

OAKLAND CUSD #5

AG SCIENCE

APRIL 27-MAY 1, 2020

JEFF COON

Week of April 27-May 2, 2020

All of these assignments are on google classroom. You must pick one of the 3 listed and complete by next Monday, May 4th for credit. If you would like to use google docs to complete the work that would be most efficient, just remember to start a new copy with your own work please. Paper copies can be returned to the school.

Class	Choice 1	Choice 2	Choice 3
Ag Science	CDE	Animal Reproduction #2	FFA Journal
Ag Business Mang	Advertising	Borrowing Money	car Insurance
BSAA	Animal Health	Respiration	Domestic Animals
Landscape Design	Managing grasses	Landscape areas	Landscape Power tools
Intro To Ag	CDE	Consumer Trends	Maintaining your SAE
Ag Mech.	Land measurement	coolants	Remote sensing

Mr. Coon Ag Science CDE Option 1 April 27 Name

Checking Your Knowledge:

1. During the Livestock Evaluation CDE, for what do students evaluate various species of livestock?

2. Explain the difference between the Farm Business Management CDE and the Marketing Plan CDE.

3. What is the purpose of Career Development Events?

4. How can the Creed Speaking, Extemporaneous Public Speaking, and Prepared Public Speaking CDEs help you in your future?

5. Describe in detail the Agricultural Communications CDE

FFA Career Development Events

CAREER...everyone will eventually have one. What will yours be? What skills do you have that make you suitable for that career? How do you know that it is the career for you? As a high school student, you have so many careers to choose from, and you have very little time to explore what your future career may be. By participating in Career Development Events through the National FFA Organization, you have the opportunity to explore career opportunities while developing your skill set.



Objective:



Identify and describe the FFA Career Development Events.

Key Terms:



Career Development Events

- Agricultural Communications
- Agricultural Issues Forum
- Agricultural Sales
- Agricultural Technology & Mechanical Systems
- Agronomy
- Creed Speaking
- Dairy Cattle Evaluation & Management
- Dairy Cattle Handlers Activity
- Environmental & Natural Resources
- Extemporaneous Public Speaking
- Farm Business Management
- Floriculture
- Food Science & Technology
- Forestry
- Horse Evaluation
- Job Interview
- Livestock Evaluation
- Marketing Plan
- Meat Evaluation & Technology
- Milk Quality & Products
- Nursery/Landscape
- Parliamentary Procedure
- Poultry Evaluation
- Prepared Public Speaking
- Veterinary Science

The Value of Career Development Events

The mission of the National FFA Organization explains that “FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.” To fulfill the mission of FFA, Career Development Events (CDEs) were created. These events provide you, as an FFA mem-

COON Ag Sci 4-27 April

ber, with opportunities to practice and develop skills in given areas of the agriculture industry. In many situations, these skills can't be developed in any other way except by actually working for an agricultural company. Career Development Events can be priceless if they help you obtain a job that fits your aspirations and abilities.

CAREER DEVELOPMENT EVENTS

Career Development Events are competitions for enhancing FFA members' career skills in a variety of areas, ranging from food science to mechanics. There are 24 CDEs and one activity at the national level. To compete in any CDE, you must be a high school (grades 9 through 12) student and a dues-paying FFA member in good standing. Your state FFA association may have additional qualifications that you must meet. Let's take a closer look at each Career Development Event.

Agricultural Communications CDE

Agricultural Communications is the CDE with the purpose of teaching FFA members skills that will benefit them when pursuing careers in agricultural communications. Without publicity through communications, such as advertising, broadcasting, and publications, agriculture would be even more foreign to the general public than it is already. The truth about agriculture must be heard so that the public isn't afraid of the technology being used.

The Agricultural Communications CDE has one team activity and three individual practicums. The team activity consists of creating a media plan to be prepared ahead of time and presented at the contest. During the contest, each individual will complete a written exam and one of the individual practicums. The practicums are creating a written communication, creating an electronic communication, and creating a visual design.

Agricultural Issues Forum CDE

The **Agricultural Issues Forum** is the CDE that investigates various agricultural issues affecting the public at local, state, and national levels. The purpose of this event is to bring awareness to issues affecting agriculture at the present time. Issues should be focused on the environment, agricultural technology, animals, agricultural careers, the economy and trade, agricultural policy, food safety, or biotechnology.

At the local level, a team will conduct research and develop a portfolio on a chosen topic before reaching the sectional competition. The topic will not change as the team advances through the levels of competition. During the contest, the team will be asked to present the issue and will then be subject to questioning from the judges. This contest applies teamwork, leadership, and communication skills for career success.

Agricultural Sales CDE

Agricultural Sales is the CDE meant to refine the skills associated with selling a product in various formats. The FFA member will have to identify potential customers, create a sales



ON THE JOB...

CAREER CONNECTION: Agricultural Sales Representative

An agricultural sales representative plays an important role in the agriculture industry. He or she markets agricultural products to potential customers in a given area. These products could be anything from the seed and fertilizer needed to grow a crop to the equipment needed to harvest it. An agricultural sales representative may also market technology, such as GPS devices and computer systems that allow farmers to keep accurate and reliable records of their work. Sales representatives are needed in every area of agriculture. Explore your options, and decide what area of agriculture suits you best.

pitch for the product, and sell the product to a customer. This is done by getting to know the customer and making the product a “must have” in the customer’s eyes. To succeed in the Agricultural Sales CDE, the member must attempt to close the deal with a purchase of the product.

Agricultural Technology & Mechanical Systems CDE

Agricultural Technology & Mechanical Systems is the CDE that showcases the skills and the implementation of practical knowledge in five systems of agricultural mechanics—agricultural power, welding, electrical wiring, carpentry, and surveying of land. Each of the five systems tests the skills of the FFA member through a written exam and hands-on practicum. The member demonstrates his or her skills in a simulated workforce situation. The CDE focuses on problem solving, working both individually and in a team setting.

Agronomy CDE

Agronomy is the CDE in which FFA members identify various crops, weeds, seeds, insects, diseases, and nutrient deficiencies. Members also evaluate a crops scenario and develop a management plan that includes all decisions from planning the field to determining how the crop will be marketed after harvest. The CDE focuses on using environmental stewardship and integrated pest management practices to better the crop.

Creed Speaking CDE

Creed Speaking is the CDE that evaluates a first-year FFA member’s ability to express the passion and meaning behind the FFA Creed. The member should recite the Creed with fluency, enunciation, and clarity, as well as answer questions concerning the meaning of the Creed.

Dairy Cattle Evaluation & Management CDE

Dairy Cattle Evaluation & Management is the CDE that provides the opportunity for FFA members to evaluate live dairy cattle based on the most current trends in the dairy industry. Students should focus on the ability of animals to produce milk and on their structure, body capacity, and udder quality. Heifers should be evaluated on their potential to be excellent milk producers and on their calving abilities. Current trends can be found on dairy breed registry websites. Students will also focus on herd production and analyze herd data.

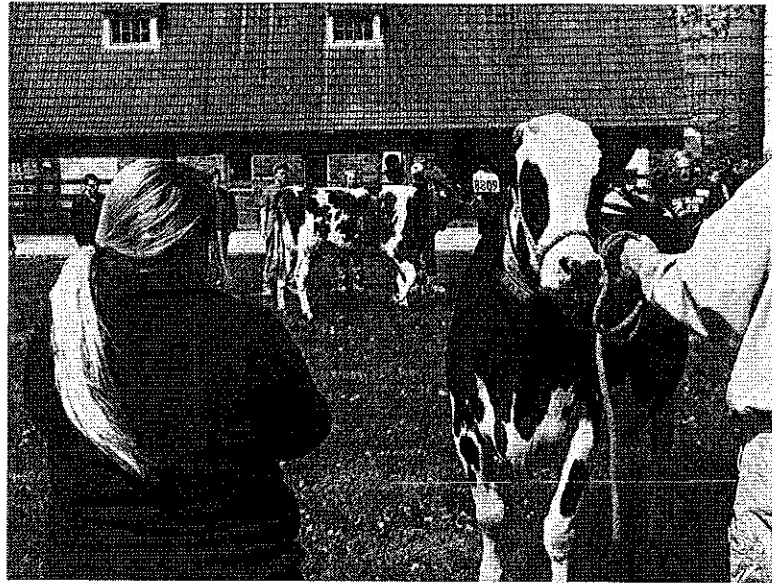


FIGURE 1. FFA members evaluate the overall confirmation and milking ability of Holstein cows as part of the Dairy Cattle Evaluation & Management CDE.

Dairy Cattle Handlers Activity

The **Dairy Cattle Handlers Activity** is the CDE activity that recognizes the skill of handlers in effectively presenting animals in the Dairy Cattle Evaluation & Management CDE.

Environmental & Natural Resources CDE

Environmental & Natural Resources is the CDE that focuses on environmental issues occurring in the United States and how those issues can be corrected in a responsible way. During the contest, FFA members will work both as a team and individually. The team event consists of solving the provided scenario in the most environmentally responsible way while providing research and factual solutions. The team will create a written report as well as give a short oral presentation defending its solution. A short period of questioning will follow the oral presentation. Other areas of the event include writing a news article or other form of press release concerning the given topic and identifying 50 items of equipment, native species, or invasive/non-native species.

Extemporaneous Public Speaking CDE

Extemporaneous Public Speaking is the CDE designed to develop the ability of all FFA members to express themselves on a given subject without having prepared or rehearsed the content of a speech in advance. This gives FFA members an opportunity to formulate their remarks for presentation in a very limited time. Topics include most areas of agriculture, such as animal and plant science, horticulture, aquaculture, environmental science, agricultural business, and many more.

Farm Business Management CDE

Farm Business Management is the CDE that simulates managing a farm or agricultural business in the most economical way possible. FFA members will work as a team for most of the contest to create the most profitable and economically feasible scenario for their business situation. To do this, they must use the business and economic principles taught in their agricultural business class, along with problem-solving skills. Each individual on the team will also complete a written exam over economic principles related to business management, record analysis, and risk management.

Floriculture CDE

Floriculture is the CDE that puts FFA members in real-world situations that can be found in the floriculture industry. Participants will compete in a team activity, a written exam, identification of plant materials and equipment, and problem-solving scenarios. During the team activity, FFA members will work together to design decorations for an event; perform packing, shipping, and inventory procedures; or fill customer orders. The final aspect of the contest is for each member of the team to individually complete three practicums. These practicums consist of creating a floral arrangement, interviewing for a job in the floriculture industry, and conducting a sales pitch.

Food Science & Technology CDE

Food Science & Technology is the CDE in which FFA members will evaluate food products for overall quality, safety, and marketing techniques. Activities include identifying similarities in shape, looks, and taste using the triangle test, as well as identifying various aromas commonly found in the food supply. As a team, members will create a product based on a given scenario. The team should focus on marketing the product and creating packaging for the food. Other practicums include identifying various food handling and safety violations, formulating a consumer complaint letter, and taking a written exam.

Forestry CDE

Forestry is the CDE that introduces FFA members to the forestry industry and allows them to demonstrate their knowledge and skill in the industry. The contest consists of a written exam, tree identification, an issues interview, timber cruising, two practicums, and a team activity. During the issues interview, individuals will communicate to the judges their knowledge of the forestry industry and their opinions on national or regional forestry issues. The timber cruising activity is simply measuring 10 boards for board-foot volume, diameter breast height, and merchantable height. The individual practicums could be any of the following: forest management evaluation, equipment identification, map interpretation, use of a compass, chainsaw part identification, tree/forest disorders, forest products, or problem solving in forest business management.



FURTHER EXPLORATION...

ONLINE CONNECTION: Horse Evaluation

Horse evaluation isn't something that most people do every day. Take some time to practice your skills! Use the following website to evaluate horses in three halter classes. This will give you an idea of what the Horse Evaluation CDE is really like.

http://www.gaaged.org/Games/horse_judging.htm

Horse Evaluation CDE

Horse Evaluation is the CDE in which FFA members evaluate horses based on breed characteristics, conformation and soundness, and overall performance. Identification and selection classes will be evaluated on an individual basis. Each FFA member will identify 10 breeds or colors/markings of horses, as well as 10 tack items. The selection classes will consist of four halter and four performance classes. As a team, FFA members will choose the correct feed, determine how to properly shoe a horse, and participate in a problem-solving scenario based on animal nutrition, management, anatomy, and marketing.

Job Interview CDE

Job Interview is the CDE designed for FFA members to develop the skill set needed to seek employment. During this contest, each student will create a résumé and cover letter, participate in various interviews, and formulate a follow-up letter. He or she may also fill out an employment application as a part of the contest.

Livestock Evaluation CDE

Livestock Evaluation is the CDE that provides students the opportunity to evaluate various species of livestock for breed characteristics and for meat and breeding quality. Students will face rings that include marketing scenarios and must make keep/cull decisions based on their scenario goals and acquired knowledge. They must be able to explain, with fluency and accuracy, why they placed a class a certain way.

Marketing Plan CDE

Marketing Plan is the CDE that focuses on creating a plan to publicly market an agricultural product. The product is chosen by FFA each year.

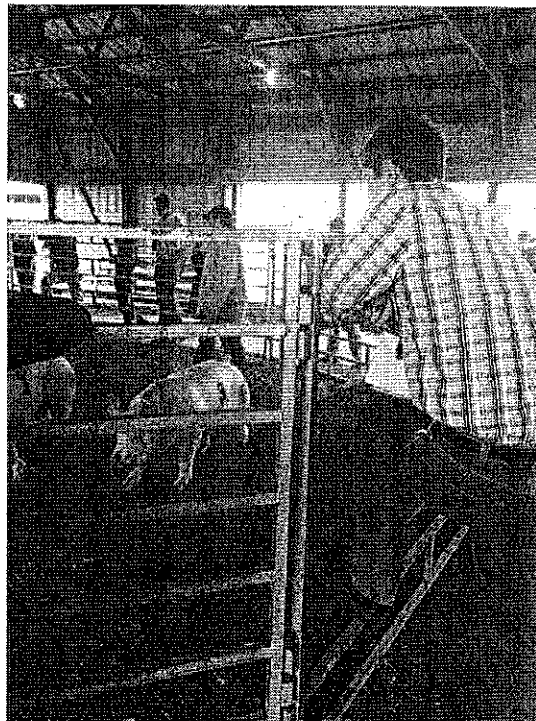


FIGURE 2. FFA members evaluate this swine class as a part of the Livestock Evaluation CDE. The animals are judged on breed characteristics as well as meat and breeding qualities.

Each team must submit a written marketing plan that includes a brief description, market analysis, business proposition, strategies-and-action plan, projected budget, and evaluation of the marketing plan and its goals. This plan will be judged prior to the live presentation. The live presentation should be viewed as a pitch to the judges for them to approve the proposed plan. Following the live presentation, each team member should participate in a question-and-answer session.

Meat Evaluation & Technology CDE

Meat Evaluation & Technology is the CDE that focuses on judging beef, pork, and lamb for meat quality and customer satisfaction. Areas of the contest include a written exam, retail meat cut identification, beef quality and yield grading, and the placing of classes. The contest may provide information sheets that detail various carcass qualities. If so, FFA members will have to determine the best placing for those carcasses or place them in a keep/cull format.

Milk Quality & Products CDE

Milk Quality & Products is the CDE that highlights the dairy industry, dairy products, and farm practices that contribute to the dairy supply in the United States. The event consists of a milk flavor identification and evaluation class, fat content identification, cheese identification, evaluation of California Mastitis Test results, a problem-solving scenario, a written exam, and team activity. The problem-solving activity will be focused on the quality and acceptability of milk, calculations of the value of milk and milk components, processing procedures, and cleaning and sanitizing operations.

Nursery/Landscape CDE

Nursery/Landscape is the CDE that focuses on the skills in all aspects of maintaining landscape plants, equipment, and products, as well as formulating landscape designs. The contest format consists of two team events; a written exam; identification of plants, pests, and disorders; identification of equipment and supplies; estimation of landscaping costs; customer assistance, both oral and written; and nursery propagation or potting. The team activities involve evaluating a landscape or nursery business issue and performing a variety of tasks that are common in the landscaping industry, such as the repair of equipment and the preparation of business reports.

Parliamentary Procedure CDE

Parliamentary Procedure is the CDE whose purpose is to teach FFA members the proper way to conduct a business meeting. This activity will benefit them for years to come, as parliamentary procedure is used in many organizations and settings. During this CDE, a mock meeting will be conducted. Members of the team will be given roles and specific motions to deal with. Floor members, chairpersons, and secretaries will be judged on an individual and team basis. *Robert's Rules of Order* will be followed during this contest.



FURTHER EXPLORATION...

ONLINE CONNECTION: Parliamentary Procedure Flashcards

Think you rock at parliamentary procedure? Test your knowledge using this set of online flashcards! Follow the link to practice.

<https://quizlet.com/4198495/flashcards>

Poultry Evaluation CDE

Poultry Evaluation is the CDE that tests FFA members' skills in the production, processing, and marketing of poultry, meat, and eggs. Activities during the contest include judging of carcasses, judging of live birds, identification of anatomy, judging of further-processed poultry products, interior and exterior egg grading, and a written exam. Processed products are judged on their similarities and customer preferences. Egg exteriors are graded on cleanliness, shell strength, and customer preferences. All these activities will be scored on an individual basis. The team portion of the contest involves answering questions on a problem scenario provided and determining the best solution for the scenario.

Prepared Public Speaking CDE

Prepared Public Speaking is the CDE that teaches FFA members to be confident and knowledgeable whenever they are speaking. The contest consists of presenting a prepared speech and answering questions following the speech to demonstrate knowledge of the topic. The skills learned from this Career Development Event will benefit students in future job interviews, public forums, and whatever other public speaking situations they may participate in.

Veterinary Science CDE

Veterinary Science is the CDE that allows students the opportunity to practice and demonstrate skills needed to perform veterinary medicine on both large and small animals. The contest consists of a written exam, scenario questions, identification of equipment, identification of breeds, identification of parasites, math applications, handling and restraining practicums, performance of a clinical procedure, and a team activity. During the team activity,

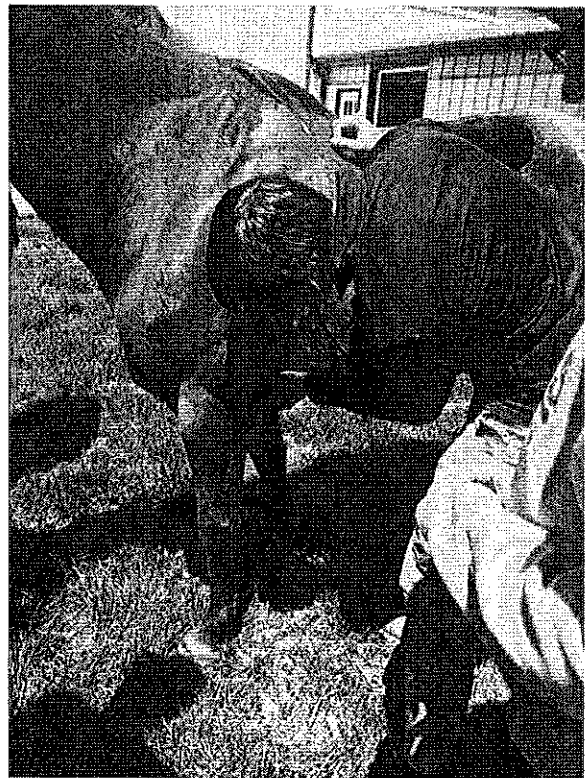


FIGURE 3. This FFA member is listening to a horse breathe and checking for any heart or lung problems. This is an example of a clinical practicum that could be given during the Veterinary Science CDE.

FFA members will be assigned roles on a veterinary team, and each will be expected to explain the process of professionally completing his or her role on the team. The scenario activity provides members with real-world issues in veterinary medicine and asks them to make educated and ethical suggestions to solve the problem. The CDE overall simulates for students what can be expected during a typical day on a veterinary team.

Summary:



You will discover many different Career Development Events that you can participate in. Many of these are focused on skills that you can use for the rest of your life. The mission of the National FFA Organization explains that “FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.” Career Development Events are an example of how FFA goes about achieving this mission.

Checking Your Knowledge:



1. During the Livestock Evaluation CDE, for what do students evaluate various species of livestock?
2. Explain the difference between the Farm Business Management CDE and the Marketing Plan CDE.
3. What is the purpose of Career Development Events?
4. How can the Creed Speaking, Extemporaneous Public Speaking, and Prepared Public Speaking CDEs help you in your future?
5. Describe in detail the Agricultural Communications CDE.

Expanding Your Knowledge:



Ask your agriculture teacher when the next CDE is in your area. Join the CDE team; participate in practices, and show off your skills during the contest. Participating in a CDE will teach you skills that you may use the rest of your life.

Web Links:



National FFA Organization

<https://www.ffa.org/>

Career Development Events

<https://www.ffa.org/participate/cdes>

MyCaert.com Career Profiles

<http://www.mycaert.com/career-profiles/>

Checking Your Knowledge:

1. Why is fertility still low after puberty?
2. What should an animal producer do in cases of dystocia during parturition?
3. Why is it important for a young animal to obtain colostrum?
4. Why must poultry maintain the humidity of their eggs?
5. How does the fertilization of poultry and fish eggs differ?

COON H354 4-27 #2

Reproductive Development of Animals

THE REPRODUCTIVE DEVELOPMENT of animals is quite fast in comparison with that of humans. Animals can reproduce within a year or two of birth. The pace at which animals develop depends on many factors, including the maturing of internal organs, the environment, the animals' diet, and many hormone-stimulated processes. Although the reproductive development of poultry and fish is similar in some ways to that of other animals, poultry and fish are more similar to each other with regard to reproduction. The young of poultry and most fish hatch from eggs in an external environment.



Objective:



Explain the phases of reproductive development in animal life.

Key Terms:



colostrum
dystocia
fertilization
gestation

incubation
lactation
ovum
parturition

puberty
spawning
sperm
zygote

Animal Reproductive Development

Animals must mature and develop internally before they can reproduce. **Puberty** is the point at which an animal reaches a level of sexual development that makes it capable of repro-

duction. In a female the estrous cycle begins, and she will experience her first estrus. In a male the testicles develop, and he will produce his first ejaculate with some fertile sperm.

Puberty is not the point of complete reproductive development. Animal fertility is actually quite low, and chances of achieving pregnancy are very slim. In the female the uterine body is not prepared to accept the attachment of an embryo. The male does not produce a high enough level of sperm cells to service females continually. He can even become sterile for a time if not let develop fully before being used for regular breeding.

Male and female animals develop reproductively at different rates. For example, a young gilt will usually experience her first estrus at 6 to 8 months of age. A young boar will typically reach puberty at 5 to 18 months of age. It is important to remember that pigs and other animals' reproductive development is influenced by many factors. These include their environment, nutrition, breed, exposure to mature animals, and health.

Animal producers must be cautious when mixing sexes of animals approaching puberty. While the chances of a fertile mating occurring are slim, unwanted pregnancies are possible.

Once animals fully develop reproductively, they are then mated to produce new offspring. For a mating to be successful, fertilization must occur. **Fertilization** is the uniting of the ovum of the female and the sperm of the male. The **ovum** is the female sex cell. The **sperm** is the male sex cell. Semen containing sperm is deposited in the female. Usually the male must mount the female, insert his penis into her reproductive tract, and deposit the semen. The sperm cells in the semen then use a swimming-like motion to find the ovum. When a sperm cell penetrates the ovum, fertilization occurs. Once the ovum becomes fertilized, it is called a **zygote**, or fertilized sex cell. When united, the two sex cells exchange DNA, and if everything goes correctly, a pregnancy will occur.

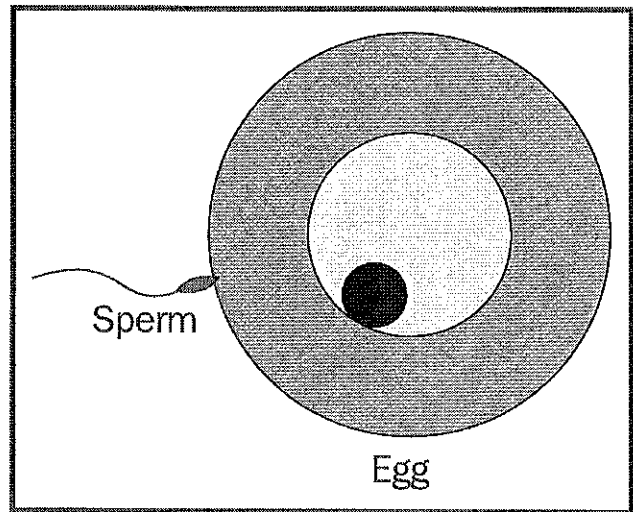


FIGURE 1. Fertilization occurs when the sperm of the male unites with the egg of the female.

The zygote will travel down through the female reproductive tract and eventually attach to the uterine wall. At this point, gestation begins. **Gestation** is the period during which the offspring grows and develops in the uterine body of its mother. The young grows from the diameter of pencil lead to birth weight. Birth weight is normally reflective of the mature size of the animal. For example, the birth weight of an elephant is significantly higher than that of a house cat.

The length of gestation varies with the species. It can be quite long—for example, approximately 340 days for horses. A dog's gestation is about 56 days. A rabbit's is fairly short—approximately 31 days.

Near the end of gestation, the mother prepares to give birth. The process of giving birth is called **parturition**. Parturition involves several steps. The cervix dilates; the uterine body begins contracting; the offspring is expelled from the body; and the placenta, or afterbirth, is expelled. This can take anywhere from 1 to 12 hours.

Animals approaching parturition should be carefully monitored. Problems, such as dystocia, can occur. **Dystocia** is severe distress in the female while giving birth. Assistance may be needed to complete the process. A professional, such as a veterinarian, should be consulted.

A female typically gives signs of approaching parturition. These could include the building of a nestlike-structure, isolation from other animals, or a noticeable change in behavior.

Shortly before or immediately after parturition, the female prepares to care for her young. This is done through the production of milk, or **lactation**. This is extremely important for the survival of the young. The first milk, or **colostrum**, provides enzymes to fight bacteria and disease. A young animal is commonly exposed to a harsh environment at birth and needs all the defense it can get to remain healthy and strong. The milk is extracted from the mother's mammary system. Lactation, like parturition, is stimulated by hormones in the body of the female. Hormones are released to begin both processes at nearly the same time.

POULTRY AND FISH REPRODUCTIVE DEVELOPMENT

The reproductive development of poultry and fish is very similar. Poultry and most fish hatch their young from eggs in an external environment from the body. Like animals, they must reach sexual maturity before they are able to reproduce.

Poultry

In poultry the female begins producing eggs in her body on a regular basis. Fertilization occurs within her body. The male mounts the hen and deposits sperm into her funnel. The sperm cells are included in the egg as it develops and passes through the funnel.

The female will then start laying eggs in a nest. The quality, type, and size of the nest depend on the species of the poultry. Once the desired number of eggs is laid, incubation begins. **Incubation** is the act of poultry physically sitting on top of the eggs to keep them warm until the young hatch. The temperature must be kept in a range of 99° to 100°F (37.2° to 37.8°C). The poultry will incubate the eggs for the

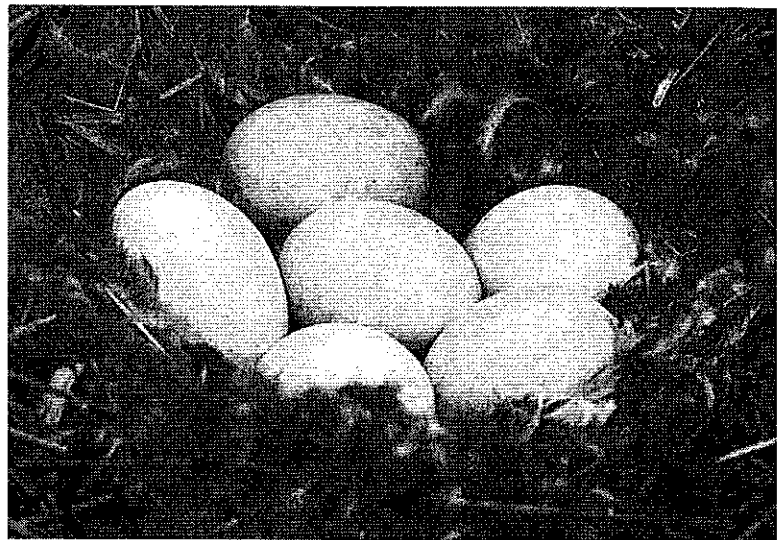


FIGURE 2. This goose nest is built of twigs and feathers to protect the eggs. (Courtesy, USDA)

required number of days, which varies among species. The incubation period for a chicken is 21 days, a turkey 28 days, and an ostrich more than 40 days.

The poultry must also maintain the humidity of the eggs for the last two weeks of nesting. This will soften the eggs and assist the young when hatching. The eggs must also be exposed to sufficient levels of oxygen and turned 2 to 5 times daily for the first 14 to 18 days of nesting. If the eggs are properly fertilized, cared for, and not found by predators, young should hatch.

Fish

Fish also build nestlike structures in which to lay their eggs. They build them in the mud and rock along or near the banks of rivers and lakes. Fish are seasonal breeders, stimulated by daylight, water temperature, and other environmental factors.

Spawning is the act of the female fish laying thousands of eggs in a nest, where they are fertilized by the male fish. The male and female fish will guard the nest until their young hatch. Incubation of the eggs takes 6 to 10 days, depending on the temperature of the water. The warmer the water, the faster the eggs hatch.

Summary:



Animals must mature and develop before they can reproduce efficiently. This process begins with the animals going through puberty so that sex cells can be produced by both sexes. Once the animals are developed reproductively, fertilization must occur by uniting a sperm cell and an ovum. Once pregnant, the female begins the gestation process. At the conclusion of gestation, parturition begins. During or shortly after the birthing process, the female begins lactating to support her young.

Poultry must also mate before an egg can be fertilized. The fertile eggs are laid in a nest and incubated until they hatch. Fish, too, lay their eggs in a nest. Once the female lays the eggs, the male fertilizes them.

Checking Your Knowledge:



1. Why is fertility still low after puberty?
2. What should an animal producer do in cases of dystocia during parturition?
3. Why is it important for a young animal to obtain colostrum?
4. Why must poultry maintain the humidity of their eggs?
5. How does the fertilization of poultry and fish eggs differ?

COON By Sean 4-27 #9

Expanding Your Knowledge:



Interview an animal producer to discuss the processes of breeding, fertilization, and parturition. Ask questions about when fertilization occurs in animals of the producer's specialty. Also, ask about special care of females during their gestation process. Do the animals have special needs? Ask about steps to prepare for parturition of females. Are any special procedures necessary? What does the producer do if dystocia occurs? Ask to participate in the breeding, fertilization, or parturition process of an animal. Share the results of this interview with your classmates.

Web Links:



Gestation Table for Cattle

<http://www.cattletoday.com/gestation.shtml>

Canine Breeding and Reproduction

<http://www.aces.edu/pubs/docs/U/UNP-0052/>

Chicken Embryo Development

<http://www.rit.edu/~nlwsbi/EMBRYOS.HTM>

Agricultural Career Profiles

<http://www.mycaert.com/career-profiles>

COON

Ag Science

4-27 #3

Mr. Coon

Ag Science

Name

Date

Activity with SAE project