

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:

Dairying 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 could be prevented

Five diseases afflicting poultry, how each are contracted and how each 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:

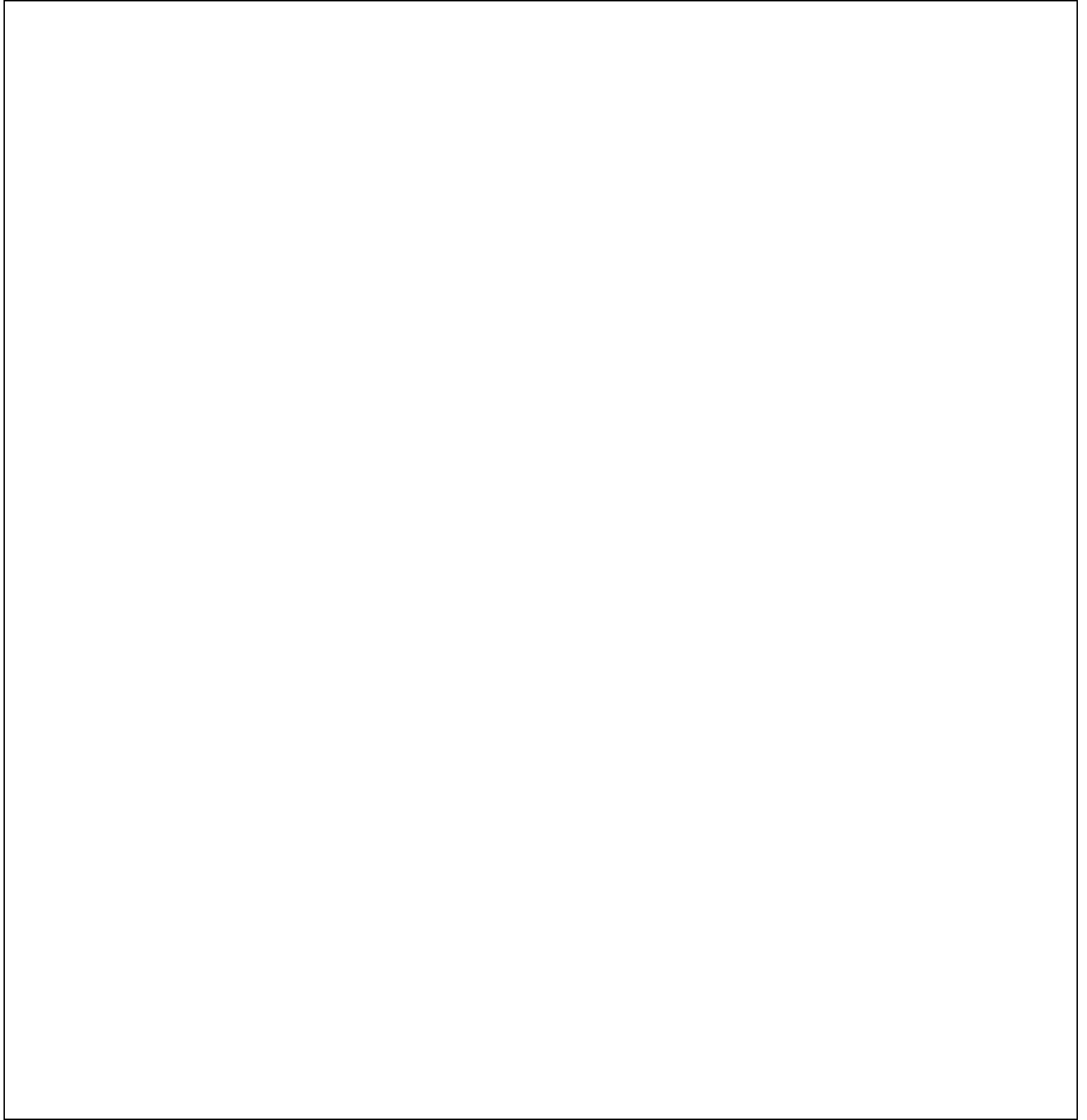
Dairying Option

REQUIREMENT A: Tell how a cow or a goat converts forage and grain into milk. Explain the differences in feeds typically used for dairy cows versus those fed to beef cows.

How a cow or a goat converts forage and grain into milk

Differences in feeds typically used for dairy cows versus those fed to beef cows

REQUIREMENT B: Make a chart showing the components in cow's milk or goat's milk. Chart the amount of each component.



REQUIREMENT C: Explain the requirements for producing grade A milk. Tell how and why milk is pasteurized.

Requirements for producing grade A milk

How and why milk is pasteurized

REQUIREMENT D: Tell about the kinds of equipment used for milking and the sanitation standards that must be met on dairy farms.

Kinds of equipment used for milking

Sanitation standards that must be met on dairy farms

REQUIREMENT E: Define the following terms: bull, cow, steer, heifer, springer; buck, doe, kid.

Bull

Cow

Steer

Heifer

Springer

Buck

Doe

Kid

REQUIREMENT F: Visit a dairy farm or a milk processing plant. Describe what you saw and explain what you learned. If you cannot visit a dairy farm or processing plant, view a video from a breed or dairy association, or research the internet (with your parent's permission) for information on dairying. Tell about your findings.

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