

JMG Teacher Leader Guide				Science TEKS						Notes	Integrated Content
Chapter	Section	Activity	Page	Kinder	1st	2nd	3rd	4th	5th		
1. Plant Growth and Development	Importance and Uses of Plants	Hamburger Plant	3		1.9C	2.9C				dependence on plants as source of food	
		Benefits Mobile	4				3.7D			benefits of plants	
		Know & Show Sombrero	4				3.7D			benefits of plants	Art
		The Choo-Choo Song	5							food from plants	Music
		The Medicine Plant	6				3.7D 3.10A	4.10A 4.10B		traits and uses of Aloe Vera	
		Plant Classification	Leaf-and-Seed Information Chart	7		ext1.10 B					classify leaves and seeds
	Plant Parts		Plant Parts Rap	8			2.10B			plant structures and function	Music
		Touch and Tell	9	K.10B	1.10B					plant parts	
		Plant Parts We Eat	9	K.10B	1.10B					plant parts	Literature
		Seed Science	10			2.10B	3.10A			seed structure and function investigation	
		Flower Dissection	11			2.10B	3.10A			flower structure and function	
	Plant Needs	P.L.A.N.T. Needs	11	K.9B	1.9A	2.9A	3.9A	4.9A	5.9A	basic needs of plants	
		What's Not the Same?	12	K.9B		2.9A	3.9A	4.9A	5.9A	fair test investigation - plants and light	
		Plant People	12	K.9B		2.9A				basic needs of plants	Art
		Picture Yourself a Plant	13	K.9B		2.9A				basic needs of plants	Art, Language Arts
	Plant Growth	Coconut Float	13				3.10A			seed dispersal	Language Arts
		Plant Performance	15			2.9B				plant needs - creative writing	Language Arts
		Topiary Design	16								Art, STEM
	Plant Processes	Power Seeds	16	K.10D		2.10B	3.10A			seed/seedling structure and function	
		Oxygen Factory	17						5.9D	carbon dioxide/oxygen cycle diagram	
Gas Gobblers		18						5.9D	carbon dioxide/oxygen cycle game		
	Spinning Seeds	19				3.10A 3.6C			geotropism and effect of gravity	STEM	
Propagation	Paper Pots	20	K.1C K.9B K.10B K.10D	1.1C 1.10B	2.1C 2.9A 2.10B	3.1B 3.7D 3.9A 3.10A	4.1B	5.1B	recyclable, plantable pots	Art	
	Gallon Greenhouse	21	K.9B	1.9B	2.9A 2.10B	3.10A		5.9A	create table top greenhouse	STEM	
	Propagation Demonstration	21			ext2.10B	ext3.10A			plant propagation methods		
Leadership/Service Learning Projects	Gifts for Others	24								PBL, Art	
	Variable Day	24								PBL	
	Adopt-a-Spot	24								PBL, Art	
	Share What You Know	24								PBL	
2. Soils and Water	Soil Color, Texture and Structure	Touchy Feely	25		1.7A			4.7A		properties of soil	
		Mud Pies	26		1.7A			4.7A		properties of soil	
		Shake, Rattle and Roll	26					4.7A		properties of soil	Math
		Candy Aggregate	27		1.7A					components of soil	
	Nutrients	Nutrient Variable	28							investigation design - effect of fertilizer	
		The Numbers on the Bag	29							fertilizer nutrients	
	Soil Improvement	Bumps Below	30							nitrogen producing plants	
		Building Bins and Compost Sandwiches	31				3.1B 3.7A			compost bin design	STEM, PBL
		Composting Critter Page	31						5.9B	decomposers	
		Compost Sandwich Composition	33				3.7A			compost - writing activity	Language Arts
	Water Cycle and You	Earth Apple	35			2.1C 2.7B				model of available freshwater	Math
		Cloud Maker	36			2.8C		4.8B		water cycle model	
		The Cycle Song	37					4.8B		water cycle song	Music
		Apple Rings and Banana Chips	38							water content in fruit	Math
	Water Movement	Out of the Spout	39					4.7A		water retention of soil	
		Where Did It Go?	39					4.7A		water retention of soil	
Leadership/Service Learning Projects	Water Flows, Soil Goes	40					4.7B		erosion		
	Help Make Their Bed	41					4.7A			PBL	
	Landfill Visit	41				3.7A				PBL	
	Wastewater Visit	41			2.7B					PBL	
	Make a Difference	41				3.7A				PBL	
	Super Soil Business	41				3.7A	4.7A			PBL	
3. Ecology and Environmental	Balance and Interactions in Nature	Nature Class Web	43					4.9B 5.9C		interdependence in food web	Literature
		The Food Chain Gang	45				3.9B			food chain game	
		Polluting Your Planet	47						5.9C	pollution model	PBL
		Exploding Cactus	48					4.10A 5.10A		plant adaptations	
	Habitats	Garden Weather Station	49	K.8A	1.8A	2.8A	3.8A	4.8A		weather tools	Math
		The Tree Community	50		1.9C				5.9A	interdependence of living organisms	
		Gourd Bird House	51	K.1C K.9B	1.1C	2.1C	3.7D			bird habitats	Art
		Our Pocket Park	52	K.9B	1.9B	2.9A	3.9A	4.9A	5.9A		PBL, Language Arts

		Backyard Buddy	52							environmental awards	Social Studies
		Visit with a Vet	53	K.3C K.9B	1.3C 1.9B	2.3C 2.9A 2.10A	3.3C 3.9A 3.10A	4.3C 4.9A	5.3C 5.9A		PBL
	Hand-in-Hand with Nature	On the Move	54					4.9B	5.9C	water pollution	Language Arts
		Both Sides of the Fence	55					4.9B	5.9C	chemical fertilizers	PBL, Language Arts
		Weighing Wastes	57	K.1C	1.1C	2.1C		4.7C		reduce food waste	PBL, STEM
		Let's Try Organic	58							organic gardening	PBL, STEM
		Xeriscape	59				3.9A 3.10A	4.7C 4.10A		water conservation	PBL, STEM
	Recycling	Vermi-composting	61				3.7A		5.9A 5.9B	compost earthworm bin	PBL, STEM
		Supermowing Machine	63							invent mowing machine	PBL, STEM
		Grow Cards	63				3.1B				PBL, Art
		Know & Show Recycling Sombbrero	64	K.1C	1.1C	2.1C	3.1B	4.1B	5.1B	conservation	Art
	Eco-Art	Plant Pounding	65	K.10B	1.10B					create fabric	PBL, Art
		Let's Dye It	66							plant dyes	Art
		Nature Windows (seasons, leaf, plant parts)	66	K.10A K.10B	1.8C					pressed art	Art
		Garden Folk	67							create scarecrow	
		Nature Masks	67							wearable art	Art
		Mother Nature's Children	68								Art
	Leadership/Service Learning Projects	Winter Wildlife Tree	69								PBL
		Backyard Habitat Garden	69								PBL
		Recycled Art Show	69								PBL
4. Insects and Diseases	Insect Basics	Insect Predictions and Survey	71		1.10A	2.10A 2.10C	3.10A			insect characteristics, scientific diagram	
		Insect Symmetry	74			2.10A 2.10C	3.10A			symmetry of butterflies	Math
		The Great Cover-Up!	75			2.10A	3.10A	4.10A			
		Designer Bugs	76			2.10A		4.10A			Art
		Insect Riddles	76			2.10A 2.10C					Language Arts
		Secret Smells Game	79			2.10A 2.10C					
	Insect Life Cycles and Classification	All in the Family: Insect Flash Cards	80							enrichment - classification of insects	
		Ordering Insects	81							enrichment - classification of insects	
		Metamorphosis Bracelets and Belts	83			2.10C		4.10C	5.10C		
		Morpho Puppets	85			2.10C		4.10C	5.10C		Language Arts
		Web Activity: Journey North	85			2.9A 2.9B 2.10C	3.9A 3.10A 3.10	4.10A 4.10C	5.8A 5.9A 5.10A		PBL
	Insect Collecting	Suck A Bug	87	K.9A K.9B	1.10A	2.10A 2.10C					
		It's a Small World	88						5.9A	create Berlese funnel	STEM
		Insect Nets	89	K.4A K.10A	1.4A 1.10A	2.4A 2.10C				create collecting net	STEM
		By Land or Sea	92							insect habitats	
		Ant Lion Farm	93							observation of insect in environment	
	Insect/Plant Interactions	Chew on This!	94					4.10A		insect mouth parts	
		School Yard Survey	97						5.9A	environmental impact of insects	
		Pollinator Puppet Show	97					4.10A		insects and flower pollination	
		The Bartering System	99							interdependence	
		The Lone Bee	101				3.9A			bee shelter	STEM
		Designer Plants and Insects	102					4.10A		interdependence of plants and insects	
	Insect Management	Garden Friends and Foes	102						5.9A	insect classification and environmental impact	
		Don't Bug Me!	104						5.9C		
		Who Goes There?	105							integrated pest management system	PBL
		Critter Creations	107							insect models	
	Plant Diseases	Exploratory Fungi	108							fungus	
		Yeast Bread	108							mold	
		Lacy Leaves	110							decomposers	Art
		Likin' Those Lichens	111							lichens	
		Prescription for Prevention	113							disease prevention	
		There's a Fungus Among Us	114							fungus	
	Leadership/Service Learning Projects	Collect and Share	115								PBL
		Butterfly Garden	115							attracting butterflies	PBL
		Butterfly Release	115							community event	PBL
5. Landscape Horticulture	Design Process	Rooms	117							space design and purpose	
		People and Places	119							yard design for client needs	
		Money Trees	119							planting for energy conservation	

		Site Map	121							landscape design site analysis	
	Design Principles	Nature Wheels	122							landscape design element - color	Art
		Texture Collection	124							landscape design element - texture	
		Same Sides	125							landscape design element - balance	
		Does It Fit?	126	K.9B						landscape design element - proportion	
	Identification and Selection	Tearing Trees	126	K.10A						tree classification - shape	
		How Tall Is That Tree?	127							tree measurement	Math
		Learning Your ABP's	128							enrichment - plant classification and life cycles	
		Great Green Grass	129							enrichment - grass research and improvement	
	Installation	Arbor Day	130					3.7D		special event	
		"Do It Right"	131			2.9A 2.9B				planting a tree	Drama, Language Arts
		Seed, Sod and Plugs	133							planting grass	Language Arts
	Caring for Your Landscape	An Inch of Water	134					4.1B 4.7C		irrigation and water conservation	Math, PBL
		Pruning Places	135							plant pruning	
		More Mulch, More Moist	136					4.1B 4.7C		mulching - water conservation	Math
		Queen Bud	137							plant buds and pruning	
	Leadership/Service Learning Projects	Plant a Bed	138								PBL
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6. Fruit and Nuts	Facts and History	Dr. Fruit	141							research - fruit and nut plants	Math
		Linnaeus' World Wide Names	142							classification names	Language Arts
		Botanical Wood Prints	144							print press	Art
		A Bushel and a Peck	144							non-standard measurement	Math
		Fruit and Veggie Lab	145		1.10B					classification of fruits and vegetables	Social Studies
	Products	Snooty Fruit	146	K.4B						sense of smell	
		Apple-ing Appearance	147	K.5A	1.5A					judging apples	
		Taste Test	148	K.5A	1.5A					properties of fruits	
		JMG Jam	149							homemade berry jam	
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	Growth, Development and Growing Techniques	A Fruit's Life Rhyme	151					3.10C		fruit life cycle	Music
		Fruit Frenzy	152	K.10D						fruit seeds investigation	
		The Zones	152					3.9A	5.8C	temperature zones and path of sun	Social Studies
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		Fruit Factory	154			2.7C 2.9B 2.10B	3.9A			community fruit or nut tree	
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7. Vegetables and Herbs	Planning the Garden	Home Sweet Home	157	K.9A		2.9A 2.9B				site evaluation and selection	
		Make Your Pick	159			2.9B	3.9A			plant selection	
		Small and Large	160	K.9B		2.9A 2.9B 2.10B	3.9A 3.10A			plant space	Math
		Rules are Rules	161	K.1A K.1B	1.1A 1.1B	2.1A 2.1B	3.1A	4.1A	5.1A	outdoor safety practices	Social Studies
		Schedule It	162	K.9B	1.9B	2.9A	3.9A	4.9A	5.9A	garden care and maintenance schedule	PBL
		Some Like It Hot	163				3.10A			plant classification and weather	
	Growing Techniques	Cylinder Gardening	164	K.9A K.9B K.10A K.10B K.10C K.10D	1.9A 1.9B 1.9C 1.10B	2.9A 2.9B 2.9C 2.10B	3.9A 3.9C 3.10A 3.10B 3.10C	4.9A 4.10A 4.10B 4.10C	5.9A 5.9B 5.9D 5.10B	plant investigation design	
		Paper Towel Gardening	165	K.10D		2.9A 2.9B				space planning and organization	Math
		Tender Transplants	167	K.9A K.9B	1.9A 1.9B	2.9A 2.9B	3.9A 3.9C	4.9A	5.9A 5.9B	steps for transplanting	
		Weed Mats	169	K.9A K.9B	1.9A 1.9B	2.9A 2.9B	3.9A 3.9C	4.9A	5.9A 5.9B	natural weed removal	
		Season Extenders	170			2.9B	3.9A 3.9C	4.9A	5.9A	design controlled environment	STEM/STEAM
	Harvesting	Garden to the Table	171							harvest plants	
		Beauty Contest	172							classification	
		Seed Bank	172	K.10C K.10D	1.10B					collection of seeds	
	Nutrition in the Garden	The Pyramid	173							nutrition	Health
		Food Safety	174							food safety	Health

