

Soil & Water Science

SoTitle: Soil & Water Science

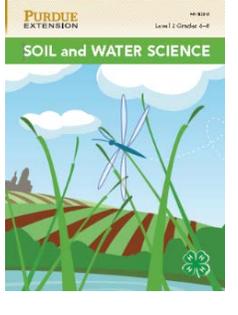
For: youth in grades 3 – 12

Keywords: science, soil, water, erosion, conservation, environment

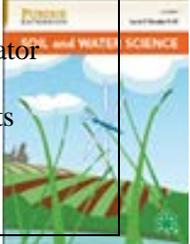
Description: The Soil & Water Science curriculum is designed for youth who enjoy learning about science and two very important natural resources: soil and water. Level 1 introduces basic terms and concepts to youth in grades 3-5. Activities focus on understanding important soil and water processes.

Level 1 activity titles:		# 4-H-1027	
<ul style="list-style-type: none"> • Erosion <ul style="list-style-type: none"> ○ Splash ○ Water ○ Wind • Floods! • Life in the Soil • Properties of Water 	<ul style="list-style-type: none"> • Soil and Water • Soil Needs Space • Soil Origins • Soil Profiles • Soil Textures • The Water Cycle • What is a Watershed? 		

Level 2 activities help youth put the basic concepts into action to understand more advanced soil and water concepts and interactions with the environment. For grades 6-8.

Level 2 activity titles:		# 4-H-1028	
<ul style="list-style-type: none"> • Careers • Clean Water • Color Clues • Conservation Practices • Floodplains • The Kankakee Marsh • Municipal Water Treatment • Onsite Wastewater Treatment 	<ul style="list-style-type: none"> • Soil Erosion • Soil Formation • Soil Health • Soil Texture • Storm Water Runoff • Surface Water and Groundwater • Water Testing • Wetlands 		

Level 3 activities are divided into chapters as people might use the information in them. Level 3 focuses on soil and water science impacts on people and the environment and will prepare high-school aged youth to be well informed and to study these topics at a college or university.

Level 3 activity titles:		# 4-H-1029	
<ul style="list-style-type: none"> • You are a Homeowner <ul style="list-style-type: none"> ○ City Dwellers/Country Dwellers ○ Conservation at Home ○ Soil Moisture ○ Why Should I Care About My Soil? • You Live in a Watershed <ul style="list-style-type: none"> ○ Stream Water Quality Monitoring ○ Water as a Resource ○ Water Information Online ○ Water Pollution 	<ul style="list-style-type: none"> • You are a Food and Fiber Producer <ul style="list-style-type: none"> ○ Agricultural Soils ○ Agricultural Water ○ Soil Erosion ○ Water and CAFOs • You are the Mayor <ul style="list-style-type: none"> ○ Conservation Planning ○ Explore Your Wastewater Treatment Plant ○ Planning for Growth ○ Wetlands 	<ul style="list-style-type: none"> • You are a Teacher <ul style="list-style-type: none"> ○ Interactive Demonstration ○ Lights, Camera, Learn-by-Doing! ○ Mentor a 4-H Member ○ Share Your Knowledge • You are a Legislator <ul style="list-style-type: none"> ○ Challenges ○ Current Events 	

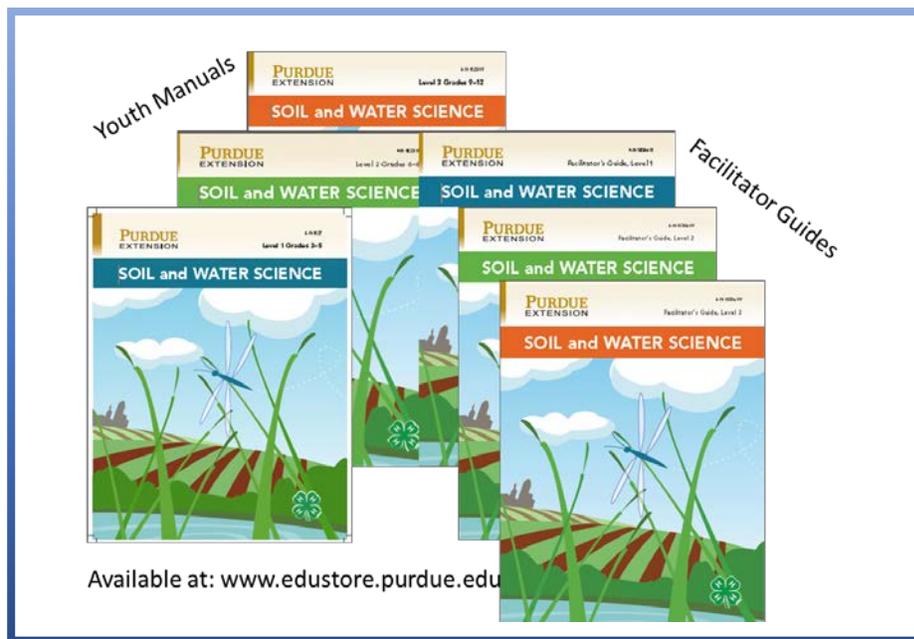
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A “Facilitator’s Guide” with guidance for educators is available for each youth manual. The Facilitator’s Guide includes a note to the facilitator about the youth curriculum and a discussion. Additional information is included for each activity:

- The Big Picture – background information and why the topic is important
- Facilitating the activity – suggestions for working with youth doing the activities
- Essential Questions – a discussion of possible answers to the experiential learning questions in the youth manuals
- Next Generation Science Standards
- Success Indicator – how the educator will know if youth understand essential ideas

Publications:

The manuals are available for download by youth and adults online at Purdue Extension’s The Education Store, www.edustore.purdue.edu. Enter “Soil and Water Science” in the *Store Search* box.



Reviewed by scientists and education specialists and have passed National 4-H peer review

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