PUSD Science District	PUSD Science District Instructional Guide (Date Updated: 9/27/2019) Additional First Grade Links HERE					
Grade Level: First Gra	de Science DIG	Time: Quarter 1				
Unit Title: Life Scienc	Title: Life Science Animals Essential Questions: What does the life cycle of look like? What does need to live and survive How are offspring different or similar from one another is their parents? What would cause animal go extinct? What is extinction? What characteristics cause in group Phenomena: some suggested links to phenomena: https://www.ngssphenomena.com/ https://betterlesson.com > browse > next_gen_science https://www.teacherspayteachers.com https://www.readworks.org					
Standards	Learning Progressions	Objectives (I Can)	Key Vocabulary	Resources (Activities/Lessons/Experi ments)	Assessments	
<u>1.L.1U1.6</u> Observe,describe, and predict life cycles of animals and plants.	Plants and animals have predictable characteristics at different stages of development. Plants and animals grow and change. Adult	I can observe life cycles of animals and plants. I can describe life cycles of animals and plants.I can	plants animals characteristics stages of development grow young	<u>Arizona Science</u> <u>Standards</u> <u>https://jr.brainpop.com</u> (\$)	Observations Participation	

	plants and animals	predict life cycles of	living	
	can have young.	animals and plants.	offspring	https://www.ngssphenom
<u>1.L2U2.7</u> Develop			Identical	
and use models about	Animals depend on	I can obtain	parents	ena.com/
how living things use	their surroundings to	information to	generation	
resources to grow and	get what they need,	support an	characteristics	
survive; design and	including food, water,	evidence-based	animals	https://betterlesson.com >
evaluate habitats for	shelter, and a	explanation that	food	browse >
organisms using earth	favorable	plants and animals	water	
materials.	temperature. Animals	produce offspring of	shelter	<u>next_gen_science</u>
	depend on plants or	the same kind.	favorable	
	other animals for food.		temperature	
1.L2U1.8 Construct	They use their	I can evaluate	plants	https://mysteryscience.co
an explanation	senses to find food	information to support	senses	intps.//infysteryscience.co
describing how	and water, and they	an evidence-based	body parts	<u>m</u>
organisms obtain	use their body parts	explanation that	air	
resources from the	to gather, catch, eat,	plants and animals	minerals	
environment including	and chew the food.	produce offspring of	light	https://www.teacherspayt
materials that are	Plants depend on air,	the same kind.	seeds	nttps.//www.teacherspayt
used again by other	water, minerals (in		sketches	eachers.com (does
organisms.	the soil), and light to	I can communicate	drawings	contain free downloads
	grow.	information to support	physical models	
	Animals can move	an evidence-based	compare	also)
	around, but plants	explanation that	test	
	cannot and they often	plants and animals	discuss	
	depend on animals for	produce offspring of	strengths	https://www.readworks.or
<u>1.L3U1.9</u> Obtain,	pollination or to move	the same kind.	weaknesses	https://www.ieddworks.or
evaluate, and	their seeds around.			g
communicate		I can create a model		
information to support	Living things produce	to describe how		https://thewonderofscienc
an evidence-based	offspring of the same	animals and plants		e.com/phenomenal
explanation that	kind, but offspring are	are classified into		
plants and animals	not identical with	groups with their		
produce offspring of	each other or with	similarities.		Printable and editable
the same kind, but	their parents. Plants			lessons:
offspring are generally	and animals, including	I can ask questions		https://tbamoodle.tbaisd.o
not identical to each	humans, resemble	how factors can cause		rg/course/view.php?id=16
other or their	their parents in many	species to go extinct.		1
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Parents.	features because			
	information is passed	I can explain how		
	from one generation	factors can cause		
	to the next.	species to go extinct.		
<u>1.L4U1.10</u> Develop a	Organisms have			
model to describe	characteristics that			
how animals and	can be similar or			
plants are classified	different.			
into groups and				
subgroups according	There are many			
to their similarities.	different kinds of			
	plants and animals in			
1.L4U1.11 Ask	the world today and			
questions and explain	many kinds that once			
how factors can cause	lived but are now			
species to go extinct.	extinct. We know			
	about these from			
	fossils. Animals and			
	plants are classified			
	into groups and			
	subgroups according			
	to their similarities .			
	Some kinds of plants			
	and animals that once			
	lived on Earth (e.g.,			
	dinosaurs) are no			
	longer found			
	anywhere, although			
	others now living			
	(e.g., lizards)			
	resemble them in			
	some ways			

 * Cross Cutting Concepts: Cause and effect: systems and system models; energy and matter; structure and function; stability and change <u>https://ngss.nsta.org/CrosscuttingConceptsFull.aspx</u> 					

PUSD Science District	Instructional Guide (Date	Updated 9/27/2019)				
Grade Level: First Grade Science DIG		Time: Quarter 2				
Unit Title: Life Science: Plants		Essential Questions: What does the life cycle of look like? What does need to live and survive How are offspring different or similar from one another and from their parents? What would cause plant to go extinct? What is extinction?				
		Phenomena: some suggested links to phenomena: https://www.ngssphenomena.com/ https://betterlesson.com > browse > next_gen_science https://mysteryscience.com https://www.teacherspayteachers.com https://www.teacherspayteachers.com https://www.readworks.org				
Standards	Learning Progressions	Objectives (I Can)	Key Vocabulary	Resources (Activities/Lessons/Exper iments)	Assessments	
<u>1.L.1U1.6</u> Observe,describe, and predict life cycles of animals and plants.	Plants and animals have predictable characteristics at different stages of development. Plants and animals grow	I can observe life cycles of animals and plants. I can describe life cycles of animals	plants animals characteristics stages of development grow	Arizona Science Standards https://jr.brainpop.com (\$)	Observations Participation	

	and change. Plants	and plants.I can	young	
	and animals can have	predict life cycles of	living	https://www.ngssphenom
1.L2U2.7 Develop	young	animals and plants.	offspring	ena.com/
and use models about	Animals depend on		Identical	
how living things use	their surroundings to	I can obtain	parents	
resources to grow and	get what they need,	information to	generation	
survive; design and	including food, water,	support an	characteristics	https://betterlesson.com
evaluate habitats for	shelter, and a	evidence-based	animals	> browse >
organisms using earth	favorable	explanation that	food	<u>next_gen_science</u>
materials.	temperature. Animals	plants and animals	water	<u>next_gen_science</u>
	depend on plants or	produce offspring of	shelter	
1.L2U1.8 Construct	other animals for food.	the same kind.	favorable	
an explanation	They use their senses		temperature	https://mysteryscience.c
describing how	to find food and water,	l can evaluate	plants	om
organisms obtain	and they use their	information to support	senses	
resources from the	body parts to gather,	an evidence-based	body parts	
environment including	catch, eat, and chew	explanation that	air	
materials that are	the food. Plants	plants and animals	minerals	https://www.teacherspay
used again by other	depend on air, water,	produce offspring of	light	teachers.com (does
organisms.	minerals (in the soil),	the same kind.	seeds	
	and light to grow.		sketches	contain free downloads
	Animals can move		drawings	also)
	around, but plants	I can communicate	physical models	
	cannot, and they often	information to support	compare	
	depend on animals for	an evidence-based	test	
<u>1.L3U1.9</u> Obtain,	pollination or to move	explanation that	discuss	https://www.readworks.o
evaluate, and	their seeds around.	plants & animals	strengths	rg
communicate		produce offspring of	weaknesses	
information to support	Living things produce	the same kind.		https://thewonderofscien
an evidence-based	offspring of the same			ce.com/phenomenal
explanation that	kind, but offspring are	I can create a model		
plants and animals	not identical with	to describe how		
produce offspring of	each other or with	animals and plants		Printable and editable
the same kind, but	their parents. Plants	are classified into		lessons:
offspring are generally	and animals, including	groups with their		
not identical to each	humans, resemble	similarities.		https://tbamoodle.tbaisd. org/course/view.php?id=1
other or their	their parents in many			<u>61</u>
Parents.	features because	I can ask questions		<u>v</u>
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	information is passed	how factors can cause	
	from one generation	species to go extinct.	
	to the next. Plants		
	also are very much,		
<u>1.L4U1.10</u> Develop a	but not exactly, like	I can explain how	
model to describe	their parents and	factors can cause	
how animals and	resemble other plants	species to go extinct.	
plants are classified	of the same kind.		
into groups and			
subgroups according	There are many		
to their similarities.	different kinds of		
	plants and animals in		
1.L4U1.11 Ask	the world today and		
questions and explain	many kinds that once		
how factors can cause	lived but are now		
species to go extinct.	extinct. We know		
opeoloo to ge ontinet.	about these from		
	fossils. Animals and		
	plants are classified		
	into groups and		
	subgroups according		
	to their similarities .		
	Some kinds of plants		
	and animals that once		
	lived on Earth (e.g.,		
	dinosaurs) are no		
	longer found		
	anywhere, although		
	others now living		
	(e.g., lizards)		
	resemble them in		
	some ways.		
			<u> </u>

* Cross Cutting Concepts: Cause and effect: systems and system models; energy and matter; structure and function; stability and change
 <u>https://ngss.nsta.org/CrosscuttingConceptsFull.aspx</u>

PUSD Science District Instructional Guide (Date Updated: 9/27/2019)						
Grade Level: First Grade Science DIG	Time: Quarter 3					
Unit Title: Earth Science & Physical Science: Light & Sound	Time: Quarter 3 Essential Questions: What are some natural resources we use everyday? How do we use these resources and why do we need them? How is light impacted by different materials? What causes shadows? What materials allow light to pass through? What materials block light? How do we hear sounds? Why do vibrations make sound? What does the movement of sound look like? Phenomena: some suggested links to phenomena: https://www.ngssphenomena.com/ https://betterlesson.com > browse > next_gen_science https://www.teacherspayteachers.com https://www.readworks.org					
Standards Learning Progressions	Objectives (I Can)	Key Vocabulary	Resources (Activities/Lessons/Expe riments)	Assessments		

evaluate, and communicate information about the properties of Earth materials and investigate how humans use natural resources in everydaychange the shape of the land. The resulting properties of Earth materials and investigate how humans use natural resources in everydayliving things natural resources soil Water foodStandardsParticipationevaluate, and communicate information about the properties of Earth materials and investigate how humans use natural resources in everydayliving things natural resources soil Water foodStandardsParticipationhttps://jr.brainpop.com (\$)https://jr.brainpop.com (\$)https://www.ngsspheno mena.com/	n
communicate information about the properties of Earth materials and investigate how humans use naturalthe land. The resulting properties of Earth investigate how humans use naturalnatural resources soil Water food heat Sheltershttps://jr.brainpop.com (\$)Image: the land, provide homes for living things.the land, provide investigate how life.properties of Earth natural resources soil Water foodhttps://jr.brainpop.com (\$)	
information about the properties of Earth materials and investigate howlandforms, together investigate howmaterials and investigate howsoil Water foodhttps://jr.brainpop.com (\$)investigate how humans use natural humans use naturalhomes for living theigs.resources in everyday life.heat Sheltershttps://jr.brainpop.com (\$)	
properties of Earth materials and investigate howwith the materials on investigate on the land, provide homes for living things.investigate howWater foodIntegen/instanpoproting (\$)investigate how homes for living humans use naturalinvestigate how foodWater food(\$)investigate how humans use natural humans use naturalinvestigate how heat Sheltershttps://www.ngsspheno https://www.ngsspheno	
materials and investigate how humans use naturalthe land, provide homes for living things.humans use natural resources in everyday life.food heat Sheltershttps://www.ngsspheno https://www.ngsspheno	
humans use natural things. life. Shelters	
humans use natural things. life. Shelters	
resources in everyday iron iron	
life. Humans use natural I can evaluate copper	
resources for information about the (minerals)	
everything they do: for properties of Earth <u>https://betterlesson.com</u>	
example, they use materials and light shadow mirrors	
soil and water to investigate how prisms	
grow food, wood to humans use natural wavelike sound <u>next_gen_science</u>	
burn to provide heat resources in everyday matter	
or to build shelters , life. vibrate	
and materials such as stability and change https://mysteryscience.	
iron or copper I can communicate cause and effect	
(minerals) extracted information about the	
from Earth to make properties of Earth forces push pull twist	
cooking pans. materials and motion shape balance	
investigate how magnet design https://www.teacherspa	
humans use natural evaluate friction	
resources in everyday sketches drawings yteachers.com (does	
life. physical models contain free downloads	
<u>1.P2U1.1</u> Plan and Some materials allow compare test discuss also)	
light to pass through a can plan and carry strengths weaknesses	
investigations them, others allow out investigations	
demonstrating the only some light demonstrating the	
effect of placingthrough, and otherseffect of placinghttps://www.readworks.	
objects made with block all the light and objects made with different materials in org	
diferent materials in Create a dark shadow diferent materials in	
the path of a beam of on any surface the path is a beam of	
light and predict how beyond them (i.e., on light.	
objects with similar the other side from <u>https://thewonderofscie</u>	
properties will affect the light source), I can predict how <u>nce.com/phenomenal</u>	
the beam of light where the light cannot objects with similar	

I.P2U1.2Use modelsto provide evidenceLight and sound arethat vibrating matterwavelike phenomenasound can makeSound can makematter vibrate.vibrating matter can	properties will affect the beam of light. I can use a model to provide evidence that vibrating matter creates sound. I can use a model to provide evidence that sound can make matter vibrate.	Printable and editable lessons: https://tbamoodle.tbaisd .org/course/view.php?id =161
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* Cross Cutting Concepts: Cause and effect: systems and system models; energy and matter; stability and change
 <u>https://ngss.nsta.org/CrosscuttingConceptsFull.aspx</u>

PUSD Science District Instructional Guide (Date Updated: 9/27/2019)					
Grade Level: First Grade Science DIG	Time: Quarter 4				
Unit Title: Physical Science: Movement of Objects	How does force chang How do we achieve a b What is friction and wh How can you reduce fr How can you change a Phenomena: some sug <u>https://www.ngsspherenterson.com</u>	objects? (Push, pull, tw ge a shape? (twist, com balance between object hat causes it? riction between two obj an object's speed, direct ggested links to phenor nomena.com/ om > browse > next_gen e.com payteachers.com (does	npress) ects? etion or shape? mena:	5)	
Standards Learning Progressions	Objectives (I Can)	Key Vocabulary	Resources (Activities/Lessons/Expe riments)	Assessments	

 1.P3U1.3 Plan and carry out investigations which demonstrate how equal forces can balance objects and how unequal forces can push, pull, or twist objects, making them change their speed, direction, or shape. 1.P4U2.4 Design and evaluate ways to increase or reduce heat from friction between two objects. 	in the same line cancel each other and are described as being in balance . The movement of objects is changed if the forces acting on them are not in balance. When two objects rub against each other, this interaction is called friction . Friction between two surfaces can warm both of them (e.g., rubbing hands together). There are ways to reduce the friction between two objects. Designs can be conveyed through sketches, drawings, or physical models . Because there is always more than one	I can plan and do an investigation that shows how equal forces can balance objects. I can plan and do an investigation that shows how unequal forces can push, pull or twist objects. I can plan and do an investigation that shows how unequal forces can change their speed, direction, or shape. I can design and evaluate ways to increase or reduce heat from friction between two objects.	light shadow mirrors prisms wavelike sound matter vibrate stability and change cause and effect forces Push Pull Twist motion shape balance magnet design evaluate friction sketches drawings physical models compare test discuss strengths weaknesses	Arizona Science Standardshttps://jr.brainpop.com (\$)https://www.ngsspheno mena.com/https://betterlesson.com mena.com/https://betterlesson.com > browse > next_gen_sciencehttps://mysteryscience. comhttps://www.teacherspa yteachers.com (does contain free downloads also)https://www.readworks. org	Observations Participation
	always more than one possible solution to a problem, it is useful to			https://thewonderofscie	

compare designs, test them, and discuss their strengths and weaknesses.	nce.com/phenomenal Printable and editable lessons: https://tbamoodle.tbaisd .org/course/view.php?id =161
 Cross Cutting Concepts: Crosscutting Concepts: cause and effect; systems and system models; energy and matter; stability and change. <u>https://ngss.nsta.org/CrosscuttingConceptsFull.aspx</u> 	