

Acres of Adventure, Book 2

Afterschool Agriculture: Acres of Adventure, Book 2, a publication of National 4-H, is intended to promote agricultural literacy among young people during out-of-school time while developing their understanding, appreciation, and application of science through a variety of hands-on agriculturally-based activities. Aimed primarily at youth in grades 3 to 5, *Acres of Adventure* reinforces various educational standards as indicated below, including selections from science, visual arts, social studies, math, physical health, and foreign language.

Acres of Adventure, Book 2 is available from your county Extension office or online at <http://estore.osu-extension.org>. Ohio residents get the best price when they order and pick up their purchases through local Extension offices.



Summary of Learning Outcomes

Activity	Ag Skill	Life Skill	National Education Standard	Success Indicator
AGRICULTURE GONE WILD				
From Fruit to Leather	Making a fun and tasty fruit leather snack	Making decisions—analyzes situation/information	NS.K-4.2 Physical Science	Decide which fruits would make tasty leather
No-Drip Diapers	Investigating the absorbent power of cornstarch in diapers	Reasoning—Extracts information and data	NS.K-4.5 Science and Technology	Collects data about the properties and use of super absorbent corn polymers in diapers
Bigger, Better Bubbles	Discovering the role soy plays in creating soap bubbles	Solving Problems—Analyzes possible causes / reasons	NS.K-4.5 Science and Inquiry	Test glycerin recipes to analyze how to create the best bubble.
Carefree Corn Plastic	Making a fun and pliable corn plastic from cornstarch	Solving Problems—Generates / evaluates solutions	NS. 5-8.6 Science in Personal and Social perspectives	Makes corn plastic and generates new uses that might solve environmental problems
Packing Peanut Play	Making art and structures with corn-based packing peanuts	Communicating with Others – Speaks extemporaneously	NA-VA.-K-4.6 Making connections Among Visual Arts and Other Disciplines	Creates 3-D artwork made of biodegradable packing peanuts and communicates about the design with others
Slippery Stuff	Exploring a food science problem	Reasoning—Apply reasoning skills to solve problems	NS.K-4.1 Science as Inquiry	Experiments with surface tension using soap and lecithin as surfactants

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Mysterious Mixtures	Discovering the role soy plays in mixing oil and water in foods	Acquiring and Evaluating Information—Obtains data	NS.K-4.2 Physical Science	Makes a simple salad dressing and adds an emulsifier
Food Glue	Exploring the different food products used in making glue	Acquiring and Evaluating Information –Obtains data	NS.K-4.1 Science as Inquiry	Makes glue, tests glue, and uses glue in papier-mâché
Veggie Ink	Making a vegetable-based soy ink	Reasoning—Examines information	NS.K-4.2 Physical Science	Makes soy ink and prints with ink
Great Lightening	Using microwave energy to release the remarkable power in grapes	Applies technology—Follows proper procedures	NS.K-4.1 Science as Inquiry	Uses the microwave to demonstrate the high sugar content of grapes
FARM PHYSICS				
Bridge the Gap	Understanding how the science of bridge building can solve problems on the farm	Solving Problems—Analyzes possible causes / reasons	NS.K4.2 Physical Science	Builds a paper bridge to demonstrate how physics can solve a problem on a farm
Eggs on the Move	Using investigative skills to detect differences in eggs	Making Decisions – Analyzes situation / information	NS.K-4.2 Physical Science	Decides whether an egg is fresh or hardboiled using physics concepts
Flapping Chickens	Finding solutions to the problem of weighing live farm animals	Solving Problems – Analyzes possible causes / reasons	NS.K-4.2 Physical Science	Conducts physical experiments and solves the problem of how to weigh an animal
Float Your Boat	Investigating the transportation of agriculture products on lakes and rivers	Solving Problems—Judges effectiveness / efficiency of solution	NS.K-4.5 Science and Technology	Designs and constructs
Siphon Solutions	Investigating the movement of liquids between differing elevations	Solving Problems—Devises / implements plan of action	NS.k-4.2 Physical Science	Creates a siphon to simulate a solution to a farm problem
Dome Dynamics	Exploring the use of domed structures on the farm	Performing as a team member to complete tasks	NS.K-4.2 Physical Science	Builds a life-size dome working as a team member

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Tower Transmissions	Exploring the use of towers to transmit information on the farm	Solving Problems—Analyzes possible causes / reasons	NS.K-4.2 Physical Science	Builds a newspaper tower to demonstrate how physics can solve a farmer’s problem
Rubber Band Rolling Can	Investigating the use of farm machinery to move objects	Reasoning—Applies rules / principles to process / procedure	NS.K-4.2 Physical Science	Constructs a can that moves by itself using stored energy
Watering Can Irrigation	Exploring how gravity can be used to move water to thirsty crops	Solving Problems—Analyzing possible causes / reasons	NS.K-4.2 Physical Science	Makes a watering can using the laws of motion to solve a farm physics problem
Uphill Motion	Exploring the challenges of moving irrigation water uphill	Solving Problems; analyzes possible causes/ reasons	NS.K-4.2 Physical Science	Performs simulation experiment that moves water uphill
FRONTIER LIVING				
Please Pass the Pancakes	Recognizing how pioneers used milk and flour in everyday recipes	Performing as a Team Member—Actively participates in team activities	NSS-USH.K-4.1 Living and Working Together in Families and Communities, Now and Long Ago	Makes butter and uses buttermilk to make pancakes
Pumpkin Pie in a Bag	Recognizing how the pioneers used pumpkins for nourishment and enjoyment	Performing as a Team Member – Completes tasks	NM-MEA.3-5.2: Measurement	Makes pumpkin pie in a bag, assembly-line style
Tortilla in a Bag	Exploring the versatility of native flatbreads	Performing as a Team Member—Assumes responsibility for accomplishing team goals	NSS-G.K-12.4 Human Systems	Works as a team member to make tortillas for the entire group
Food on the Run	Discovering the nutritional value of trail mix	Reasoning—Uses logic to draw conclusions	NPH-H.K-4.1 Health Promotion and Disease Prevention	Identifies nutrition information and enjoys snacks from different food groups
Home Grown Soap	Exploring the connection between agriculture products and pioneer soap making	Thinking Creatively—Applies creative thinking skills to generate new ideas	NPH-H.K-4.3 Reducing Health Risk	Makes soap and demonstrates good hand hygiene

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Cargo on the Move	Using pioneer technology to protect food from damage	Solving Problems—Devises and implements a plan of action	NS.5-8.5 Science and Technology	Creates food packing that protects an egg during a trail hike
Cornhusker Dolls	Experiencing how pioneers turned leftovers into toys	Teach others—Teaches others new skills	NS.K-4.6 Personal and Social Perspectives	Makes a toy and plays with it or demonstrates how a child would play with it
Bread Basket Weaving	Experiencing how pioneers turned leftovers into useful products	Making Decisions—Applies principles to situation	NA-VA.K4.1 Understanding and Applying Media, Techniques, and processes	Weaves a basket out of salt dough
Finger Weaving	Experiencing how pioneer women occupied their leisure time	Interprets Information—Integrates	NA-VA.k-4.1 Understanding and Applying Media, Techniques, and Processes	Completes finger-weaving rope to make gift ribbon, toy snakes, belts, or curtain tie-backs
Playing with Sounds	Experiencing how pioneer children occupied their leisure time	Performing as a Team Member—Actively participates in team activities	NA-M.K-4.3 Improvising Melodies, Variations, and Accompaniments	Works as a team member to create a musical performance
INSECT INVASION				
Quit Bugging Me	Exploring the characteristics of insects pests in the environment	Performing as a Team Member—Assists team members	NS.K-4.3 Life Science	Identifies the pest characteristics
Let's Go Ant Watching	Discovering how ants improve soil quality	Making Decisions—Gathers information	NS.K-4.3 Life Science	Observes, records, and compares various ant activity
Bug Sweep	Observing and categorizing the various bugs in the neighborhood	Reasoning—Applies rules/principles to a process/ procedure	NS.K-4.3 Life Science	Categorizes bugs and insects according to rules/ principles that they observe
Buggy Snakes	Learning bug characteristics by preparing bug snacks	Performing as a Team Member—Completes tasks	NS.K-4.6 Personal and Social Perspectives	Prepares a fun snake to share with classmates

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Pest Air Raid	Reflecting on the destructive power of flying insects	Reasoning—Uses logic to draw conclusions	NS.5-8.3 Life Science	Simulates a swarm attacking a crop and draws conclusions about pest problem
Feast Like a Bug	Discovering the various characteristics of insects mouthparts	Solving Problems—devises and implements a plan of action	NS.K-4.3 Life Science	Uses tools simulating insects mouthparts to eat a snack
Yucky Dirt	Recognizing the presence of living creatures in soil	Inquiring and Evaluating information—Interprets information	NS.K-4.3 Life Science	Observes soil samples looking for living organisms
Web Hunt	Recognizing the important role spiders serve to agriculture	Reasoning—Uses logic to draw conclusions	NS.K-4.3 Life Science	Finds spider webs and identifies web types
If Bugs Could Talk	Discovering the characteristics of insects communication	Performing as a Team Member—Encourages team members	NL-FL.K-12.1 Communication	Communicates using several methods (touch, sound, visual, and chemical) to imitate insect communication
When Bugs Go Bad	Understanding the diets and habits of common insects pests	Communicating with Others—Presents complex ideas/ information	NS.K-4.3 Life Science	Performs a play that provides information about pest diets/ habits