

ACTIVITY 9.1

UNIT WORD SEARCH

brine
by-products
canning
contaminated
curds
dehydration

factory
incubation
irradiation
microbes
pasteurization
pickling

preservation
production
retailers
scaffold
terminal
warehouses

waste
whey
wholesalers

S X H C W U W S X I N C S S V M B F P U G C
 K E S A W D E R N R O T C O N F Y G A Y N U
 F B S K E B F C V N I X A J Q R P I S R I G
 Q T K U O N U R T U T C F I X G R D T E N Q
 E O Y R O B O A W N A J F P Z J O S E J N E
 Z L C G A H M I K M I J O K N V D R U T A G
 D I T T W I E I T U D N L Q H L U E R B C R
 M L I I N P Y R I A A X D I I O C L I L O Q
 Z O H A N O I T A V R E S E R P T I Z U U E
 N Z T J I W C G Z W R D D U Z U S A A C G E
 W E P I C K L I N G I E Y B G H S T T U K L
 D W H O L E S A L E R S C H R J L E I R L W
 Y E H W N O I T C U D O R P E I X R O D S H
 R T K R J L A N I M R E T I X D N U N S N S
 M B U S F A C T O R Y H L N D N R E O G V Y

ACTIVITY 9.2

FOOD PROCESSING MATCHING

Student Supplies

Pencil

Determine if each is part of the pre-processing, processing or post-processing stage of production. Place the correct letter in the blank.

- A = Pre-processing
- B = Processing
- C = Post-processing

Example: C bread stacked on grocery shelves

- | | |
|-----------------------------------------------|--------------------------------------------------|
| _____ 1. peanuts ground into peanut butter | _____ 7. transporting applesauce to the retailer |
| _____ 2. stocking bagels at the grocery store | _____ 8. shipping fruit to a wholesaler |
| _____ 3. oranges growing on a tree | _____ 9. pigs on the farm |
| _____ 4. wheat made into flour | _____ 10. chocolate formed into bars |
| _____ 5. lemons being cleaned | _____ 11. rice dried for packaging |
| _____ 6. cheese packaged for sale | _____ 12. sugar cane growing in the field |

Give one more example for each stage of production.

Pre-processing _____

Processing _____

Post-processing _____

ACTIVITY 9.3

BEEF BY-PRODUCTS

Student Materials

Pencil

Resources on beef by-products

Introduction

Beef by-products are used in many everyday items—such as medicines, cosmetics, sports equipment and industrial lubricants! Using resources, such as extension fact sheets or association websites, determine two items made from beef by-products for each category. If possible, name the part of the animal used for the product.

- 1. Pharmaceutical/Medical

- 2. Cosmetic

- 3. Industrial/Transportation

- 4. Sports Equipment

- 5. Household/Art

ACTIVITY 9.4

FOOD PRESERVATION MATCHING

Student Supplies

Pencil

Match each food product to a preservation method. Write the method number in the blank next to the food product. A method can be used more than once.

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 1. drying — Extraction of moisture by sun, air, heat or vacuum to inhibit the growth of molds, bacteria and yeasts. | _____ bacon |
| 2. salting — The addition of salt or a brine solution to foods to decrease the activity of molds, bacteria and yeasts. | _____ beef jerky |
| 3. fermentation — The use of special bacteria, molds or yeasts to prevent spoilage by converting the elements of food that spoil easily to stable elements that act as preservatives. | _____ frozen peas |
| 4. smoking — The addition of smoke and heat to preserve food by the action of the chemicals from the smoked wood and the partial drying of the food. | _____ coffee |
| 5. canning — The packing of food in a container, sealing the container and heating it to sterilize the food. | _____ yogurt |
| 6. pasteurization — The heating of milk and other liquids which reduces the number of disease-producing bacteria. | _____ canned fruit |
| 7. refrigeration — The lowering of the temperature of food to inhibit the growth of bacteria, molds and yeasts. | _____ raisins |
| 8. freezing — The lowering of the temperature of food to temperatures below 28 degrees F to stop the growth of bacteria, yeasts and molds and to kill parasites. | _____ ketchup |
| 9. freeze-drying — The freezing of food and the subsequent removal of water from the frozen food through the use of heat and a vacuum. | _____ ham |
| 10. food concentration — Heating food until it boils and removing the water or partially freezing food and removing water in the form of ice crystals. | _____ lettuce |
| 11. irradiation — Passing energy through food to destroy insects, fungi, or bacteria that cause human disease or cause food to spoil. | _____ cheese |
| | _____ frozen orange juice |
| | _____ ground beef |
| | _____ pickles |
| | _____ milk |



ACTIVITY 9.6

HOW FAR DID IT TRAVEL?

Student Supplies

- Pencil
- State Map

The table below shows the estimated average mileage certain fruits and vegetables travel from the place where they were grown to the average consumer.

1. Use the “Oklahoma Fruits and Vegetables and Farms That Grow Them” chart to find the nearest farm to purchase the fruits and vegetables.
2. Locate the town where the farm is located on an Oklahoma map.
3. Determine how many miles are between that town and your town.
4. Write the mileage in the correct column.

Produce Type	Estimated Average Distance (mi) from Conventional Source	Nearest Local Source	Estimated Mileage from Nearest Source to Your Town
apples	1,555		
asparagus	1,671		
broccoli	2,095		
cabbage	754		
carrots	1,774		
cauliflower	2,118		
corn (sweet)	813		
grapes	2,143		
lettuce	2,040		
onions	1,675		
peaches	1,674		
peppers (bell)	1,261		
potatoes	1,239		
pumpkins	233		
spinach	2,086		
squash	781		
strawberries	1,093		
tomatoes	1,369		
watermelons	791		



Oklahoma Fruits and Vegetables and Farms That Grow Them

County	City	Farm Name	Fruit or Vegetable Grown
Adair	Westville	Paradise Valley Organics	broccoli, cabbage, carrots, cauliflower, corn, lettuce, onions, bell peppers, potatoes, pumpkins, spinach, squash, strawberries, tomatoes, watermelon
Atoka	Atoka	The Farm	broccoli, cabbage, carrots, cauliflower, lettuce, onions, bell peppers, potatoes
Atoka	Lane	Shiny C Farm	broccoli, cabbage, cauliflower, grapes, bell peppers, corn, tomatoes
Canadian	Calumet	Sand Hill Vineyards	grapes
Canadian	El Reno	Organic Gardens	broccoli, cabbage, carrots, lettuce, onions, bell peppers, potatoes, spinach, squash, tomatoes, watermelon
Canadian	Piedmont	Two Tomatoes Veggies	carrots, onions, tomatoes
Canadian	Yukon	Pizza Farm	broccoli, cabbage, carrots, cauliflower, corn, onions, pumpkins, bell peppers, spinach, squash, strawberries, tomatoes
Carter	Wilson	SK Ranches	broccoli, lettuce, onions, bell peppers, potatoes, strawberries, tomatoes, watermelon
Cherokee	Tahlequah	Hatchet Bar H	apples, peaches
Cleveland	Noble	George's Apiary	tomatoes
Cleveland	Norman	Happy Lucky Chicken Farm	pumpkins
Cleveland	Norman	OEI Farm	grapes, lettuce, onions, bell peppers, spinach, squash, tomatoes
Cleveland	Norman	Rock Creek Vineyard	grapes
Cleveland	Norman	Sand Hill Farm	cabbage, carrots, cauliflower, lettuce, bell peppers, potatoes, pumpkins, squash, tomatoes, watermelon
Craig	Vinita	Honey Suckle Farms	apples, corn, strawberries
Creek	Bristow	Crestview Inc. Farms	broccoli
Creek	Bristow	Nuyaka Natural Farm	apples, broccoli, cabbage, carrots, cauliflower, corn, lettuce, onions, peaches, bell peppers, potatoes, pumpkins, spinach, squash, tomatoes, watermelon
Creek	Bristow	Nuyaka Creek Winery & Vineyard	asparagus, grapes, peaches, strawberries, tomatoes
Creek	Sand Springs	Pleasant Valley Farm	pumpkins, watermelon



County	City	Farm Name	Fruit or Vegetable Grown
Creek	Sapulpa	The Peppermint Dragon	asparagus, broccoli, cabbage, cauliflower, lettuce, onions, bell peppers, squash, strawberries, tomatoes
Delaware	Colcord	Cedar Acres Produce	broccoli, cabbage, carrots, onions, bell peppers
Ellis	Fargo	Jahay Farm	cabbage, carrots, lettuce, onions, bell peppers, potatoes, pumpkins, squash, tomatoes, watermelon
Garvin	Paoli	Daniel & Wynn Produce	onions, potatoes, squash, tomatoes, watermelon
Garvin	Pauls Valley	Pesterfeld Farm	corn
Garvin	Stratford	Peach Crest Farm LLC	lettuce, peaches, bell peppers, watermelon, pumpkins, spinach, squash, tomatoes
Grady	Blanchard	Sunrise Acres	broccoli, cabbage, carrots, cauliflower, lettuce, onions, bell peppers, potatoes, spinach, sweet potatoes, tomatoes
Grady	Rush Springs	Bounds Farm	broccoli, cabbage, carrots, cauliflower, corn, lettuce, onions, potatoes, pumpkins, spinach, squash, tomatoes, watermelon
Hughes	Allen	Kelly Jay	broccoli, cabbage, carrots, cauliflower, corn, lettuce, onions, bell peppers, potatoes, pumpkins, spinach, squash, strawberries, tomatoes, watermelon
Hughes	Calvin	Cronkhite Farms	asparagus, corn, grapes, onions, bell peppers, squash, potatoes, strawberries, tomatoes
Jackson	Altus	Circle W Farms	watermelon
Kay	Ponca City	Kyger Road Greenhouses & Market	tomatoes
Kingfisher	Kingfisher	S/C Farms	watermelon
LeFlore	Pocola	Wild Things Farm	asparagus, corn, pumpkins, spinach, squash, strawberries, tomatoes, watermelon
Logan	Coyle	Shekinah Springs Farm	broccoli, lettuce, onions, potatoes, spinach
Logan	Edmond	Kendall's Home Grown Veggies	apples, corn, grapes, peaches, bell peppers, tomatoes
Major	Ringwood	Indian Creek Village	grapes
Marshall	Madill	Motes Produce	asparagus, corn, lettuce, onions, bell peppers, potatoes, pumpkins, squash, tomatoes, watermelon
Mayes	Chelsea	Oklahoma Rose Vineyard	asparagus, corn, lettuce, spinach



County	City	Farm Name	Fruit or Vegetable Grown
McClain	Blanchard	Berry Creek Farm	apples, asparagus, broccoli, cabbage, carrots, cauliflower, grapes, lettuce, onions, bell peppers, spinach, strawberries, tomatoes
McClain	Newcastle	TG Farms	corn, grapes, peaches, peppers, potatoes, pumpkins, squash, tomatoes, watermelon
McCurtain	Broken Bow	HoneyBear Ranch	broccoli, carrots, cauliflower, onions, peaches, bell peppers, potatoes, pumpkins, spinach, tomatoes
McIntosh	Checotah	Headwater Hybridmaster	tomatoes
McIntosh	Hanna	Hanna Garden Project	cabbage, bell peppers
McIntosh	Porum	McCawley Family Farm	lettuce
Murray	Davis	Bubba & Ma's Homegrown Veggies	cabbage, carrots, lettuce, onions, bell peppers, potatoes, squash, tomatoes
Muskogee	Muskogee	Mikelsons Orchard	apples, peaches
Oklahoma	Arcadia	Crestview Inc. Farms	apples, asparagus, broccoli, cabbage, cauliflower, grapes, lettuce, onions, bell peppers, potatoes, spinach, squash, strawberries, tomatoes
Okmulgee	Okmulgee	Deep Fork Farms	broccoli, cabbage, cauliflower, grapes, onions, bell peppers, potatoes, pumpkins, squash, tomatoes, watermelon
Payne	Glencoe	El Sueno Enterprises	broccoli, cabbage, cauliflower, corn, lettuce, onions, bell peppers, pumpkins, spinach, squash, tomatoes, watermelon
Payne	Stillwater	Woodward Park Vineyards	grapes
Pontotoc	Ada	Peach Tree Farms	peaches
Pottawatomie	Shawnee	Crows Vegetable Farm	asparagus, cabbage, corn, onions, bell peppers, potatoes, pumpkins, squash, strawberries, tomatoes
Pottawatomie	Shawnee	Tesch Farm	broccoli, cabbage, cauliflower, corn, onions, bell peppers, potatoes, pumpkins, spinach, squash, strawberries, tomatoes, watermelon
Pottawatomie	Tecumseh	Rolling Hills Farm	onions, pumpkins, squash, strawberries, tomatoes
Rogers	Claremore	One Tree Hill Farm	corn, onions, bell peppers, potatoes, pumpkins, squash, tomatoes, watermelon
Rogers	Collinsville	Windy Hill Farm	apples, broccoli, carrots, cauliflower, lettuce, onions, peaches, bell peppers, spinach, squash, tomatoes



County	City	Farm Name	Fruit or Vegetable Grown
Rogers	Oologah	Aunt Netties Farm	broccoli, cabbage, cauliflower, onions, peaches, bell peppers, potatoes, spinach, strawberries
Seminole	Okemah	PD&H Farms	lettuce, onions, squash, watermelon
Seminole	Wewoka	Holland Farm	corn, lettuce, onions, bell peppers, potatoes, tomatoes, watermelon
Tulsa	Collinsville	AK's Bloomers	carrots, grapes, lettuce, onions, peaches, bell peppers, pumpkins, spinach, squash, strawberries, tomatoes, watermelon
Tulsa	Tulsa	Earthly Goods Garden	broccoli, lettuce, bell peppers, spinach, squash, strawberries, tomatoes
Tulsa	Tulsa	Three Springs Farm	broccoli, cabbage, cauliflower, lettuce, onions, potatoes, pumpkins, spinach, squash, tomatoes, watermelon
Tulsa	Tulsa	Wheat's Haikey Creek Farm	apples, lettuce, onions, bell peppers, potatoes, spinach, squash, tomatoes
Wagoner	Broken Arrow	Mom's Menagerie Farm	spinach, squash, tomatoes
Wagoner	Haskell	MB Gardens	broccoli, cabbage, cauliflower, corn, onions, bell peppers, squash, tomatoes
Washita	Colony	McLemore Pumpkin Farm	pumpkins
Woodward	Sharon	Cornett	tomatoes
Woodward	Woodward	Anichini Moore Ranch & Farm	apples, corn, grapes, peaches, bell peppers, pumpkins, strawberries, tomatoes, watermelon
Woodward	Woodward	Barnett Farm	apples, grapes, peaches, strawberries

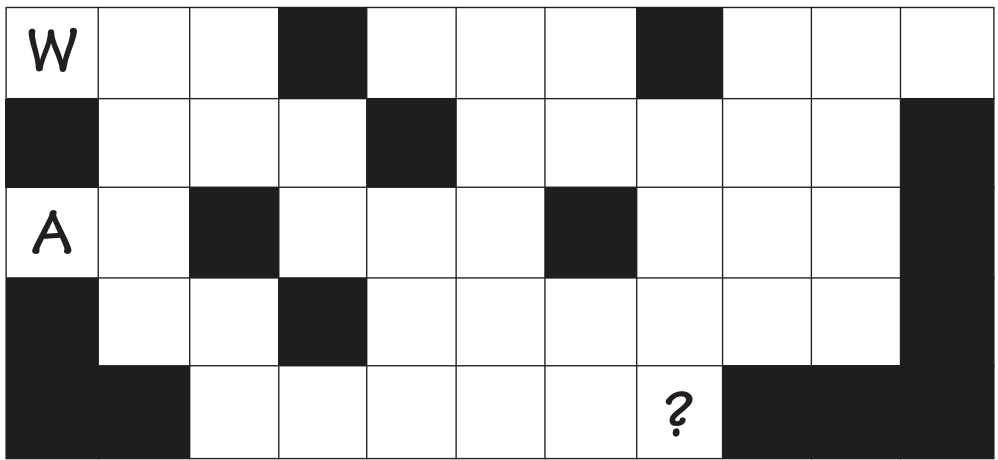


ACTIVITY 9.7 **FALLEN PHRASE JOKE**

Student Materials

Pencil

The letters in the phrase have fallen down. Use only the letters in the column to solve the phrase. The first column has been completed for you.



I

O Y D R E A E

M J T I C A N G H

~~A~~ H F N H E T C R N

~~W~~ T A U O S D A T E E

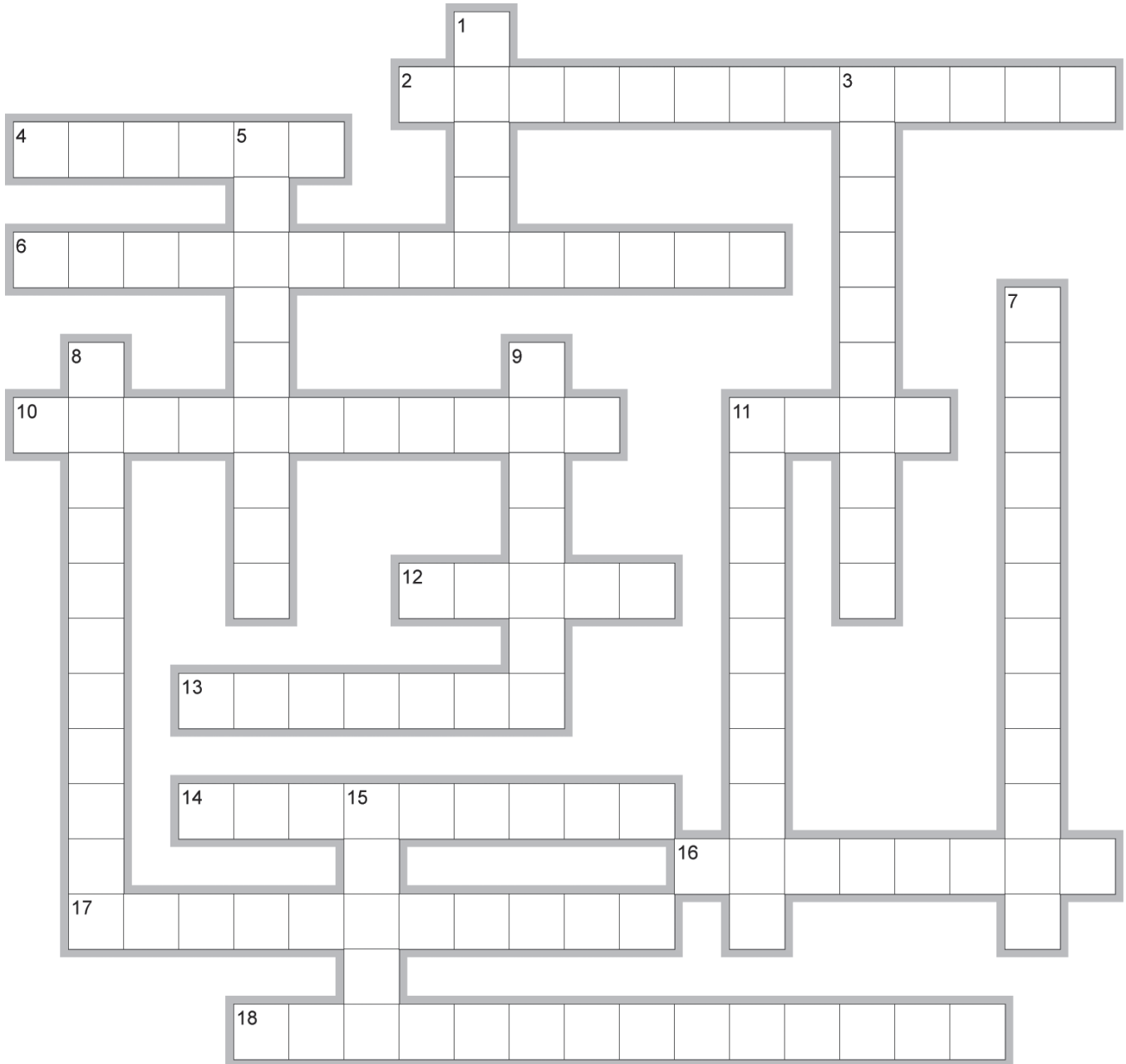
Joke Answer: _____

What preservation method has this product undergone? _____

Name _____ Date _____ Hour _____

ACTIVITY 9.8

UNIT REVIEW CROSSWORD



EclipseCrossword.com

Across

2. “before” stage of production
4. date indicating when a product should be removed from shelves
6. stocking loaves of bread on shelves
10. symbolized by the radura
11. watery part of milk
12. this should be done to leftovers
13. As soon as man could travel, he began _____.
14. key for preventing food poisoning
16. grocery store
17. removing moisture
18. heating of milk to kill bacteria

Down

1. salty water
3. type of foodborne disease
5. secondary to a primary product
7. infected or unclean
8. products used by astronauts
9. stage where hot dogs are shaped
11. sells in large quantities
15. solid part of milk