

Benchmarks



I. Understanding Food and Fiber Systems

Standards			
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Bench- marks	A. Understand the meaning of Food and Fiber Systems/agriculture.	B. Understand the essential components of Food and Fiber Systems (e.g production, processing, marketing, distribution, research and development, natural resource management, and regulation).	C. Understand Food and Fiber Systems' relationship to society.
K-1	Students will discover food, clothing, and shelter originate from plants and animals. They will match and/or illustrate a product and its origin.	Students will identify types of farms. They will match different kinds of farms to their products.	Students will identify Food and Fiber Systems products. They will give examples of agricultural products they use.
2-3	Students will tell how agriculture provides people's basic food, clothing, and shelter needs. They will identify regional agricultural products and the basic needs they fulfill.	Students will describe the journey of an agricultural product from the farm to the consumer. They will label the sequence of steps a food or fiber product takes from production, processing, marketing and distribution to the consumer.	Students will identify people who work in Food and Fiber Systems. They will categorize people in the community who provide food, clothing, and shelter.
4-5	Students will identify the natural resources Food and Fiber Systems use to provide people's basic needs. They will describe how resources (rivers, forests, oceans, range land, etc.) contribute to world agricultural production.	Students will determine the role of natural resource management in Food and Fiber Systems. They will explain the importance of managing soil, air, water and energy to agricultural production.	Students will identify major agricultural commodities produced in their state. They will compare commodity output at state and national levels.
6-8	Students will define agriculture in terms of the Food and Fiber System components. They will show agriculture is a complex system of production, processing, marketing and distribution.	Students will describe the function of Food and Fiber System components, including production, processing, marketing, distribution, research and development, natural resource management, and regulation. They will discuss the function of each component.	Students will recognize Americans spend the smallest proportion of personal income on food. They will compare how much Americans spend on food to the amount others spend.
9-12	Students will explain why agriculture is the foundation of a nation's standard of living. They will demonstrate that Food and Fiber Systems must be sustainable, and resources used must be renewed and replenished.	Students will explain the importance of the essential components of Food and Fiber Systems and describe their interdependence. They will discuss how the components have changed.	Students will identify plant and animal products that serve as ingredients for producing products that meet societal needs other than food, clothing and shelter. They will explain plant and animal products and byproducts are used to manufacture medical, cosmetic, cleaning and other products.



Standards		
D. Understand the local, national, and international importance of Food and Fiber Systems.	E. Understand Food and Fiber Systems careers.	Benchmarks
Students will identify local Food and Fiber Systems businesses. They will match these businesses to agricultural products.	Students will identify Food and Fiber Systems jobs in the community. They will collect pictures of people doing agricultural work.	K-1
Students will determine resources, such as water and land, are shared by households, businesses, and agriculture. They will describe examples of multiple uses for land and water resources.	Students will generate a list of Food and Fiber Systems careers. They will research characteristics of agricultural careers.	2-3
Students will explain how traders, explorers, and colonists brought plants and animals to this country. They will locate the origins of regional agricultural products available.	Students will examine the changes in Food and Fiber Systems due to technological advances, and subsequent changes in occupational opportunities. They will identify agricultural careers and how they have changed.	4-5
Students will examine why agriculture is the oldest, largest, and most-essential industry. They will discuss the national and international importance of Food and Fiber Systems.	Students will recognize that agricultural inventions and discoveries produce new career opportunities. They will compare knowledge, skills, and attitudes required for entry-level, technical, and professional careers in Food and Fiber Systems.	6-8
Students will explain how globalization has impacted commodities traded on world markets. They will cite examples of how global markets affect personal and professional choices.	Students will discuss non-traditional agricultural careers and their effects on other industries. They will create a career path and determine its relationship to Food and Fiber Systems.	9-12

II. History, Geography, and Culture

		Standards		
		A. Understand Food and Fiber Systems' role in the evolution of civilizations.	B. Understand Food and Fiber Systems' role in societies throughout world history.	C. Understand Food and Fiber Systems' role in U.S. history.
Bench- marks				
K-1	Students will illustrate how agriculture provides food, clothing and shelter. They will classify agricultural products as food, clothing, or shelter.	Students will illustrate how events, such as seasonal festivals, focus on Food and Fiber Systems . They will identify agriculture-based celebrations or festivals in the community.	Students will realize most early Americans were agriculturalists. They will identify prominent early Americans involved in Food and Fiber Systems .	
2-3	Students will explain how agriculture is the foundation of civilizations. They will identify family experiences or involvement with Food and Fiber Systems .	Students will identify an early society. They will illustrate agriculture's role in sustaining that society.	Students will describe how native and settler populations interacted with the environment. They will identify the origins of food, clothing, and shelter of American Indians and early settlers.	
4-5	Students will analyze how early inhabitants mostly relied on hunting and gathering. They will describe agricultural changes from nomadic societies to permanent settlements.	Students will discuss how the desire to obtain exotic foods and spices, and precious gems and minerals motivated European exploration. They will trace the origins of food, fiber, and natural resources early European explorers traded.	Students will illustrate how people seeking to meet their basic needs moved from region to region as resources became scarce. Students will describe examples of immigration and migration in U.S. history.	
6-8	Students will determine agriculture's role in the development of civilizations. They will evaluate innovations that increased the availability of food, clothing, and shelter.	Students will explain how expanded trade led to development of industrialized societies. They will evaluate the importance of agricultural commodities in the growth of international trade during the Age of Exploration.	Students will identify historical events that influenced agricultural development. They will describe positive and negative impacts on Food and Fiber Systems, resulting from historical events.	
9-12	Students will compare nomadic life to settlements and towns. They will analyze how the barter system evolved and encouraged economic growth, communication, and multiculturalism.	Students will identify nations where international food and fiber involvement exists. They will investigate the impact of global societies on food and fiber systems.	Students will identify the role agriculture played in U.S. development. They will analyze agriculture's role in events that shape the nation.	



Standards		
D. Understand the relationship between Food and Fiber Systems and world cultures.	E. Understand how different viewpoints impact Food and Fiber Systems.	Benchmarks
Students will discover foods they consume originated from different countries. They will trace foods back to the original country.	Students will realize people live in cities, towns, and rural areas. They will illustrate characteristics of cities, towns, and rural areas.	K-1
Students will explain why agriculture influences food and clothing in cultures. They will compare food and clothing among cultures.	Students will determine whether they live in a city, suburb, town, or rural area. They will give examples of contrasting views of Food and Fiber Systems in the community.	2-3
Students will identify geographic origins of plants and animals. They will locate current world-production areas of Food and Fiber Systems products.	Students will identify Food and Fiber Systems issues in the community or state. They will contrast different viewpoints of each issue.	4-5
Students will explain how geography influences food and fiber production. They will analyze regional geographic characteristics influencing food, clothing, and shelter choices.	Students will summarize national Food and Fiber Systems issues. They will analyze the viewpoints of major stakeholders.	6-8
Students will recognize world cultures affect agriculture. They will explain how consumer trends impact Food and Fiber Systems.	Students will compare global issues impacting Food and Fiber Systems. They will justify personal viewpoints based on research.	9-12

III. Science, Technology, and Environment

		Standards	
		A. Understand how ecosystems are related to Food and Fiber Systems.	B. Understand Food and Fiber Systems dependence on natural resources.
Bench- marks			
K-1	Students will identify the natural life cycles of plants and animals. They will illustrate life-cycle stages.	Students will identify natural resources. They will illustrate natural resources used by Food and Fiber Systems.	
2-3	Students will describe components of an ecosystem. They will illustrate specific components of an ecosystem in the community.	Students will describe renewable and non-renewable natural resources. They will classify natural resources used in the production of food, clothing, and shelter into renewable or non-renewable categories.	
4-5	Students will discover ecosystems regenerate. They will analyze the interaction of Food and Fiber Systems with natural cycles.	Students will examine how living organisms transform natural resources into consumer products. They will analyze food, clothing, and shelter to determine the natural resources used.	
6-8	Students will discover similarities of ecosystems in the world. They will categorize ecosystems by common characteristics (e.g. topography, climate, soil type and other factors).	Students will identify classes of organisms involved in Food and Fiber Systems. They will explain the roles of these organisms in agriculture.	
9-12	Students will identify how Food and Fiber Systems affect ecosystems. They will evaluate the positive and negative impacts of agriculture on ecosystems.	Students will explain why all countries' agricultural systems depend on natural resources. They will evaluate why Food and Fiber Systems compete for natural resources.	



Standards		
C. Understand management and conservation practices used in Food and Fiber Systems.	D. Understand science and technology's role in Food and Fiber Systems.	Benchmarks
Students will define natural resource conservation. They will describe ways to conserve natural resources.	Students will identify tools and machines used in Food and Fiber Systems. They will give examples of tools and machines used to produce food and fiber products.	K-1
Students will identify natural resource-management practices that limit pollution. They will cite agricultural practices used to manage and conserve soil, water, and air.	Students will recognize inventors and their inventions related to Food and Fiber Systems. They will describe the agricultural importance of the inventions.	2-3
Students will identify pest-management practices in Food and Fiber Systems. They will compare traditional and alternative pest-management practices.	Students will explain how technological advancements enhance Food and Fiber Systems' efficiency. They will list technologies that reduce manual labor needs in agriculture.	4-5
Students will identify agencies and policies that regulate natural resources-management and conservation of Food and Fiber Systems. They will determine the impact these policies and regulations on food and fiber systems.	Students will identify Food and Fiber Systems careers dependent on science and technology skills. They will contrast these skills needed for agricultural and non-agricultural careers.	6-8
Students will recognize U.S. management and conservation practices impact other countries. They will evaluate the impact of these practices on Food and Fiber Systems in other countries.	Students will recognize how science and technology impact Food and Fiber Systems. They will analyze the effects of science and technology on food, clothing, shelter, and career choices.	9-12

IV. Business and Economics

		Standards	
		A. Understand Food and Fiber Systems and economics are related.	B. Understand Food and Fiber Systems have an impact on local, national, and international economies.
Bench- marks			
K-1	Students will recognize agricultural products have monetary value. They will explain how food and clothing are worth money.	Students will identify people in the community who rely on Food and Fiber Systems to make a living. They will connect Food and Fiber Systems to local businesses.	
2-3	Students will describe how a shortage or surplus of a product provides an opportunity for trade. They will predict what happens when shortages or surpluses occur.	Students will recognize people responsible for delivering agricultural products to consumers. They will compare jobs performed from production to consumption.	
4-5	Students will define agribusiness. They will give examples of agribusinesses in the community.	Students will identify how value is added to raw agricultural products after production. They will compare the value of raw and processed products.	
6-8	Students will identify Food and Fiber Systems-related careers. They will compare business and economic skills and educational qualifications for agricultural careers.	Students will identify industries whose inputs are from Food and Fiber Systems. They will evaluate industries to determine the agricultural inputs.	
9-12	Students will identify events affecting food and fiber trade. They will analyze the economic impact of these events on Food and Fiber Systems .	Students will identify economic activities generated by Food and Fiber Systems. They will compare how agricultural and non-agricultural businesses influence the economy.	



Standards		
C. Understand government's role in Food and Fiber Systems.	D. Understand factors influencing international trade of food and fiber products.	Benchmarks
Not applicable at this level.	Students will recognize food and clothing comes from other countries. They will give examples of food and fiber products from other countries.	K-1
Students will recognize the government regulates Food and Fiber Systems. They will classify government functions, including safety, inspection, and grading.	Students will define import and export. They will identify U.S. food and fiber products exported to other countries.	2-3
Students will explain the need for government regulation in agriculture. They will give examples of regulations and laws impacting Food and Fiber Systems.	Students will explain why nations trade products and services. They will make a list of agricultural services the U.S. trades with other nations.	4-5
Students will recognize the government responds to people's needs related to Food and Fiber Systems. They will evaluate how these responses impact agriculture.	Students will explain "free trade" and "balance of trade." They will compare U.S. food and fiber trade policies to other nations' policies.	6-8
Students will identify international Food and Fiber Systems issues. They will analyze governments' roles in international agricultural issues.	Students will identify factors influencing international trade. They will explain how these factors impact U.S. food and fiber products and services.	9-12

V. Food, Nutrition, and Health

		Standards	
		A. Understand Food and Fiber Systems provide nourishment for people and animals.	B. Understand Food and Fiber Systems provide healthy-diet components.
Bench- marks			
K-1	Students will explain people and animals obtain sustenance from Food and Fiber Systems products. They will illustrate products people and animals eat.	Students will identify the parts of the Food Guide Pyramid. They will illustrate a well-balanced meal.	
2-3	Students will distinguish between processed and unprocessed foodstuffs people and animals eat. They will compare how common foodstuffs eaten by humans and animals are differently processed.	Students will match food groups with their recommended daily servings. They will plan healthy meals for one day.	
4-5	Students will identify ways of processing foodstuffs for people and animals. They will explain reasons for processing foodstuffs.	Students will identify the six basic food nutrients: carbohydrates, protein, water, vitamins, minerals, and fats. They will categorize foods based on nutritional content.	
6-8	Students will identify agricultural products in food and feed. They will compare food and feed ingredient labels.	Students will interpret food nutritional labels. They will compare personal food intake to the USDA Food Guide Pyramid recommendations.	
9-12	Students will recognize that food and feed products contain additives. They will categorize additives from ingredient labels.	Students will recognize life stages and activity levels change human nutrition requirements. They will construct healthy diet and exercise plans for different life stages and activity levels.	



Standards		
C. Understand Food and Fiber Systems provide food choices.	D. Understand Food and Fiber Systems promote a safe food supply.	Bench- marks
Students will recognize how individual preferences affect food selection. They will show where their food preferences fit into the Food Guide Pyramid.	Students will recognize safe food practices. They will illustrate ways to practice food safety.	K-1
Students will identify food advertisements. They will explain the relationship between food choice and advertising.	Students will describe safe food handling, preparation, and storage. They will show proper handling, preparation and storage of foods.	2-3
Students will explain how factors, such as culture and convenience, affect food choices. They will analyze how food preferences have changed over time.	Students will recognize the government makes food safety policies. They will explain how these policies promote a safe food supply.	4-5
Students will explain how food choices are influenced by economics. They will compare food choices based on cost.	Students will recognize food contaminants. They will classify the contaminants that make food unsafe.	6-8
Students will describe how research and development influences food choices. They will research new food choices.	Students will recognize factors affecting a safe food supply. They will evaluate how food safety issues impact Food and Fiber Systems.	9-12