the Sun.		





3.9 Organism	3.9 Organisms and environments. The student knows and can describe patterns, cycles, systems, and					
relationships v	relationships within the environments. The student is expected to					
Α	observe and describe the physical characteristics of environments		Level 3 M2 L1-L2			
	and how they support populations and communities of plants and		Level 3 M2 L9-L12			
	animals within an ecosystem;		Level 3 M2 L16-L19			
			Level 3 M2 L22-L28			
В	identify and describe the flow of energy in a food chain and predict		Level 3 M2 L16-L28			
	how changes in a food chain affect the ecosystem such as removal of					
	frogs from a pond or bees from a field; and					
С	describe environmental changes such as floods and droughts where		Level 3 M2 L1-L2			
	some organisms thrive and others perish or move to new locations.		Level 3 M2 L9-L12			
			Level 3 M2 L16-L19			
			Level 3 M2 L22-L28			
3.10 Organism	ns and environments. The student knows that organisms undergo simila	ar li	fe processes and have			
structures that	t help them survive within their environments. The student is expected to)				
Α	explore how structures and functions of plants and animals allow		Level 3 M2 L10-L12			
	them to survive in a particular environment; and					
В	investigate and compare how animals and plants undergo a series of		Level 3 M3 L7-L8			
	orderly changes in their diverse life cycles such as tomato plants,		Level 3 M3 L23-L28			
	frogs, and lady beetles.					





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Key: Module (M), Lesson (L)

PhD Science Level 4

The Grade 4 Texas Essential Knowledge and Skills (TEKS) for Science are almost entirely covered by the Level 4 *PhD Science* curriculum. Standards 4(2), 4(3), 4(6), and 4(8) are partially covered but not in the detail specified. Standard 4(1) is not covered by *PhD Science*. A detailed analysis of alignment appears in the table below.

Grade 4 Knov	vledge and skills		Aligned PhD
			Science Lessons
	investigation and reasoning. The student conducts classroom and outd		_
_	e and school safety procedures and environmentally appropriate and eth	ical	practices. The
student is exp	ected to		
Α	demonstrate safe practices and the use of safety equipment as		
	described in Texas Education Agency–approved safety standards		
	during classroom and outdoor investigations using safety equipment,		
	including safety goggles or chemical splash goggles, as appropriate,		
	and gloves, as appropriate; and		
В	make informed choices in the use and conservation of natural		
	resources and reusing and recycling of materials such as paper,		
	aluminum, glass, cans, and plastic.		
4.2 Scientific	investigation and reasoning. The student uses scientific practices durin	g la	boratory and outdoor
investigations	. The student is expected to		
Α	plan and implement descriptive investigations, including asking well		Level 4 M1 L1–L2
	defined questions, making inferences, and selecting and using		Level 4 M2 L1-L3
	appropriate equipment or technology to answer his/her questions;		Level 4 M2 L8-L9
			Level 4 M3 L1-L3
			Level 4 M3 L6
			Level 4 M3 L15-L19
			Level 4 M4 L1–L2
В	collect and record data by observing and measuring, using the metric		Level 4 M1 L12–L20
	system, and using descriptive words and numerals such as labeled		Level 4 M1 L23-L24
	drawings, writing, and concept maps;		Level 4 M4 L10-L17
С	construct simple tables, charts, bar graphs, and maps using tools and		Level 4 M1 L12-L20
	current technology to organize, examine, and evaluate data;		Level 4 M1 L23-L24
			Level 4 M4 L10-L17





	analisma data and interment matterns to construct occurrent.		1 ava 4 M4 14 15
D	analyze data and interpret patterns to construct reasonable		Level 4 M1 L1–L5
	explanations from data that can be observed and measured;		Level 4 M1 L18–L20
			Level 4 M2 L4–L5
			Level 4 M2 L8–L11
			Level 4 M2 L24–L26
			Level 4 M3 L1–L3
			Level 4 M3 L7–L11
			Level 4 M3 L20
			Level 4 M3 L24–L31
			Level 4 M4 L1–L4
			Level 4 M4 L7–L8
			Level 4 M4 L14–L17
			Level 4 M4 L22–L27
E	perform repeated investigations to increase the reliability of results; and		
F	communicate valid oral and written results supported by data.		Level 4 M1 L3–L5
			Level 4 M1 L23-L24
			Level 4 M3 L4–L6
			Level 4 M3 L10–L11
			Level 4 M3 L20–L23
			Level 4 M3 L26-L28
			Level 4 M4 L22–L24
4.3 Scientific	investigation and reasoning. The student uses critical thinking and scien	ntifi	
	d decisions. The student is expected to	10111	e problem solving to
Α	analyze, evaluate, and critique scientific explanations by using		
	evidence, logical reasoning, and experimental and observational		
	testing;		
В	represent the natural world using models such as the water cycle and		Level 4 M1 L1–L2
	stream tables and identify their limitations, including accuracy and		Level 4 M2 L1–L3
	size; and		Level 4 M2 L8–L11
			Level 4 M2 L15–L16
			Level 4 M3 L1–L3
			Level 4 M3 L7-L14
			Level 4 M4 L1–L8
			Level 4 M4 L10-L24
С	connect grade-level appropriate science concepts with the history of		
	science, science careers, and contributions of scientists.		
4.4 Scientific	investigation and reasoning. The student knows how to use a variety o	to	ols, materials,
equipment, ar	nd models to conduct science inquiry. The student is expected to		
	collect, record, and analyze information using tools, including		Level 4 M1 L1–L2
	calculators, microscopes, cameras, computers, hand lenses, metric		Level 4 M2 L1–L3
	rulers, Celsius thermometers, mirrors, spring scales, balances,		Level 4 M2 L8-L11
	graduated cylinders, beakers, hot plates, meter sticks, magnets,		Level 4 M2 L15-L16
	collecting nets, and notebooks; timing devices; and materials to		Level 4 M3 L1–L3
	support observation of habitats of organisms such as terrariums and		Level 4 M3 L7-L14
	aquariums.		Level 4 M4 L1–L8
			Level 4 M4 L10–L24
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4.5 Matter ar	nd energy. The student knows that matter has measurable physical prop	erti	es and those
properties det	termine how matter is classified, changed, and used. The student is expec	ted	to
Α	measure, compare, and contrast physical properties of matter,		Level 5 M1 L1–L4
	including mass, volume, states (solid, liquid, gas), temperature,		Level 5 M1 L9
	magnetism, and the ability to sink or float; and		Level 5 M1 L11–L17
	·		Level 5 M1 L23–L26
В	compare and contrast a variety of mixtures, including solutions.		Level 5 M1 L1–L2
	, ,		Level 5 M1 L13–L26
	otion, and energy. The student knows that energy exists in many forms a	nd	can be observed in
cycles, pattern	ns, and systems. The student is expected to		T
Α	differentiate among forms of energy, including mechanical, sound,		Level 4 M2 L1–L5
	electrical, light, and thermal;		Level 4 M2 L10–L11
			Level 4 M2 L24–L26
В	differentiate between conductors and insulators of thermal and		Level 3 M4 L19–L21
	electrical energy;		Level 4 M2 L12–L14
			Level 4 M2 L19–L20
С	demonstrate that electricity travels in a closed path, creating an		
	electrical circuit; and		
D	design a descriptive investigation to explore the effect of force on an		Level 3 M4 L1–L9
	object such as a push or a pull, gravity, friction, or magnetism.		Level 3 M4 L28–L30
4.7 Earth and	I space. The students know that Earth consists of useful resources and its	sur	face is constantly
changing. The	student is expected to		
Α	examine properties of soils, including color and texture, capacity to		Level 5 M3 L12–L13
	retain water, and ability to support the growth of plants;		
В	observe and identify slow changes to Earth's surface caused by		Level 4 M1 L6-L11
	weathering, erosion, and deposition from water, wind, and ice; and		Level 4 M1 L25–L27
С	identify and classify Earth's renewable resources, including air, plants,		Level 4 M1 L21–L27
	water, and animals, and nonrenewable resources, including coal, oil,		
	and natural gas, and the importance of conservation.		
4.8 Earth and	space. The student knows that there are recognizable patterns in the na	tur	al world and among
the Sun, Earth	, and Moon system. The student is expected to		
Α	measure, record, and predict changes in weather;		Level 3 M1 L1–L15
			Level 3 M1 L19–L20
			Level 3 M1 L27–L29
В	describe and illustrate the continuous movement of water above and		Level 5 M2 L6–L7
	on the surface of Earth through the water cycle and explain the role of		Level 5 M2 L15–L19
	the Sun as a major source of energy in this process; and		Level 5 M2 L24–L26
			Level 5 M3 L8
С	collect and analyze data to identify sequences and predict patterns of		Level 5 M4 L1–L2
	change in shadows, seasons, and the observable appearance of the		Level 5 M4 L5–L17
	Moon over time.		Level 5 M4 L20–L26
4.9 Organism	is and environments. The student knows and understands that living org	ani	sms within an
-	eract with one another and with their environment. The student is expec		
A	investigate that most producers need sunlight, water, and carbon		Level 5 M2 L3–L9
	dioxide to make their own food, while consumers are dependent on		
	other organisms for food; and		
В	describe the flow of energy through food webs, beginning with the		Level 5 M2 L18-L20





4.10 Organisi	ms and environments. The student knows that organisms undergo simila	ar li	fe processes and have
structures and	behaviors that help them survive within their environment. The student	is e	xpected to
Α	explore how structures and functions enable organisms to survive in		Level 3 M2 L9-L12
	their environment;		
В	explore and describe examples of traits that are inherited from		Level 3 M3 L1-L6
	parents to offspring such as eye color and shapes of leaves and		Level 3 M3 L14–L18
	behaviors that are learned such as reading a book and a wolf pack		Level 3 M3 L26-L28
	teaching their pups to hunt effectively; and		
С	explore, illustrate, and compare life cycles in living organisms such as		Level 3 M3 L7-L8
	beetles, crickets, radishes, or lima beans.		





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Key: Module (M), Lesson (L)

PhD Science Level 5

The Grade 5 Texas Essential Knowledge and Skills (TEKS) for Science are almost entirely covered by the Level 5 *PhD Science* curriculum. Standards 5(2), 5 (3), 5(6), and 5(8) are partially covered but not in the detail specified. Standards 5(1) and 5(4) are not covered by *PhD Science*. A detailed analysis of alignment appears in the table below.

Grade 5 Knov	vledge and skills		Aligned PhD Science Lessons
5.1 Scientific	investigation and reasoning. The student conducts classroom and outd	oor	investigations
following hom	e and school safety procedures and environmentally appropriate and eth	ical	practices. The
student is exp	ected to		
Α	demonstrate safe practices and the use of safety equipment as		
	outlined in Texas Education Agency–approved safety standards during		
	classroom and outdoor investigations using safety equipment,		
	including safety goggles or chemical splash goggles, as appropriate,		
	and gloves, as appropriate; and		
В	make informed choices in the conservation, disposal, and recycling of		
	materials.		
5.2 Scientific	investigation and reasoning. The student uses scientific practices during	g la	boratory and outdoor
investigations	. The student is expected to		
Α	describe, plan, and implement simple experimental investigations		Level 5 M1 L13–L14
	testing one variable;		Level 5 M1 L18–L22
			Level 5 M2 L3–L5
			Level 5 M3 L10–L11
			Level 5 M4 L5–L6
			Level 5 M4 L18–L19
В	ask well defined questions, formulate testable hypotheses, and select		Level 5 M1 L1–L2
	and use appropriate equipment and technology;		Level 5 M2 L1–L2
			Level 5 M2 L21–L23
			Level 5 M3 L1–L3
			Level 5 M3 L19–L23
			Level 5 M4 L1–L2
			Level 5 M4 L13





C collect and record information using detailed observations and accurate measuring; Level S M1 L1-12 Level 5 M2 L1-123 Level 5 M3 L1-13 Level 5 M3 L1-13 Level 5 M4 L1-12 Level 5 M4 L1-14 Level 5 M4 L1-12 Level 5 M4 L1-15 Level 5 M4 L1-12 Level 5 M4 L1-11 Level 5 M4 L1-12 Level 5 M4 L1-11 Level 5 M4 L1-12 Level 5 M4 L1-15 Level 5 M4 L1-12 Leve								
Level 5 M3 L12-L23 Level 5 M3 L19-L23 Level 5 M3 L19-L31 Level 5 M3 L19-L32 Level 5 M3 L19-L31 Level 5 M3 L19-L31 Level 5 M3 L19-L17 Level 5 M3 L13-L5 Level 5 M3 L14-L15 Level 5 M3 L14-L16 Level 5 M4 L13-L3 Level 5 M3 L14-L16 Level 5 M4 L13-L3 Level 5 M3 L14-L16 Level 5 M4 L14-L15 Level 5 M4 L14-L	С	collect and record information using detailed observations and		Level 5 M1 L1–L2				
Level 5 M3 1.1–13 Level 5 M3 1.1–13 Level 5 M4 1.1–12 Level 5 M4 1.1–12 Level 5 M4 1.13 D analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence; Level 5 M2 1.3–15 Level 5 M2 1.3–15 Level 5 M2 1.3–15 Level 5 M3 1.4–15 Level 5 M3 1.4–15 Level 5 M3 1.4–15 Level 5 M3 1.4–15 Level 5 M3 1.4–115 E demonstrate that repeated investigations may increase the reliability of results; Communicate valid conclusions in both written and verbal forms; and Level 5 M2 1.1–11 Level 5 M2 1.13–10 Level 5 M3 1.14–116 Level 5 M4 1.14–115 Level 5 M3 1.14–116 Level 5 M		accurate measuring;		Level 5 M2 L1–L2				
Level 5 M3 L19–L23 Level 5 M4 L1–L2 Level 5 M2 L15–L17 Level 5 M2 L8–L13 Level 5 M2 L8–L13 Level 5 M3 L14–L16 Level 5 M3				Level 5 M2 L21–L23				
D analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence; Level 5 M1 L15–L17 Level 5 M2 L3–L5 Level 5 M3 L4–L5 Level 5 M3 L4–L15 Level 5 M3 L4–L5 Level 5 M3 L4–L6 Level 5 M3 L8–L20 Level 5 M3 L9–L27 Level 5 M3 L9–L27 Level 5 M3 L9–L29 Level 5 M3 L4–L19 Level 5 M3 L4–L19 Level 5 M3 L4–L19 Level 5 M3 L4–L19 Level 5 M3 L4–L10 Level 5				Level 5 M3 L1-L3				
analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence; Level 5 M2 L15–L17 Level 5 M3 L15–L17 Level 5 M3 L15–L17 Level 5 M3 L15–L17 Level 5 M3 L14–L16 Level 5 M3 L14–L				Level 5 M3 L19-L23				
D analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence; Level 5 M2 L3—L5 Level 5 M2 L3—L5 Level 5 M3 L3—L15 Level 5 M3 L4—L16 Level 5 M3 L4—L5 Level 5 M3 L4—L16 Level 5 M				Level 5 M4 L1–L2				
explanations from direct (observable) and indirect (inferred) evidence; Level 5 M2 L13–L13 Level 5 M2 L15–L17 Level 5 M3 L4–L5 Level 5 M3 L4–L5 Level 5 M4 L14–L15 E demonstrate that repeated investigations may increase the reliability of results; Communicate valid conclusions in both written and verbal forms; and Communicate valid conclusions in both written and verbal forms; and Level 5 M2 L16–L7 Level 5 M3 L18–L12 Level 5 M3 L18–L12 Level 5 M3 L14–L16 Level 5 M3 L14–L16 Level 5 M3 L14–L16 Level 5 M3 L14–L16 Level 5 M4 L18–L19 Level 5 M4 L14–L15 Level 5 M2 L15–L17 Level 5 M3 L14–L16 Level 5 M3 L14–L16 Level 5 M3 L14–L16 Level 5 M4 L14–L15 Level 5 M4 L14–L16 Level 5 M4 L14–L15 Level 5 M4 L14–L15 Level 5 M4 L14–L16 Level 5 M4 L14–L16 Level 5 M4 L14–L16 Level 5 M4 L14–L15 Level 5 M4 L14–L16 Level 5 M4 L14–L15 Level 5 M4 L14–L16 Level 5 M4 L14–L15 Level 5 M4 L14–L16 Level 5 M4				Level 5 M4 L13				
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	support observations of habitats or organisms such as terrariums and					
	aquariums.					
5.5 Matter and energy. The student knows that matter has measurable physical properties and those						
	termine how matter is classified, changed, and used. The student is expec	ted				
Α	classify matter based on measurable, testable, and observable		Level 5 M1 L1–L2			
	physical properties, including mass, magnetism, physical state (solid,		Level 5 M1 L13–L26			
	liquid, and gas), relative density (sinking and floating using water as a					
	reference point), solubility in water, and the ability to conduct or					
	insulate thermal energy or electric energy;		1 15 14 14 10			
В	demonstrate that some mixtures maintain physical properties of their		Level 5 M1 L1–L2			
	ingredients such as iron filings and sand and sand and water; and		Level 5 M1 L13–L26			
С	identify changes that can occur in the physical properties of the		Level 5 M1 L13–L14			
	ingredients of solutions such as dissolving salt in water or adding					
	lemon juice to water.	<u> </u>				
	Potion, and energy. The student knows that energy occurs in many forms as, and systems. The student is expected to	and	i can be observed in			
A	explore the uses of energy, including mechanical, light, thermal,		Level 4 M1 L23–L24			
Α	electrical, and sound energy;		Level 4 M2 L1–L3			
	creation, and sound energy,		Level 4 M3 L14–L19			
			1010: 1.110 11 : 110			
В	demonstrate that the flow of electricity in closed circuits can produce					
	light, heat, or sound;					
С	demonstrate that light travels in a straight line until it strikes an object		Level 4 M2 L10			
	and is reflected or travels through one medium to another and is		Level 4 M4 L3–L8			
	refracted; and		Level 4 M4 L26			
D	design a simple experimental investigation that tests the effect of		Level 3 M4 L19–L30			
	force on an object.		Level 4 M2 L8–L9			
			Level 4 M2 L24–L26			
	space. The student knows Earth's surface is constantly changing and cor	sis	ts of useful resources.			
The student is	•	1	Γ			
Α	explore the processes that led to the formation of sedimentary rocks		Level 4 M1 L1–L5			
	and fossil fuels; and		Level 4 M1 L19–L27			
В	recognize how landforms such as deltas, canyons, and sand dunes are		Level 4 M1 L6–L11			
	the result of changes to Earth's surface by wind, water, or ice.		Level 4 M1 L25–L27			
	space. The student knows that there are recognizable patterns in the na	tur	al world and among			
	, and Moon system. The student is expected to	1	T			
Α	differentiate between weather and climate;		Level 5 M3 L1–L13			
_			Level 5 M3 L24–L27			
В	explain how the Sun and the ocean interact in the water cycle;		Level 5 M3 L6–L8			
С	demonstrate that Earth rotates on its axis once approximately every		Level 5 M4 L1–L2			
	24 hours causing the day/night cycle and the apparent movement of		Level 5 M4 L5–L17			
	the Sun across the sky; and		Level 5 M4 L20–L26			
D	identify and compare the physical characteristics of the Sun, Earth,					
·	and Moon.		1 /			
5.9 Organisms and environments. The student knows that there are relationships, systems, and cycles within						
	. The student is expected to		Lovel F M2 14 12			
Α	observe the way organisms live and survive in their ecosystem by		Level 5 M2 L1–L2			
	interacting with the living and nonliving components;		Level 5 M2 L14			





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			Level 5 M2 L19		
В	describe the flow of energy within a food web, including the roles of		Level 5 M2 L1–L14		
	the Sun, producers, consumers, and decomposers;		Level 5 M2 L24–L26		
С	predict the effects of changes in ecosystems caused by living		Level 5 M2 L19–L20		
	organisms, including humans, such as the overpopulation of grazers or				
	the building of highways; and				
D	identify fossils as evidence of past living organisms and the nature of		Level 3 M2 L1–L8		
	the environments at the time using models.		Level 3 M2 L26-L28		
5.10 Organisms and environments. The student knows that organisms have structures and behaviors that					
help them survive within their environments. The student is expected to					
Α	compare the structures and functions of different species that help		Level 3 M2 L1–L2		
	them live and survive in a specific environment such as hooves on		Level 3 M2 L9–L12		
	prairie animals or webbed feet in aquatic animals; and		Level 3 M2 L16-L19		
			Level 3 M2 L22-L28		
В	differentiate between inherited traits of plants and animals such as		Level 3 M3 L1-L6		
	spines on a cactus or shape of a beak and learned behaviors such as		Level 3 M3 L14-L18		
	an animal learning tricks or a child riding a bicycle.		Level 3 M3 L26–L28		