

Unit 1 - Partners in the Wild: Plants, Pollinators, and Places to Live

Pacing Guide using Mystery Science

*Informational writing standards are now being covered in science. Please use [these resources](#) to address the informational writing standards. These lessons can be incorporated at any point during the unit.

Unit & Lesson #	Focus	Standards Addressed	Day (20-30 minutes)	Overview	Writing Activities	Additional Activities
Animal Adventures Anchor Phenomenon Life Underground	Animal Biodiversity & Habitats	2-LS4-1 K-2-ETS1-1 K-2-ETS1-2	1	The anchor phenomenon for this unit is a cave north of San Antonio, Texas, that has an unusually large amount of animal poo covering the cave floor. Throughout the unit, students gather details about the mysterious type of animal that lives there. During the introduction, students generate observations and questions about the phenomenon and create an initial conceptual model to explain the phenomenon. Students will gather clues during and after each lesson in this unit to help them improve their explanations. It is	Bat Rest Stop Bracken Cave See-Think-Wonder Chart	

				important to encourage students to recognize that even if they don't know the perfect answer yet, they are going to learn a lot throughout the unit and will have an opportunity to change or add to their first explanation.		
Animal Adventures Lesson 1 How many different kinds of animals are there?	Biodiversity & Classification	2-LS4-1	2	In this session, students examine how scientists organize animals into groups based on their characteristics.		
			3	In the hands-on activity, Animals Sorting Game, students study animal traits and use these traits to sort animal cards into mammals, birds, reptiles, and invertebrates. Students are then challenged to make decisions about animals that don't fall neatly into any of those categories. Wrap-up slides & teacher-led		Online books about Animal Classification: Epic!

			discussion.			
			Anchor Connection Students wonder: Why do different animals live in different places? Students learn: The animal in the cave has the characteristics of a mammal. Even though the cave is filled with a huge amount of poo, the mammal inside is very small.	4	Science Journal Entry to answer anchor connection question	
			<u>Lesson 1</u> <u>Assessment</u> Extensions include: Readings, videos, and activities.	5		
			In this session, students solve the mystery of why a group of wild bighorn sheep would leave their usual desert habitat to visit a second, very different habitat: a local playground.	6		
			In the hands-on	7	Habitat Journal	
Animal Adventures Lesson 2 Why would a wild animal visit a playground?	Habitat Diversity	2-LS4-1				

			activity, Habitat Scavenger Hunt, students record observations of the diversity of life found in the desert and the playground, as well as the physical characteristics of each location. Students combine these observations to create an understanding of how the living and nonliving parts of a habitat support the animals that live there. Wrap-up slides & teacher-led discussion.			
			8 Anchor Connection Students wonder: How can we identify types of animals in different habitats? Students Learn: Bighorn sheep go out at night to eat, and go to the caves during the day to sleep.	<u>Science Journal</u> Entry to answer anchor connection question		
			9 <u>Lesson 2 Assessment</u>			

			Extensions include: Readings, discussions, activities, and an online resource.			
Animal Adventures Lesson 3 Why do frogs say "ribbit"?	Biodiversity, Habitats, & Species	2-LS4-1	10	This session is a case study in biodiversity using the frogs of North America.		
			11	In the hands-on activity, Who's Calling?, students learn to identify frogs by their unique calls and investigate which of two locations has a greater variety of frogs. After listening to recordings of frog calls, students create words that will remind them of the sounds, and then use those words to identify frog sounds in different environments. Wrap-up slides & teacher-led discussion.	<u>Frogs</u>	
			12	Anchor Connection Students wonder:	<u>Science Journal</u> Entry to answer anchor connection	

			discussion.			
			Anchor Connection Students Learn: The bats hang from the ceiling when they are inside of the cave.	16		Science Journal Entry to answer anchor connection question
			<u>Lesson 4 Assessment</u> Extensions include: Readings, discussions, activities, and videos.	17		
Animal Adventures Unit Assessment			<u>Animal Adventures Unit Assessment</u>	18		
Animal Adventures Performance Task Where else do bats live?	Biodiversity, Habitats, & Species	2-LS4-1	In this performance task, students explore and compare two very different places that Mexican free-tailed bats live. After a review of the Animal Adventures unit, students will learn about a new location where a different colony of bats lives. Then, they compare and contrast the physical environment and	19		<u>Bats Habitats</u>

				the other living things that can be found in each place.			
Plant Adventures Anchor Phenomenon Superbloom	Plant Growth and Habitat	2-LS2-1	20	The anchor phenomenon for this unit is an amazing burst of life in a place called Death Valley. How can huge fields of flowers suddenly grow in one of the hottest, driest places on Earth? During the introduction, students generate observations and questions about the phenomenon and create an initial conceptual model to explain the phenomenon. You can split this introduction into two parts with a break in between: complete everything up through the See-Think-Wonder, and then complete everything after that point. Students will gather clues during and after each lesson in	See-Think-Wonder <u>Chart</u> <u>Superbloom Cycle</u>		

Plant Adventures Lesson 1 How did a tree travel halfway around the world?				this unit to help them improve their explanations. It is important to encourage students to recognize that even if they don't know the perfect answer yet, they are going to learn a lot throughout the unit and will have an opportunity to change or add to their first explanation.		
	Seed dispersal	2-LS2-2 K-2-ETS1-2 K-2-ETS1-3	21	In this session, students investigate the mystery of the koa tree, a type of tree that grows in only two places—islands halfway across the world from one another.		Audio Book: <u>From Seed to Plant</u>
			22	In the hands-on activity, students develop three different physical models of seed structures. They observe how structure affects the seed's function in dispersing away from the tree. Then, they use these observations to		

			evaluate whether koa seeds are likely dispersed by wind, water, or animals. Wrap-up slides & teacher-led discussion.			
		23	Anchor Connection Students wonder: What do seeds and plants need to grow? Students learn: The flowers don't come out of nowhere—they grow from seeds. The seeds for each superbloom come from the previous superbloom.		<u>Science Journal</u> Entry to answer anchor connection question	
		24	<u>Lesson 1</u> <u>Assessment</u> Extensions include: Readings and videos.			
Plant Adventures Lesson 2 Why do seeds have so many different shapes?	Animal Seed Dispersal	2-LS2-2	25	In this lesson, students explore how the structures of seeds enable them to disperse, with a focus on seeds that utilize animal structures to aid in their		

			dispersal.			
			26	In the hands-on activity, Seed Travelers, students develop a model of a furry animal (“fluffadoo”) and then use it to test how far seed models with different structures can travel. Wrap-up slides & teacher-led discussion.		
			27	Anchor Connection Students wonder: How do different plants get the light and water they need? Students learn: Seeds begin growing when they are exposed to enough water. It is very, very rare for it to rain enough in Death Valley for a superbloom.	<u>Science Journal</u> Entry to answer anchor connection question	
			28	<u>Lesson 2 Assessment</u>		
Plant Adventures Lesson 3	Water, Sunlight, & Plant Growth	2-LS2-2	29	In this lesson, students investigate		

Why do you find flowers and bees together?				the mystery of why bees tend to spend so much time in and around flowers.		
				30 In the activity, Busy Bees, students develop a model that mimics the function of an animal pollinating plants. Wrap-up & teacher-led discussion.		
				31 Anchor Connection Students wonder: Do animals help with the superbloom? Students learn: The flowers also rely on help from pollinators to make new seeds.	<u>Science Journal</u> Entry to answer anchor connection question	
				32 Lesson 3 Assessment		
Plant Adventures Lesson 4 Could a plant survive without light?	Water, Sunlight, & Growth	2-LS2-1	33	In this lesson, students investigate how plants need water and sunlight to grow.		
			34	In the two-part activity, Seeds —		

			Light and Dark, students experiment with growing radish seeds in light and dark conditions. They plant them in cups, place half of the cups in sunlight, and put the other half in a dark container. Three to seven days later, students compare the seedlings and then watch what happens when all are placed in sunlight.						
			Anchor Connection Students wonder: Why do different plants grow in different places? Students learn: The plants also require sunlight to grow and be healthy. Fortunately, Death Valley has an abundance of sunlight.	35		Science Journal Entry to answer anchor connection question			
			<u>Lesson 4</u> <u>Assessment</u>	36					
			In this lesson,	37	2-LS2-1	Plant Needs &	Plant Adventures		

Lesson 5 How much water should you give a plant?	Habitats			students investigate how different plants grow best under very different conditions, ranging from deserts to tropical rainforests.		
			38	In the activity, Puzzling Plants, students plan and conduct virtual experiments in order to determine how much water and sunlight a set of mystery plants need to grow and stay healthy. Wrap-up & teacher-led discussion.		
			39	Anchor Connection Students learn: The flowers eventually dry up from too much sunlight and not enough water. Their seeds are left behind, though, waiting for the next time the rains come.	Science Journal Entry to answer anchor connection question	
			40	<u>Lesson 5 Assessment</u>		
Plant Adventures Unit Assessment			41	<u>Plant Adventures Unit Assessment</u>		

Plant Adventures Performance Task How can anything live in Death Valley?	Water, Plants & Animals, & Habitats	2-ESS2-3	42	In this performance task, students will obtain information about Death Valley in order to see how different living things make use of water in different forms and in different places. After a review of the Plant Adventures unit, students will virtually travel to different locations in Death Valley. They will make observations about how the water at each location supports a wide variety of incredible living things, ranging from one of the oldest living things on Earth to one of the rarest.	Water and Life in Dry Death Valley	
Unit 1 Common Assessment			43	LPS Unit 1 Common Assessment		