

ANIMAL SCIENCE MERIT BADGE WORKBOOK

This Scoutmaster Bucky Merit Badge Workbook is based off the current *Scouts BSA Requirements*.

Consider also using the Animal Science merit badge class preparation page for clarification and expectations when participating in a Scoutmaster Bucky merit badge opportunity ([online](#) or [in-person](#)).

<https://scoutmasterbucky.com/merit-badges/animal-science/>

Scout's
Name:

Avian Option

This workbook covers only one of the options for this merit badge. Check the Scoutmaster Bucky website for the other possibilities.

REQUIREMENT 1: Name four breeds of livestock in each of the following classifications: horses, dairy cattle, beef cattle, sheep, hogs, poultry, and goats. Tell their principal uses and merits. Tell where the breeds originated.

Four breeds of horses

Four breeds of dairy cattle

Four breeds of beef cattle

Four breeds of sheep

Four breeds of hogs

REQUIREMENT 2: List five diseases that afflict the animals in each of the classifications in requirement 1. Also list five diseases of poultry. Describe the symptoms of each disease and explain how each is contracted and how it could be prevented.

Five diseases afflicting horses, how each are contracted and how each could be prevented

Five diseases afflicting dairy cattle, how each are contracted and how each could be prevented

Five diseases afflicting beef cattle, how each are contracted and how each could be prevented

Five diseases afflicting sheep, how each are contracted and how each could be prevented

Five diseases afflicting hogs, how each are contracted and how each

Five diseases afflicting poultry, how each are contracted and how each could be prevented could be prevented

REQUIREMENT 3: Explain the differences in the digestive systems of ruminants, horses, pigs, and poultry. Explain how the differences in structure and function among these types of digestive tracts affect the nutritional management of these species.

Digestive system of ruminants and how it affects the nutritional management

Digestive system of horses and how it affects the nutritional management

Digestive system of pigs and how it affects the nutritional management

Digestive system of poultry and how it affects the nutritional management

REQUIREMENT 4: Select one type of animal—beef cow, dairy cow, horse, sheep, goat, or hog, or a poultry flock—and tell how you would properly manage it. Include in your discussion nutritional (feeding) concerns, housing, disease prevention, waste control/removal, breeding programs, and biosecurity as appropriate.

Your selected type of animal

How you would properly manage it

Nutritional concerns

Housing

Disease prevention

Waste control/removal

Breeding programs

Biosecurity

REQUIREMENT 5: Explain the importance of setting clear goals for any animal breeding program. Tell how purebred lines of animals are produced. Explain the practice of crossbreeding and the value of this practice.

Importance of setting clear goals

How purebred lines of animals are produced

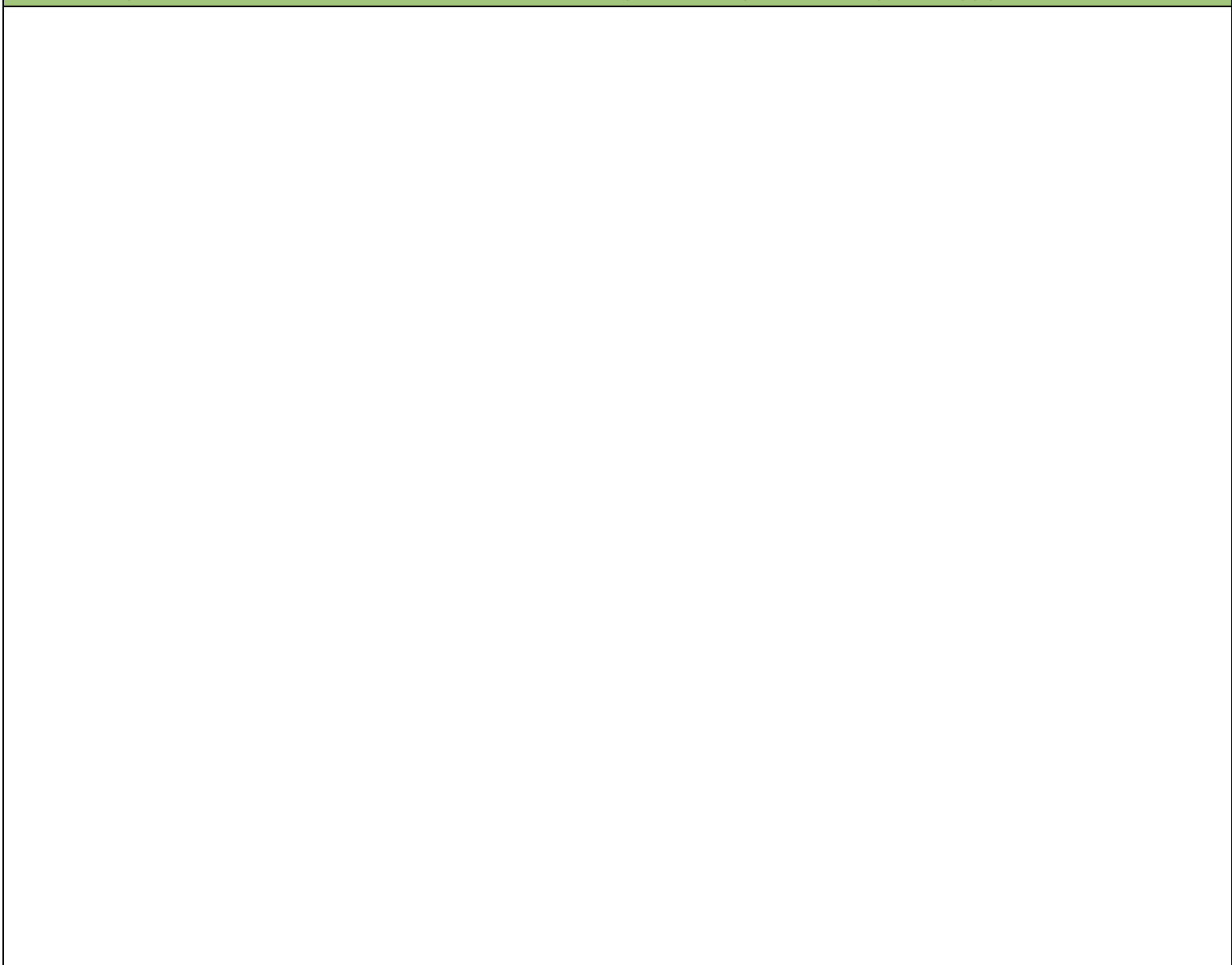
The practice of crossbreeding

The value of crossbreeding

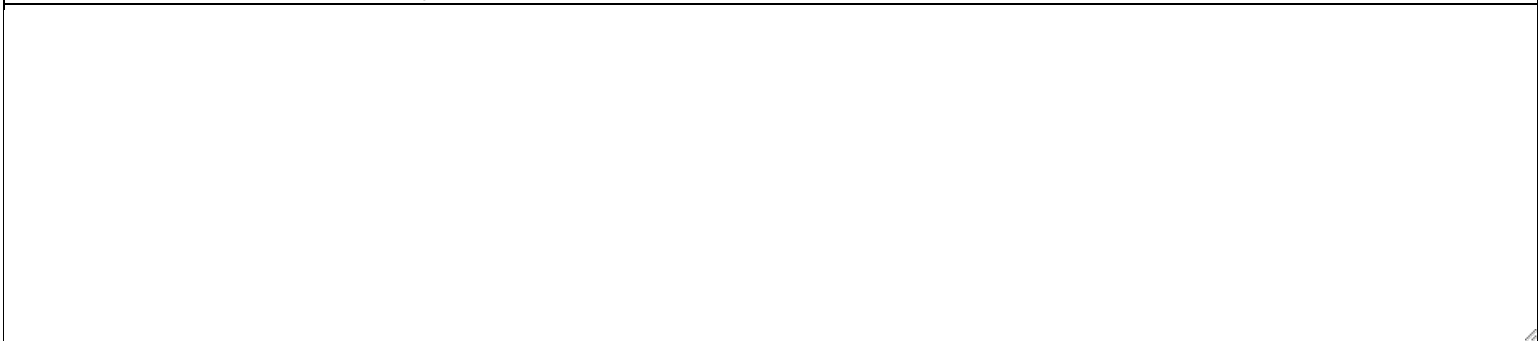
REQUIREMENT 6: Complete ONE of the following options:

Avian Option

REQUIREMENT A: Make a sketch of a layer house or broiler house showing nests, roosts, feeders, waterers, and means of ventilation. Explain how insulation, ventilation, temperature controls, automatic lights, and other environmental controls are used to protect birds from heat, cold, and bad weather. Explain the importance of light for egg production.



How environmental controls are used to protect birds



The importance of light for egg production

REQUIREMENT B: Explain why overcrowding is dangerous for poultry flocks.

REQUIREMENT C: Tell about the grading of eggs. Tell how broilers (fryers) are graded. Describe the classes of chicken meat.

Grading of eggs

How broilers are graded

Classes of chicken meat

REQUIREMENT D: Do ONE of the following:

REQUIREMENT 1: Manage an egg-producing flock for five months. Keep records of feed purchased, eggs sold, medication, vaccination, and mortality. Present your records to your counselor for review.

Completed

REQUIREMENT 2: Raise five chickens from hatching. Keep records of feed intake, weight gains, medication, vaccination, and mortality. Present your records to your counselor for review.

Completed

REQUIREMENT 3: Visit a commercial avian production facility. Describe what you saw and explain what you learned. If you cannot visit a commercial facility, view a video from a poultry association, or research the internet (with your parent's permission) for information on poultry production. Tell about your findings.

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REQUIREMENT E: Define the following terms: chick, pullet, hen, cockerel, cock, capon

Chick

Pullet

Hen

Cockerel

Cock

Capon

REQUIREMENT 7: Find out about three career opportunities in animal science. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor, and explain why this profession might interest you.

Three career opportunities

Education, training, and experience required for one profession