

Wright City Science Curriculum

Unit 5 - 2nd grade

Grade	2
Unit of Study	Plants, Pollination and Seed Dispersal
Length of Unit	10 days; 30 minutes per day
Sample Essential Questions	Sample Corresponding Big Ideas
	Plants depend on water and light to grow (A.1)
	Plants depend on animals for pollination or to move their seeds around (A.2)
	Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people (secondary to A.2)

Missouri Learning Standards	
Priority Standards	Supporting Standards
2.LS2.A.1 Plan and conduct investigations on the growth of plants when growing conditions are altered (e.g., dark vs. light, water vs. no water)	2.ETS1.B.1 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem
2.LS2.A.2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants	2.DS.A.4 Solve problems using information presented in line plots, picture graphs and bar graphs. (A.2)
	2.DS.A.3 Draw a picture graph or a bar graph to represent a data set with up to four categories. (A.2)
	2.DS.A.5 Draw conclusions from line plots, picture graphs and bar graphs. (A.2)

Unit 5 Sequence			
MLS	Topic(s)	Learning Targets	Academic Vocabulary
			soil, seed, stem, leaves, roots, controlled variable, constant variable, condition, unhealthy, healthy, temperature, pollen, pollination, disperse

MLS	Learning Activities	
	Ada Twist, Scientist	Must Do
2.LS2.A.1 Plan and conduct investigations on the growth of plants when growing conditions are altered (e.g., dark vs. light, water vs. no water)	Top Experiments for 2.LS2.A.1 (Plant Needs): • Mini Greenhouse Bean Experiment: Place bean seeds in plastic bags with wet paper towels. Test variables by placing some in a sunny spot, some in a dark cupboard, and some with no water, observing growth over 1-2 weeks. • Light vs. Dark Plant Study: Grow fast-growing plants (like radish or grass seed) in two different setups: one with access to light and one in complete darkness, then compare growth, color, and stem strength.	Option Level

	• Water Quantity Trial: Plant seeds in three identical pots, providing different amounts of water (none, recommended amount, excessive amount) to observe the effects of hydration levels. • Soil/No Soil Investigation: Investigate if plants need nutrients/soil to sprout by planting seeds in a moist paper towel versus a pot with dirt.	
2.LS2.A.2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants	Top 2.LS2.A.2 Experiments and Modeling Activities • Pollination Simulation (Bee Pollinator): Use pipe cleaners (representing bee legs) and cheese puffs or craft pom-poms (representing pollen) to transfer "pollen" between paper flowers. • Seed Dispersal Engineering Challenge (Wind): Students design "helicopters" or flyers using paper and paperclips to model how seeds like maple keys travel away from the parent plant. • Seed Dispersal Challenge (Animal Fur): Use velcro or tape on a piece of felt ("animal fur") to see which types of handmade "seeds" (cotton balls, felt, paper) stick to it, simulating hitchhiker seeds. • "Design a Fruit" Engineering: Students create a fruit with seeds inside that must survive a drop from a height to simulate fruit dropping, and then design a way for the seeds to be carried away by a "pollinator". • Sticky Seed Design: Use double-sided tape and various materials to create a seed that can stick to a sock, mimicking how burrs disperse via animal fur.	Option Level
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