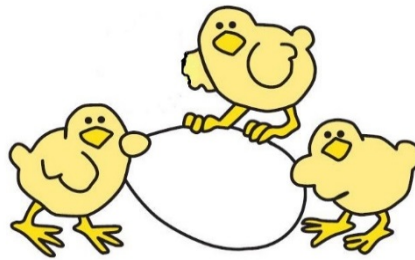


POULTRY

Newton County 4-H



Level 3 – Grades 9-12

What you will do in this project:

- Complete the project by answering one of the activities in this activity sheet and record sheet and turn it in by 6pm on the evening prior to the show. Complete a different activity each year.
- Attend County 4-H Poultry workshops when offered.
- Refer to the Newton County Periscope for a complete listing of all regulations concerning this project.
- Each exhibitor may enter four birds in each class and may exhibit in more than one class for Poultry. In Turkeys, a member may exhibit 1 Young Tom, 1 Mature Tom, 1 Young Hen, and 1 Mature Hen in the same breed. In Geese, you may exhibit one each in Heavy, Medium, and Light: 1 Young Goose, 1 Young Gander, 1 Mature Goose, and 1 Mature Gander. For Waterfowl, a member may exhibit one of each in Heavy, Medium, and Light: 1 Young Hen, 1 Young Drake, 1 Mature Hen, and 1 Mature Drake.
- All birds must be in your possession by May 15 with the exception of broilers that are hatched at the end of May.

Management Tips:

- Provide clean, freshwater to your birds at all times. In the winter, warm (but not hot) water will be needed. Birds on average will drink 1-2 cups a day. Check their water at least twice a day – more often on hot days.
- One chicken eats about 2 pounds of feed each week. 12 chickens eating two pounds a week would eat 24 pounds week. ($12 \text{ birds} \times 2 \text{ lbs} = 24 \text{ lbs}$)
- A feed ration of at least 16% protein for the mature chicken is needed.
- Put at least a 4 inch layer of bedding on the floor for your birds and keep dry. Spread fresh bedding on the top. Clean area completely at least once a year with a solution of 2 table spoons of chlorine bleach into 2 gallons of boiling water. Scrub with a broom. Ventilate well to dry.
- Birds should be washed before bringing to the fair with a solution of warm water and 2 table spoons of chlorine bleach in a five gallon bucket.

4-H Member: _____ 4-H Club: _____

Grade in School (Jan. 1.): _____ Years in this project: _____

Signature of 4-H Member verifying that you have completed these activities:

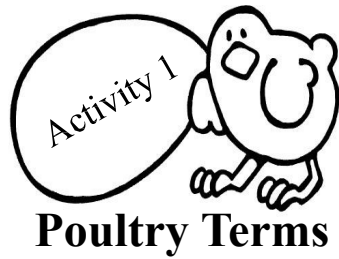
Signature of Parent that you have reviewed this information:

4-H Animal Care:

The Indiana 4-H program strongly supports positive animal care and strongly opposes animal abuse. 4-H is also dedicated to the mission of developing youth and volunteers through "Learning by Doing" programs.

4-H livestock projects teach life skills such as acquiring knowledge, making decisions, and applying leadership skills.

- When working and caring for animals, it is important to insure that appropriate safety measures are in place for both the animals and the persons who care for them. Therefore, there is no substitute for knowledge, common sense, and experience.
- Animal handlers should study and learn to anticipate an animal's reaction and try and avoid problem situations. It is most important that 4-H members understand an animal's behavior so one can "outsmart" not "out-muscle" an animal. Foremost in the 4-H'er mind should always be safety of the handler and the animal. Moving animals is more of an art than a science. Movement of animals requires planning and knowledge to accomplish it with the least amount of time, effort and stress to the animal.
- An animal's good health is often directly related to the environmental factors associated with its living space. The presence of predators, dust, odors, pests, temperature, and humidity has a direct effect on an animal's well-being.
- Animals react favorably to daily care and comfortable housing. Consideration should also be given to specific animal needs such as size of their housing space, lighting, and ventilation. The best facilities and equipment cannot and should not be a substitute for daily observation and careful attention to signs of illness, injury, and/or unusual behavior.
- Frequent consultation with your veterinarian is a must. Reasonable attention must always be given to the use of drugs and their approved withdrawal times.



Knowing the correct poultry terms is very important when involved in poultry projects. The American Standard of Perfection lists the terms used to describe the external (or outside) physical characteristics of poultry. Knowing these terms is essential to the identification and judging of exhibition and production types of poultry, selection and preparing birds for show, giving demonstrations, understanding how judges judge poultry, and just talking about poultry with friends.

CHICKEN TERMS

Approximately 30 terms are used to describe the different external parts of a chicken. The major terms are shown on the illustration. The beak on a chicken is pointed because the chicken is a grain eater. The comb is used to identify breeds and varieties. Common comb types are single, rose and pea. The earlobes are patches of smooth skin located below the ears of the bird. Earlobe color is either white or red and is used for breed identification. The wattles are fleshy appendages attached to the lower edge of the head. The feathers on the neck of the chicken are hackles on the male and neck feathers on the female. The main tail feathers arise from the tail head of both male and female chickens. The sickle feathers are the long flowing feathers on the male birds. The saddle feathers are those that flow from the back down each side of the bird. The hock is the joint between the drumstick and the leg or shank. The spur is a bony projection arising from the inside of the bird's legs. The spur is prominent in the male and is used for fighting.

TURKEY TERMS

The snood of the turkey is similar to the comb of a chicken. It is larger in the tom than hen. It becomes enlarged during the mating ritual by the tom. Sometimes, it becomes injured when toms fight, which allows disease organisms to enter the bird's body. The caruncle is reddish, fleshy material on the naked portions of the head, face, and neck of the turkey and Muscovy duck. It is similar to the wattles on the chicken. The beard is a small tuft of long, coarse, black hairs projecting from the upper part of the breast of a tom turkey.

DUCK TERMS

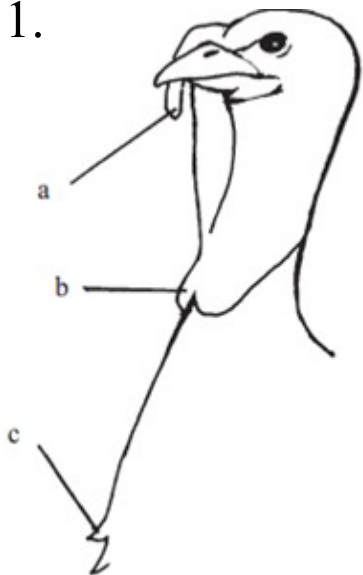
The bill is the horny formation projecting from the head of waterfowl. It consists of the upper and lower mandibles which form the forward mouth parts. The bean is a raised, hard, bean-shaped projection on the tip of the bill of waterfowl. Sometimes, the bean is removed from ducks to prevent them from seriously harming or killing each other.

GOOSE TERMS

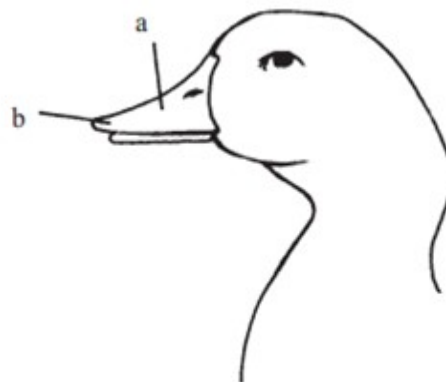
The head of a goose is different from the head of a duck because of the presence of a dewlap. This is a loose fold of skin under the rear of the bill that extends along the throat area. Its absence constitutes a disqualification in some breeds of geese such as the African and Toulouse.

Label what type of bird each one is and identify the parts that are lettered. Put your answers on a separate sheet of paper and attach it with your activity sheet.

1.



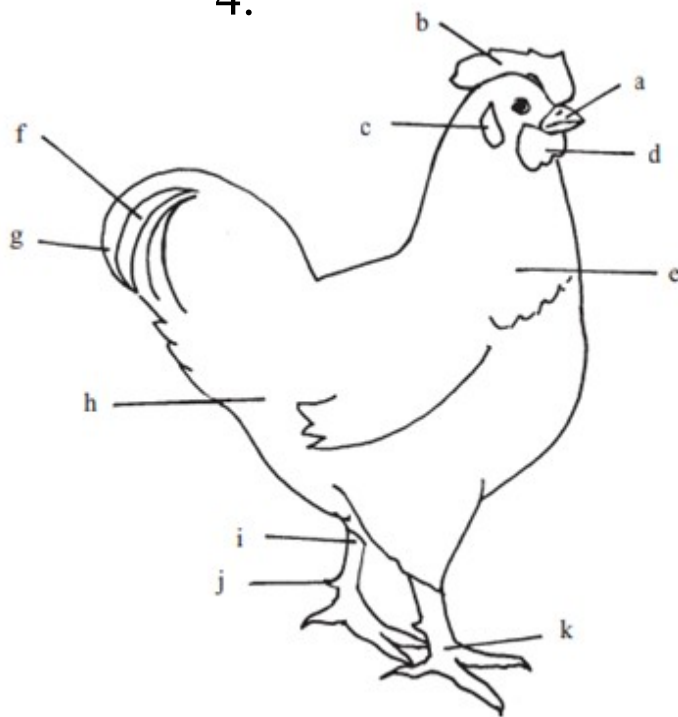
2.



3.



4.



Draw a line from the breed name to the correct picture.

Chickens

Rhode Island Red

Barred Plymouth Rock

Sebright

Cornish

Leghorn

Polish

Houdan

Geese

Emden

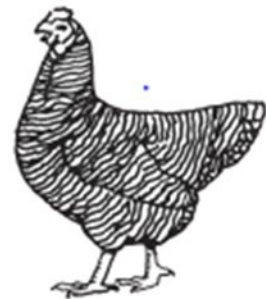
Toulouse

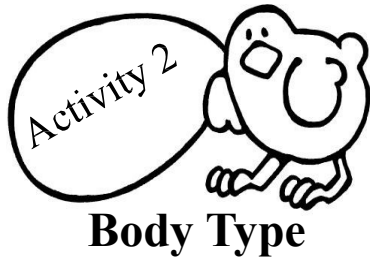
Ducks

Muscovy

Pekin

Rouen





A chicken's outline or silhouette showing the bird's size and shape, by which the breed may be identified. Type influences the size and the shape of the internal organs and the distribution of flesh, thus affecting the breeds suitability for the purpose for which it was developed, as well as its ability to adapt to various environments.



Unscramble the breed and label the correct body type.

| | | | | |
|-----------|----------|---------|--------|--------|
| seale | gshalnan | xsesus | utlasn | harbam |
| soer mboc | panshis | mastura | asrmae | |



What's for Dinner?

What's for dinner tonight? There's a good chance it's chicken - now the number one species consumed by Americans. Interest in the safe handling and cooking of chicken is growing in popularity.

Foodborne Organisms Associated with Chicken

As on any perishable meat, fish, or poultry, bacteria can be found on raw or undercooked chicken. They multiply rapidly at temperatures between 40 and 140 °F (4.4 and 60 °C) — (out of refrigeration and before thorough cooking occurs). Freezing doesn't kill bacteria, but they are destroyed by thorough cooking.

USDA's Food Safety and Inspection Service (FSIS) has a zero tolerance for certain pathogens, including *Salmonella* and *Listeria monocytogenes*, in cooked and ready-to-eat products, such as chicken franks or lunch meat, that can be eaten without further cooking.

Most foodborne illness outbreaks are a result of contamination from food handlers. Sanitary food handling and proper cooking and refrigeration should prevent foodborne illnesses.

Bacteria must be consumed on food to cause foodborne illness. They cannot enter the body through a skin cut. However, raw poultry must be handled carefully to prevent cross-contamination. This can occur if raw poultry or its juices come in contact with cooked food or foods that will be eaten raw, such as salad. An example of this is using a cutting board to chop raw chicken and then using the same board to chop tomatoes without washing the board first.

Following are some bacteria associated with chicken:

-*Salmonella enteritidis* may be found in the intestinal tracts of livestock, poultry, dogs, cats, and other warm-blooded animals. This strain is only 1 of about 2,000 kinds of *Salmonella* bacteria; it is often associated with poultry and shell eggs. FSIS requires poultry establishments to meet *Salmonella* performance standards as a means of verifying that production systems are effective in controlling contamination by this pathogenic organism. Agency inspection personnel conduct *Salmonella* testing in poultry establishments to verify compliance with the *Salmonella* standard.

-*Staphylococcus aureus* can be carried on human hands, in nasal passages, or in throats. The bacteria are found in foods made by hand and then improperly refrigerated, such as chicken salad.

- *Campylobacter jejuni* is one of the most common causes of diarrheal illness in humans. Preventing cross-contamination and using proper cooking methods reduces infection by this bacterium. As with *Salmonella*, FSIS requires poultry establishments to meet *Campylobacter* performance standards and conducts in-plant testing to verify compliance.

- *Listeria monocytogenes* was recognized as causing human foodborne illness in 1981. It is destroyed by cooking, but a cooked product can be contaminated by improper handling or poor sanitary practices in food preparation and storage areas. The risk from *L. monocytogenes* can increase when it has the opportunity to grow on a food product in storage, so take care to observe "keep refrigerated" and "use-by" dates on labels. FSIS requires establishments producing ready-to-eat (RTE) poultry products, such as deli meats and chicken dogs, to maintain a system of controls that destroy or suppress the growth of the organism. FSIS verifies that controls are in place and effective at controlling the organism.

- *Escherichia coli* (*E. coli*) is a type of bacteria that normally live in the intestines of animals and humans. There are hundreds of different kinds, or strains, of *E. coli*, some of which can be harmful, but most are not. Animal meats may become contaminated with this bacterium during the slaughter process.

The presence of *E. coli*, although an indicator organism for fecal matter, does not mean the product is, in fact, contaminated by feces. *E. coli* that is present in feathers or environmental contaminants, like dust, can also contaminate a poultry carcass. As part of poultry inspection procedures, FSIS enforces a "zero tolerance" standard for visible fecal material on poultry carcasses. It also requires slaughter establishments to perform microbiological testing for generic *E. coli* on carcasses to verify that slaughter processes are under control for the prevention and removal of fecal contamination. Safe food handling and proper cooking will help keep you and your family safe from foodborne bacteria. Follow the four food safety steps of USDA's Food Safe Families campaign.

Clean: Wash hands and surfaces often.

Separate: Separate raw meats and poultry from other foods.

Cook: Cook all poultry to 165 °F (73.9 °C).

Chill: Refrigerate promptly.

Rinsing or Soaking Chicken

Washing raw poultry before cooking it is not recommended. Bacteria in raw meat and poultry juices can be spread to other foods, utensils, and surfaces. This is called cross-contamination. Rinsing or soaking chicken does not destroy bacteria. Only cooking will destroy any bacteria that might be present on fresh chicken.

Liquid in Package

Many people think the pink liquid in packaged fresh chicken is blood; however, it is mostly water which was absorbed by the chicken during the chilling process. Blood is removed from poultry during slaughter and only a small amount remains in the muscle tissue. An improperly bled chicken has cherry red skin and is condemned at the plant.

There are three safe ways to thaw food: in the refrigerator, in cold water, and in the microwave.

Refrigerator Thawing
Cold Water Thawing
Microwave Thawing
Cooking Without Thawing

Refrigerator Thawing

Planning ahead is the key to this method because of the lengthy time involved. A large frozen item like a turkey requires at least a day (24 hours) for every 5 pounds of weight. Even small amounts of frozen food — such as a pound of ground meat or boneless chicken breasts — require a full day to thaw. When thawing foods in the refrigerator, there are variables to take into account.

- Some areas of the appliance may keep food colder than other areas.
- Food will take longer to thaw in a refrigerator set at 35 °F than one set at 40 °F.

After thawing in the refrigerator, items such as ground meat, stew meat, poultry, seafood, should remain safe and good quality for an additional day or two before cooking; red meat cuts (such as beef, pork or lamb roasts, chops and steaks) 3 to 5 days. Food thawed in the refrigerator can be refrozen without cooking, although there may be some loss of quality.

Cold Water Thawing

This method is faster than refrigerator thawing but requires more attention. The food must be in a leak-proof package or plastic bag. If the bag leaks, bacteria from the air or surrounding environment could be introduced into the food. Also, the meat tissue may absorb water, resulting in a watery product.

The bag should be submerged in cold tap water, changing the water every 30 minutes so it continues to thaw. Small packages of meat, poultry or seafood — about a pound — may thaw in an hour or less. A 3-to 4-pound package may take 2 to 3 hours. For whole turkeys, estimate about 30 minutes per pound. If thawed completely, the food must be cooked immediately.

Foods thawed by the cold water method should be cooked before refreezing.

Microwave Thawing

When thawing food in a microwave, plan to cook it immediately after thawing because some areas of the food may become warm and begin to cook during the thawing process (bringing the food to "Danger Zone" temperatures). Holding partially cooked food is not recommended because any bacteria present wouldn't have been destroyed and, indeed, the food may have reached optimal temperatures for bacteria to grow.

After thawing in the microwave, always cook immediately after, whether microwave cooking, by conventional oven, or grilling.

Foods thawed in the microwave should be cooked before refreezing.

Also, never thaw foods in a garage, basement, car, dishwasher or plastic garbage bag; out on the kitchen counter, outdoors or on the porch. These methods can leave your foods unsafe to eat.

Cooking Without Thawing

When there is not enough time to thaw frozen foods, or you're simply in a hurry, just remember: it is safe to cook foods from the frozen state. The cooking will take approximately 50% longer than the recommended time for fully thawed or fresh meat and poultry.

Safe Cooking

FSIS recommends cooking whole chicken to a safe minimum internal temperature of 165 °F (73.9 °C) as measured with a food thermometer. Check the internal temperature in the innermost part of the thigh and wing and the thickest part of the breast. For reasons of personal preference, consumers may choose to cook poultry to higher temperatures.

For approximate cooking times to use in meal planning, see the following chart compiled from various resources.

Storage Times

Product dates aren't a guide for the safe use of a product or how long can the consumer store the food and still use it at top quality. Instead, follow these tips:

- Purchase the product before the date expires.
- Follow handling recommendations on the product.
- Keep chicken in its package until it's ready to be used.
- Freeze chicken in its original pack- aging; overwrap or re-wrap it accordingly.

| Storage Times (Suggested times for maximum quality) | | |
|---|--------------------------------|----------------------|
| | Refrigerator (40°F) | Freezer (0°F) |
| Whole Chicken | Two to Three Days | Twelve Months |
| Chicken Parts | Two to Three Days | Nine Months |
| Giblets | One Day | Three Months |
| Ground Chicken | One Day | Three Months |
| Cooked Chicken | Three to Four Days | Three to Four Months |

Note: If storing longer than the storage times shown above, double wrapping is suggested to help keep in moisture.

Share

1. How many thawing methods are there? List them.
2. What is a safe cooking temperature for poultry?
3. When cooking to the proper temperature, what does that do? What are some of the common bacteria found in poultry?
4. How long can poultry be stored in the freezer that has been cooked? What are the four safety steps you should follow when handling food?
5. Why is it important to know how to properly handle poultry?