

4-H Shooting Sports

Rifle: Wild Harvest Table Guide to Deer Hunting and Preparation

Total time: 1 hour



This lesson plan uses the 4-A style, which was developed by Joye Norris in her book From Telling to Teaching, <http://www.learningbydialogue.com/tellingtoteaching.html>, and is often used by the Department of Nutrition Sciences at Cornell. The following explanation is from the Cornell University Division of Nutritional Sciences Facilitation Skills Training:

ANCHOR...	This activity “anchors” the topic in the lives of the learners. It introduces the topic by building on their previous experiences and knowledge. It helps the learner transition from what they already know to potentially new information. It is usually done in partners or small groups and serves as a “focused warm-up”.
ADD...	Information related to the topic that the learners need to know before they can successfully take action is “added” here. It can be offered as a mini-lecture, demonstration, slides, video or story.
APPLY...	The learners apply the information from “Add” more concretely to their personal lives. Participants actually “do” something with the knowledge they gained. It is usually a hands-on activity done in partners or small groups.
AWAY...	This activity helps the learner take the information “away” with them by bridging it to the future and having them think about using it in a real-life setting. It asks the learner, “What will you <i>do</i> with this information?” This is a good time for learners to set practical, realistic goals for themselves with regard to the topic.

Lesson 1 Overview

Facilities:

The workshop should be held in a space with:

- Adequate table space for preparing venison meatballs, where students can easily observe the lesson
- Access to a stove or outlet for an electric burner
- Access to a sink

Handouts:

4-H Shooting Sports booklet: Rifle

Supplies:

Ingredients and equipment for preparing venison meatballs.

Lesson at a Glance**Anchor: 5 minutes**

- Ask whether students have ever eaten venison or other wild game.

Add: 15 minutes

- Review pages 1-3 of Rifle booklet.
- Ask why food safety is important.
- Discuss different aspects of venison food safety and why it's important to practice these principles.

Apply: 30 minutes

- Prepare venison meatballs.

Away: 5 minutes

- Hand out the Rifle booklet and encourage students to prepare meals with venison at home.

Full Lesson Plan

Facilities:

The workshop should be held in a space with:

- Adequate space for preparing venison meatballs, where students can easily observe the lesson
- Access to a stove or outlet for an electric burner
- Access to a sink

Handouts:

4-H Shooting Sports booklet: Rifle

Supplies:

Cooking equipment and ingredients for preparing venison meatballs [note: this recipe yields about 12 meatballs, so you may need to adjust according to the number of participants and whether you are planning to serve a taste or a whole meal]:

- Ingredients:
 - 1 pound ground venison
 - 2 eggs, beaten
 - 6 tablespoons grated Parmesan cheese
 - ½ cup breadcrumbs or quick oats
 - 1-2 tablespoons olive oil, plus extra for sautéing.
 - ¼ cup chopped fresh parsley
 - 1 tablespoon Italian seasonings (thyme, oregano, basil)
 - 1 clove minced garlic
 - ¼ cup minced onion (optional)
 - ½ teaspoon salt
 - ½ teaspoon black pepper
- Equipment:
 - Large mixing bowl
 - Large, heavy skillet or non-stick sauté pan
 - Tongs
 - Stove
 - Disposable gloves
 - Forks
 - Small plates for taste-testing
- Additional Demonstration Equipment and props (optional)
 - Meat tenderizer tools, such as mallet or Jaccard-type(meat tenderizer with many small blades)
 - Meat fork- low cost way to pierce meat all over without Jaccard-type tool
 - vinegar or marinade or commercial tenderizer with papain

- Kitchen shears for removing sinew or silverskin
- Game cookbooks

Anchor

Ask,

- Have you ever eaten venison? How was it served? Do you have a favorite venison dish? (ask favorite beef dish if not getting a response about venison)
- How about other types of wild game? Rabbit? Squirrel, elk, bear?

Venison and other large game (elk, moose, bear) and small game (rabbit and squirrel) are usually hunted using a rifle. Tie this into your 4-H Shooting Sports rifle programming.

Add

Say,

- When you harvest wild game, it's important to practice food safety even before the meat gets to your kitchen.

Ask,

- Why do you think that it's important for us to practice food safety?
- Right! So that the game that we worked so hard to harvest stays safe for us to eat.

Say,

- What are some food safety principles that we should keep in mind when field dressing a deer and storing venison?
- The first thing we can do is consider using non-lead bullets or slugs. When we use lead ammunition, sometimes very small, undetectable lead fragments can stay in the animal. Lead is something called a neurotoxin and can be especially harmful to children and pregnant women, so we should try to avoid using it. If you do use lead ammunition, make sure that you discard the meat around the wound channel.
- It's also important to field dress the deer properly and cool the inner cavity as soon as possible. When field dressing a deer, be sure to have on hand a sharp knife, plastic gloves, and some sanitizing wipes. If you rinse the inner cavity of the deer after gutting, be sure to dry it with a towel because excessive moisture inside the deer can lead to harmful bacterial growth. After gutting the deer, prop the cavity open with clean sticks that will allow air to circulate and cool down the cavity. To make sure you field dress a deer properly, you can use the guide provided in your 4H Shooting Sports rifle booklet or other research-based information from .edu or .gov websites.
- You should only tenderize your deer by aging it if you have a storage place that is below 40°F and safe from pests like canines, cats, or rodents. When aging a deer, you should hang it by its hind feet with the skin on. If you don't have a storage place that is cool enough, you can tenderize the meat in other ways after it has been broken down into

primal cut (butchered into steaks and roasts). Let's bring in some STEM and discuss a little biochemistry for a minute...the protein in animal muscles have covalent bonds, called peptide bonds, that can make the meat tough and sometimes hard to chew. These bonds need to be broken down to make the meat more tender. Some ways to tenderize meat include mechanical tenderization, such as pounding or piercing the meat; chemical tenderization, such as marinating; brining, or using papain (enzyme from papaya fruit that is used in commercial meat tenderizer mixes); and cooking techniques, such as braising, and avoiding overcooking steaks or other tender cuts (If you brought tenderizing props, show/discuss how they are used to tenderize meat. Give examples of recipes that use the various tenderizing techniques, such as pounding venison cutlets and brining them or slow braising venison stew in liquid to make tender or marinating meat for kabobs before grilling. Use any good visuals from cookbooks if appropriate.).

- Finally, you should always have a plan for how you will store your deer meat. Freezing is one easy way to store the meat. One cubic foot of freezer space holds about 30-35 pounds of cut and wrapped meat, depending on the shape of the cuts. You can expect to get about 50-60% yield of edible meat from a deer, so a 100-pound deer will yield about 50-60 pounds of meat for the freezer. When freezing meat, always freeze the meat one layer at a time. If you put packs of unfrozen meat in a box and then try to freeze it, you may end up with warm spots in the middle of the box where the meat has not frozen all the way through. This is a food safety concern. You should freeze meat one layer at a time, and then you can put it into a box once it is completely frozen. If you don't want to freeze your venison you can also try canning it or making jerky, which you can learn more about in the 4H Shooting Sports Muzzleloader booklet.

Apply

Say,

- Now we're going to practice one delicious way to prepare your venison meat!
- Venison is a delicious and nutritious meat, especially when it is properly prepared. Wild deer meat tends to be low in fat and high in minerals and protein due to a deer's diverse, foraged diet and free range lifestyle. It also has fewer calories than beef due to its lower fat content.

Say,

- Meatballs are a great way to feed a crowd and use up ground venison! You can serve them with marinara sauce over spaghetti, or in a meatball sandwich. These meatballs also freeze well, so you can make a big batch and enjoy them later.

Prepare venison meatballs:

In a large bowl, mix the venison, eggs, Parmesan cheese, breadcrumbs or quick oats, olive oil, parsley, Italian seasonings, garlic, onion (if using), salt, and pepper. Form the mixture into 1 ½ inch meatballs (note: this may be easiest to do with your hands; wear disposable gloves).

Lightly oil the skillet or sauté pan and cook the meatballs over medium heat until browned and cooked through, turning frequently using the tongs, for about 15 minutes.

When the meatballs are cooked through, allow the students to taste test.

Say,

- If you have meatballs left over and want to freeze them, make sure that they have cooled for 15-30 minutes and then freeze them in an airtight container such as tightly wrapped butcher paper or a vacuum sealed bag.

Away

Hand out the Rifle booklet.

Say,

- Now that you know more about food safety and have practiced making meatballs, you can use this booklet to cook up some other tasty venison recipes at home! Take a look through the recipes...What recipe would you like to try?