



HEALTHFUL LIVING: K-5

Meets North Carolina Standard Course of Study

Apples Help in Major Health Areas

Apple Nutrition Facts (by the dozen)

Nutrition Facts Wall Chart



Nearly 1/2 of Crop Grown for Processing

Apple Cider

Some Hints about Cooking with Apples

Let's Get Cooking

Foods made from Apples





APPLES HELP IN MAJOR HEALTH AREAS

New Apple Data From FDA

Nutrition Facts	
Serving Size	1 medium apple (154g / 5.5oz.)
Amount per serving	
Calories 80	Calories from Fat 0
% Daily Value *	
Total Fat 0g	0 %
Saturated Fat 0g	0 %
Cholesterol 0mg	0 %
Sodium 0mg	0 %
Potassium 170mg	%
Total Carbohydrate 22g	%
Dietary Fiber 5g	%
Sugars 16g	
Protein 0g	
Vitamin A 2%	• %
Calcium 0%	• %
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less Than 65g 80g
Sat Fat	Less Than 20g 25g
Cholesterol	Less Than 300mg 300mg
Sodium	Less Than 2,400mg 2,400mg
Potassium	3,500mg 3,500mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9	• Carbohydrate 4 • Protein 4

***Digestion** - Apples add important bulk to the diet which can help to correct both constipation and diarrhea. An apple is your tummy's best friend...its pectin and mild acids help aid digestion, and its bulk peeps up the whole system. Pectin may help reduce cholesterol and prevent heart attacks.

***Heart Disease and Stroke** - Remember the old saying, "an apple a day helps keep the doctor away?" Well, a new study alters the adage a little: "an apple a day helps keep heart disease and stroke away." Eating fresh fruit like apples daily appears to significantly reduce the risk of dying from heart disease, stroke, and other causes before age 80, according to a study published in the *British Medical Journal* in October of 1996. Scientists at Oxford University's Imperial Cancer Research found that people who ate fresh fruit daily had 24 percent fewer heart attacks, 32 percent fewer strokes and 21 percent fewer death from all causes compared with those who did not.

***Overweight** - An average apple has about 80-85 calories, no fat, no cholesterol and no sodium. It is bulk producing so it satisfies your hunger while the energy from complex carbohydrates, found in apples, are absorbed more slowly by the body, giving a longer, more even boost of energy.

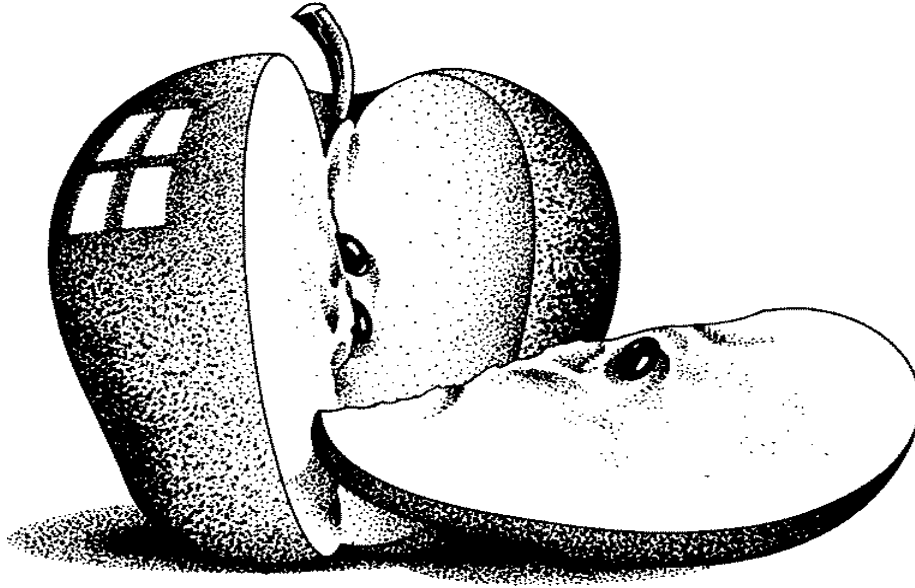
***Tooth Decay** - an apple reduces the chance of cavities, cleans the teeth and massages the gums.





APPLE NUTRITION FACTS

by the dozen



A medium sized apple:

Has no cholesterol and no artificial colors

Supplies vitamin A - good vision, bone and tooth development

Sodium free - helps reduce the risk of high blood pressure

Is almost fat free - helps reduce the risk of cancer

High in complex carbohydrates

Source of potassium

Contains 4 ounces of water - great for quenching thirst

Low acid content - apple juice is great for infants

Contains the mineral boron which helps the body use calcium and keeps the brain alert

Has only 80-85 calories

Contains pectin - helps aid in digestion

Is a good source of dietary fiber which helps reduce cholesterol





NUTRITION FACTS WALL CHART

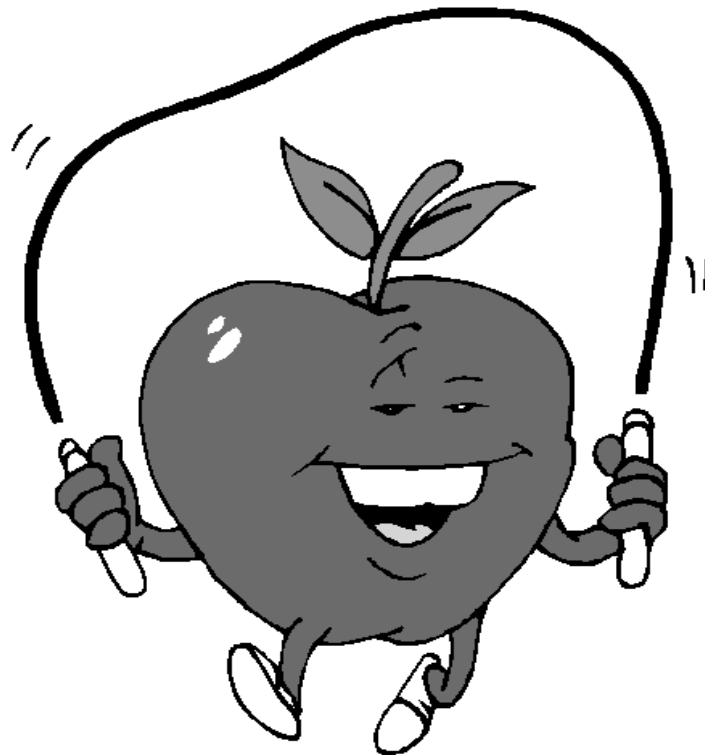
Make a wall chart or copies of the “Apple Nutrition Facts by the dozen”. Discuss with the class each fact, noting on the board the terms that the class needs to define. Note which systems of the body benefit from the nutrients found in apples.

After a brief discussion period, arrange for students to work in pairs. Have students research the meaning to the difficult terminology.

For example:

- boron
- complex carbohydrates
- pectin

After the research period, bring the class together to share the information. Students can compare notes, filling in the information missing on their own lists.





NEARLY 1/2 OF N.C. APPLE CROPS ARE GROWN FOR PROCESSING

Nearly 1/2 of North Carolina's Apple Crop is grown to be "Processed" into canned, frozen, and dehydrated apple products which provide convenience, save time, and are thrifty to buy.

Apple Sauce

The most versatile apple product. Usually a blend of two or more varieties. Saves time for busy cooks. Prevents waste and shrinkage.

Apple Juice and Cider

Natural, undiluted juice of apples. "UNCLARIFIED" = "as is". "CLARIFIED" = filtered to remove all pulp...preservative often added. Cider = fresh crushed juice in season. "Juice" = pasturized, canned or bottled for longer season marketing.

Apple Slices

Ready to use sliced apples...convenient – save time and waste – buy as pie-mix, too.

And many OTHER delicious apple products...

Canned, frozen, dehydrated – all with the unique flavor and nutrition of fresh apples – PLUS convenience!





APPLE CIDER



After apples have been harvested, they are used in various ways. One delicious way is to produce apple cider. Cider can be made from many different varieties of apples. As few as three varieties combined together will make a very tasty cider. Cider producers experiment with different combinations of both tart and sweet apples to get that “just right” taste.

The following information explains the cider making process with a “Rack and Cloth” type cider press:

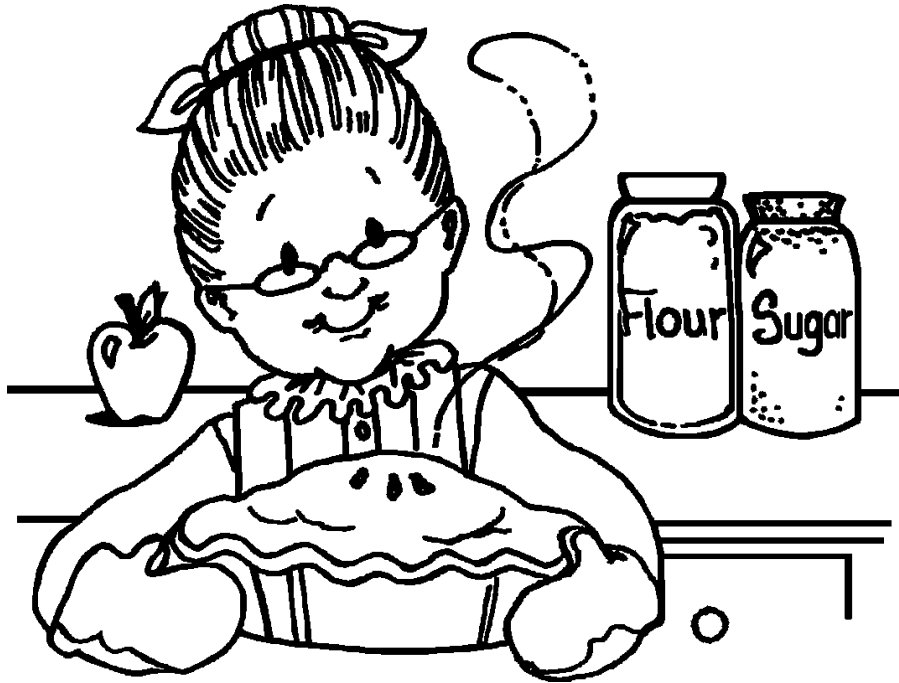
- Apples must first be washed and graded to remove all rotten fruit. Never use ground drops (apples which have fallen onto the ground during picking). This could cause problems with spoilage and bacteria.
- The graded apples are then poured into twenty bushel bins and are carried by a fork lift to a large stainless steel hopper.
- The apples are poured into the hopper where they are carried by elevators up to the grinder. The grinder then grinds the apples into tiny pieces called apple pomace.
- The pomace is then pumped through a long hose onto plastic racks which are covered with cloths. The cloths serve as a filter system for the cider.
- When seven racks have been filled with the apple pomace, they are stacked one on top of the other and placed over a hydraulic press.
- The press rises and pushes the racks together. This causes the cider to flow through the cloths off the racks and into a catch tank located underneath the racks.
- The cider is then pumped from the catch tank into a refrigerated holding tank where it is kept at 34 degrees until time for bottling.
- The holding tank is equipped with large agitating paddles which keep the cider well mixed. This process keeps any sediment from settling on the bottom of the tank.
- Some processors add potassium sorbate to the cider. This is a freshening agent which allows a longer shelf life for the consumer. Without the additive, the cider shelf life will be about 5 to 7 days. With potassium sorbate added, the cider’s shelf life will be up to 30 days.
- After the cider is cooled, it is pumped into a bottle filler where it is put into various types of containers which are usually 1/2 gallon or gallon plastic jugs.
- Once the jugs are capped and placed in boxes, they are dated so the consumer is sure the product he is buying is fresh.
- The finished product is then stored in a cold storage cooler at 32 degrees until it is purchased by the consumer.

North Carolina apple cider is a very healthy drink and is used in many recipes.





SOME HINTS ABOUT COOKING WITH APPLES



Fresh apples can be eaten out-of-hand, or made into salads, or cooked in the home. Most varieties are excellent for both fresh eating and cooking. Here are a few tips:

1. Use very little water...

None for pies, Betties, etc. Add only enough for apple sauce to keep from scorching.

2. Be careful not to use too much sugar...

A little highlights the natural apple goodness, depending upon tartness of apples. Too much sugar spoils natural flavor and makes them mushy.

3. When making salads...

Dip apple slices in lemon juice to prevent apple slices from turning brown. Golden Delicious and Cortland varieties stay whiter longer - naturally.

4. Many apple uses...

The apple is the most versatile of fruits. Dice and slice for salads, sauce 'em, bake 'em, fry 'em, juice 'em.



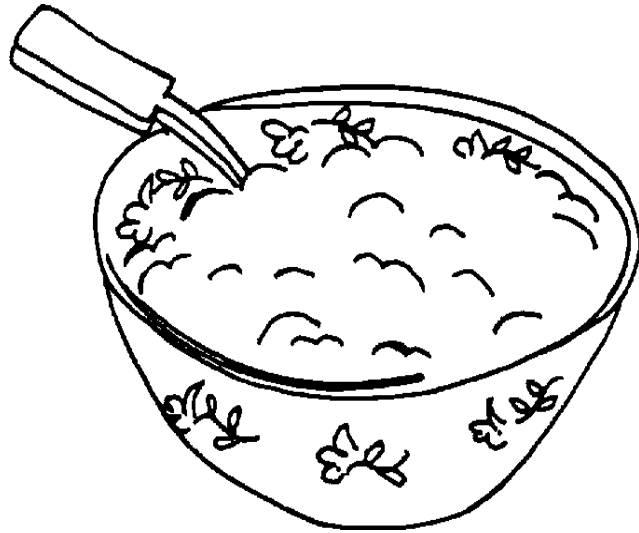


LET'S GET COOKING WITH APPLES

Homemade Applesauce

This recipe will make about 12-15 servings.

6-8 sweet or slightly tart apples
 (Golden Delicious, Mutsu or Rome Beauty are good choices).
 1 1/2 cups water
 3-4 tablespoons of honey or sugar
 (Golden Delicious may not need sugar added).
 Cinnamon (to taste).



Peel, core and slice or chop apples.

Place apples in a saucepan.

Add the water.

Cover and cook on low temperature until tender (about 25-30 minutes).

*Remember to stir often.

Add honey or sugar and cinnamon.

Apple Pops

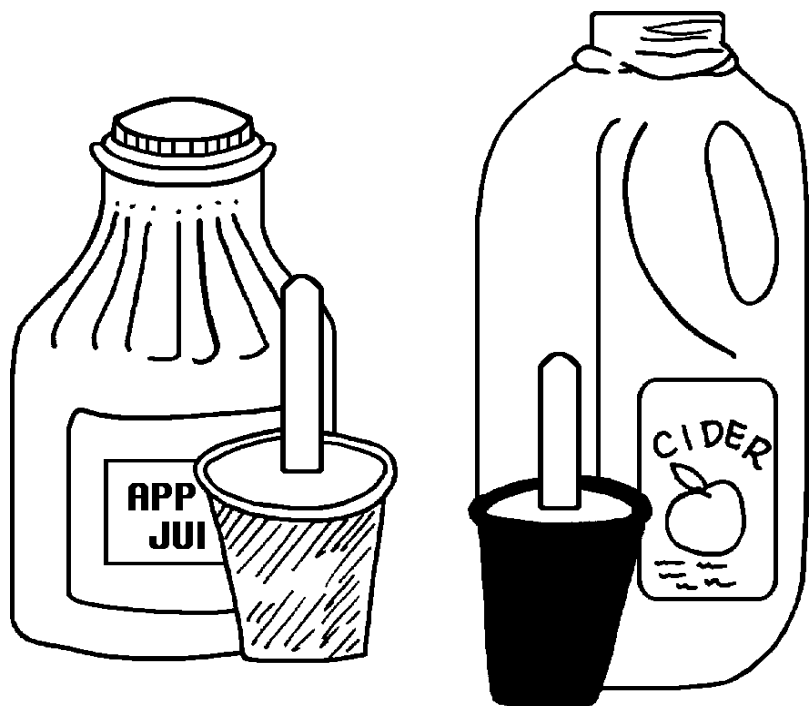
Small paper cups

Apple juice

Popsicle sticks

Pour apple juice into paper cups.

Freeze with popsicle stick





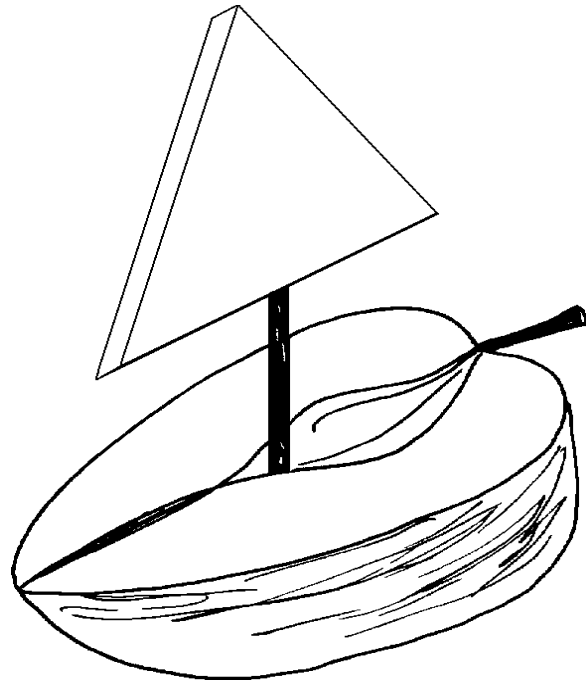
LET'S GET COOKING WITH APPLES

Apple Ships

4 tooth picks
2 fresh North Carolina apples
2 slices of cheese

Cut the apples in half.
Cut the cheese slices in half.
Put a tooth pick in each apple half. Fold cheese and put the slice on the toothpick.

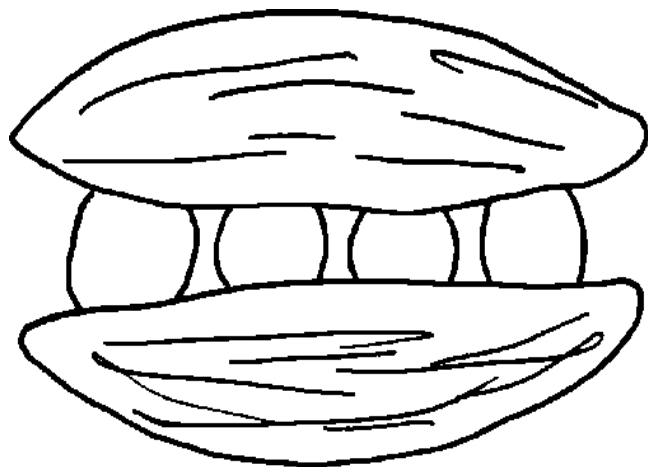
Make 4 ships.



An Apple A Day Smile

One apple for each student.
A jar of peanut butter
Four tiny marshmallows for each apple.

Core and slice a sweet North Carolina apple.
Spread peanut butter on each slice.
Place four tiny marshmallows on one of the slices.
Top with another apple slice.
Squeeze the two apple slices together gently.
Enjoy your apple smile!



Remember, "An apple a day keeps the doctor away".

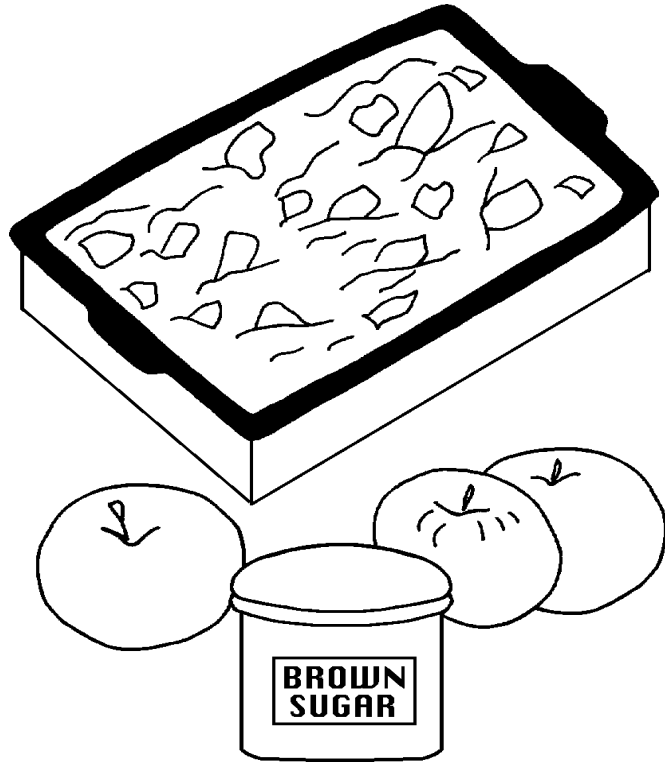




LET'S GET COOKING WITH APPLES

Baked Apples

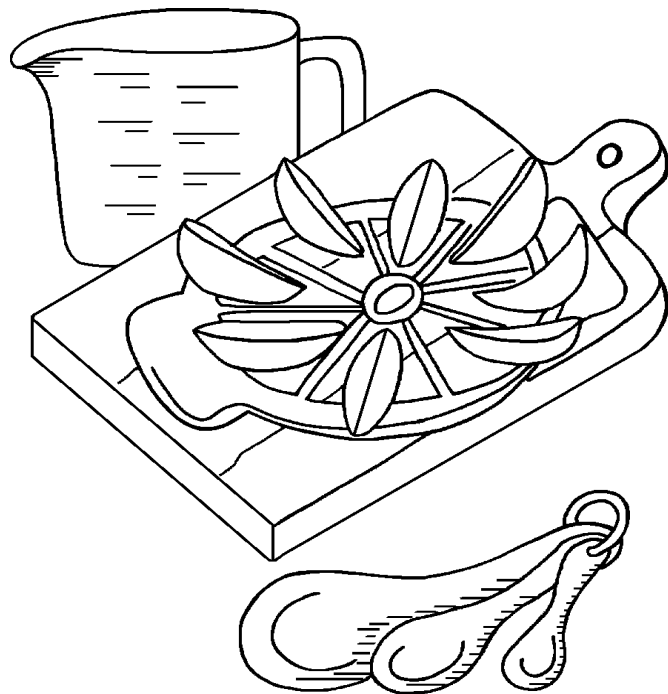
Take 4 North Carolina apples,
Wash and core them.
Place apples in a baking dish
and sprinkle with brown sugar,
cinnamon and butter.
Let it bake for 45 minutes at
350 F or until golden and
bubbly.



Apple Cobbler

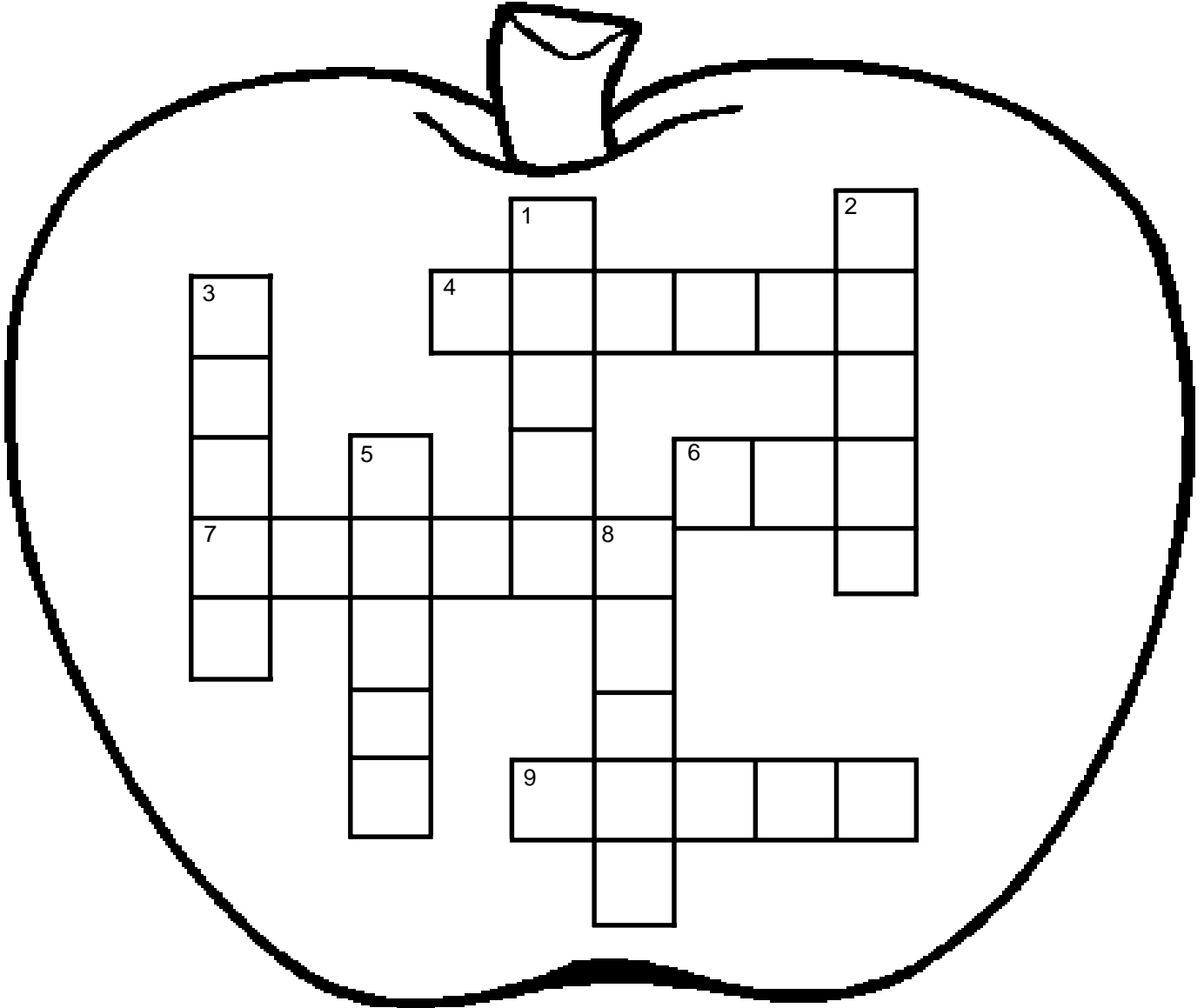
1 stick of butter
1 cup of flour
1 cup of sugar
1 cup of milk
1 cup sliced apples
(Golden Delicious apples are a
good choice)

Melt butter in baking dish.
Mix the flour and sugar.
Add milk and apples to flour
mixture. Pour into pan.
Bake at 400 F for 25 minutes.





FOODS MADE FROM APPLES



Across

- 4. Enjoy apple _____ as a spread on toasted bread.
- 6. A great way to enjoy baked apples.
- 7. Apple pie can be cut into _____.
- 9. Apple _____ can be used as part of a peanut butter sandwich.

Down

- 1. Pasteurized and filtered apple cider is called apple _____.
- 2. Apples that have lost water.
- 3. Apples when first picked off the tree.
- 5. Pressed apples are used to make _____.
- 8. Cooked apples that are great as a dessert or snack.

