

Fourth Grade STEM Unit

STEM Area	Name of Lesson:	Iowa/Common Core Concept or Skill	Where to Find It @TeachersGoingGreen.com
Science	Mapping Soil, Making Soil	<ul style="list-style-type: none"> • 4-ESS2-2 Analyze and interpret data from maps to describe patterns of Earth's features. 	Fourth Grade Science
	Greens & Browns of Composting	<ul style="list-style-type: none"> • 4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. 	Fourth Grade Science
	Rainfall & Erosion	<ul style="list-style-type: none"> • 4-ESS2-1 Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. 	Fourth Grade Science
	Mapping Energy	<ul style="list-style-type: none"> • 4-ESS3-1 Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. 	Fourth Grade Science

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Technology	Food Around the World	<ul style="list-style-type: none"> • SS.3-5.BS.2 Understand the influences on individual and group behavior and group decision-making. <ul style="list-style-type: none"> ○ Understand that people involved in a dispute often have different points of view. ○ Understand that communicating different points of view in a dispute can often help people to find a satisfactory compromise. • S.3-5.SI.1 Identify and generate questions that can be answered through scientific investigations. <ul style="list-style-type: none"> ○ Students ask questions that they can answer with scientific knowledge combined with their own observations. 	Fourth Grade Social Studies
	Guilds & Communities, Plants & People	<ul style="list-style-type: none"> • SS.3-5.BS.2 Understand the influences on individual and group behavior and group decision-making. <ul style="list-style-type: none"> ○ Understand that people involved in a dispute often have different points of view. ○ Understand that communicating different points of view in a dispute can often help people to find a satisfactory compromise. • 4-LS1-1 Construct an argument that plants & animals have internal & external structures that function to support survival, growth, behavior, and reproduction. 	Fourth Grade Social Studies
	The Giving Trees	<ul style="list-style-type: none"> • SS.3-5.PSCL.1 Understand the rights and responsibilities of each citizen and demonstrate the value of lifelong civic action. <ul style="list-style-type: none"> ○ Students ask questions that they can answer with scientific knowledge combined with their own observations. 	Fourth Grade 21st Century Skills
	Plants to Dye For	<ul style="list-style-type: none"> • 4.MD.A.1 Know relative sizes of measurement units within one system of units Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. 	Fourth Grade Mathematics

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Engineering	Design & Cook with Solar Ovens	<ul style="list-style-type: none"> • 4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. • 4-PS3-4 Apply scientific ideas to design, test, and refine a device that converts energy from one form to another. 	Fourth Grade Mathematics
	Rainfall & Erosion	<ul style="list-style-type: none"> • 4-ESS-2-1 Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. 	Fourth Grade Science
	Fractal Snowflake Formation	<ul style="list-style-type: none"> • 4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. 	Fourth Grade Mathematics
Mathematics	Creating Neighborhood Maps	<ul style="list-style-type: none"> • 4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. 	Fourth Grade Mathematics
	Making & Using a Rain Gauge for Math	<ul style="list-style-type: none"> • 4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor. 	Fourth Grade Mathematics
	Plants to Dye For	<ul style="list-style-type: none"> • 4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), 	Fourth Grade Mathematics