Acres of Adventure, Book 1

Afterschool Agriculture: Acres of Adventure, Book 1, 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, art, social studies, math, and physical health.

Acres of Adventure, Book 1 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
ALL ABOUT AGRICULTURE				
Cold Air and Fuzzy Mittens	Recognizing which natural fibers make the best insulators	Making Decision—Applies various strategies to make decisions	NS.K-4.1 Science as Inquiry	Discovers and describes different insulating properties of materials used to make bag-mittens
Ice Cream in a Bag	Discovering the agriculture products used in the production of ice cream	Performing as a Team Member—Completes tasks	NS.K-4.2 Physical Science	Works together to make ice cream
Homegrown Play Dough	Exploring the versatile properties of wheat grain	Teaching Others—Models proper attitudes	NS.K-4.1 Science as Inquiry	Makes homegrown play dough and plays with others
Cotton to Bluejeans	Exploring the role of cotton fiber in the production of clothing and fabrics	Thinking Creatively—Applies creative thinking skills to generate new ideas	NA-VA.K4.1 Understanding and Applying Media, Techniques, and Processes	Creates a bluejeans bag (storage bag, book bag, laundry bag, tote bag, or money bag)
Cycling Back to Nature	Recognizing the interdependence of agriculture and recycling	Thinking Creatively—Recognizes relationships and generalizes existing ideas	NS.5-8.6 Personal and Social Perspectives	Cuts the Mobius Loop which symbolizes the potentially never-ending use and reuse of materials
Paper Making	Discovering the role tree fiber in the production of paper	Applying technology—Manipulates technology for desired results	NS.K-4.5 Science and Technology	Makes recycled paper

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Making a Mozzarella	Exploring the science of cheese protein	Reasoning—Validates the principle	NS.K-4.2 Physical Science: Properties of objects and materials	Makes cheese using enzymes and heat for coagulation
Tie Dye Agriculture	Creating and using natural dyes from cultivated crops	Acquiring and Evaluating Information—Predicts outcomes	NA-VA.K-4.1 Understanding and Applying Media, Techniques, and Processes	Process dyes from natural materials
Pizza Farm	Understanding that farmers produce all the ingredients needed to make pizza	Performing as a Team Member—Assists team members	NM-MEA.3-5.1 Measurement	Works as a team member to prepare one step in the making of the pizza and then prepares an individual pizza to eat
Bread in a Bag	Exploring the science and history of bread making	Performing as a Team Member—Assists team members	NSS-G.K-12.2 Places and Regions	Makes Bread and learns about breads of different cultures
FAST FOOD AGRICULTURE				
Let's Do Lunch	Understanding how to satisfy wants and needs by bartering for food	Solving Problems—devises, evaluates and adjusts a plan of action	NSS-EC.K-4.5 Grain from Trade	Demonstrates a plan to trade resources to get a balanced lunch
Let's Have an Auction	Experiencing the economics of buying and selling products in an auction setting	Making Decisions—Considers risks and implications	NSS-EC.K-4.1 Scarcity	Determines how to use limited money to purchase wanted items
You Are What You Eat	Gaining knowledge about food labels	Reasoning—Extracts information and data	NPH-H.K-4.2 Health information, products and services	Examines and evaluates different food labels for ingredients and nutritional information
Taking the Squeeze Out of Bread	Designing technology to keep sandwiches from going flat	Solving problems—generates/ evaluates solutions	NS.K-4.5 Science and Technology	Using design technology to solve a food-packaging problem
Tasty Testing	Practicing consumer skills by testing different types of popcorn	Making Decisions—Understands the decision making process	NSS-EC.K-4.7 Markets—price and quantity determination	Practices consumer decision making by evaluating different product according to criteria

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Blender Creations	Experimenting with a blender, fruits, and vegetables to create a product	Performing as a Team Member—Actively participates in activities	NSS-EC.K-4.14 Profit and the Entrepreneur	Produces a tofu smoothie and an advertisement designed to market it
High Speed Mystery Foods	Experimenting with dehydrated foods	Reasoning—uses logic to draw conclusions	NS.K-4.1 Science as Inquiry	Draws conclusions by re-hydrating food to identify mystery products
Lemonade Wars	Creating a lemonade product that outsells the competition	Making decisions—Analyzes situation/ information and considers risks/ implications	NSS-EC.K-4.9 Competition in the Marketplace	Experiences decision making as a producer marketing a product
Pasta Jewels	Conducting a business simulation that makes Pasta Jewel bracelets	Performing as a Team Member—Completes tasks and obeys rules	NSS-EC.K-4.4 Role of Incentives	Produces a product according to company rules
Banana Buffet	Conducting a restaurant simulation that features a banana buffet	Performing as a Team Member—Assumes responsibility for accomplishing team goals	NSS-EC.K-4.14 Profit and the Entrepreneur	Demonstrates the ability to work as a team member in a restaurant
MYSTERY AGRICULTURE				
M&M Mystery Challenge	Understanding that advertising claims for food products can be tested	Solving Problems—Examines information and data	NS.K-4.1 Science as Inquiry	Examines the advertising claims about a food by performing experiments and examining data
Sinkers and Floaters	Making predictions about food products that sink or float	Reasoning—Creates/ develops new rules/ principles	NS.K-4.1 Science as Inquiry	Makes predictions and tests different foods according to principles of floating/ sinking
Mystery Food Taste Test	Recognizing how the sense of taste can help determine food quality	Reasoning—Uses logic to draw conclusions	NS.K-4.1 Science as Inquiry	Predicts a food product using sense of taste
Mystery Food Touch Test	Recognizing how the sense of touch can help determine food quality	Reasoning—Uses logic to draw conclusions	NS.K-4.1 Science as Inquiry	Predicts the contents of a “food balloon” using the sense of touch

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Mystery Food Sniff Test	Recognizing how the sense of smell can help determine food quality	Reasoning—Uses logic to draw conclusions	NS.K-4.1 Science as Inquiry	Predicts a food product using sense of smell
Mystery Mush	Exploring the unusual properties of cornstarch	Reasoning—Applies rules/ principles to process/ procedures	NS.K-4.1 Science as Inquiry	Produces cornstarch putty and applies reasoning skills to decide whether it is liquid or a solid
Mystery Messages	Investigating the properties of food products used in invisible ink	Reasoning—Uses logic to draw conclusions	NS.K-4.1 Science as Inquiry	Creates a visible message by "burning" organic liquids such as milk or juice
Potato Power	Exploring the power of starch in potatoes	Solving Problems—Analyzes possible cause/ reasons	NS.K-4.1 Science as Inquiry	Creates a potato battery that runs a clock
Tofu Timber	Exploring the versatility of vegetable protein	Solving problems—Generates/ evaluates solutions	NS.K-4.6 Science in Personal and Social Perspectives	Creates soybean building product and generate ideas for possible uses
Surprising Flavors	Discovering how different flavors can be used to create new foods	Performing as a Team Member—Attends closely to team activities	NS.K-4.6 Science in Personal and Social Perspectives	Performs as a team member to create a new product and a marketing scheme
PLANT DETECTIVES				
Seed Search	Investigating the variety of seeds in fruits and vegetables	Reasoning—Examines data for relevance and accuracy	NS.K-4.3 Life Science	Collects experimental data to learn about seeds in fruits and vegetables
Hot House Detective	Creating seed necklaces to examine what makes seeds grow	Solving Problems—Analyzes possible cause/ reasons	NS.K-4.1 Science as Inquiry	Creates an experiment that tests conditions needed to germinate a seed
Seed Sort	Making connections between various types of bean seeds	Reasoning—Applies rules/ principles to process/ procedures	NM-AGL.3-5.1 Understanding Patterns, Relations and Functions	Sorts bean/seeds using the rules from sorting map
Root tasting Party	Investigating different types of root crops	Making decisions—Gathers information	NS.K-4.3 Life Science	Tastes and rates taproots to experience roots as a plant part in food

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Thirsty Stem races	Recognizing how quickly water moves through stems	Solving Problems—Analyzes possible cause/ reasons	NS.K-4.3 Life Science	Creates a model to demonstrate the movement of water and food through stems
Log rolling	Exploring the function of roots and stems	Performing as a Team Member—Assists team members	NS.K-4.3 Life Science	Participates as a team member in building a forest of trees
Budding Leaves	Examining the number of leaves found in various vegetable leaf buds	Performing as a Team Member—Completes tasks	NS.K-4.3 Life Science	Inspects a variety of leaves and prepares them for snacks
Let's Play Flower	Determining what makes a flower attractive to pollinating insects	Performing as a Team Member—Actively participates	NS.K-4.3 Life Science	Demonstrates the pollination process
Soil Sam	Testing the ability of seeds to germinate in the most unlikely places	Solving Problems—Predicts outcomes	NS.K-4.1 Science as Inquiry	Works in a team to explore what plants need to grow
Be the Fruitmaster	Strategizing with fruit in a classic game of Fruitmaster	Reasoning—Analyzes logic/ rule/ principles	NM-PROB.PK-12.3:Apply and adapt a variety of appropriate strategies to solve problems	Uses reasoning skills to play and win a game of logic