Name: _____

CASE

Activity 8.3.1 The Circle of a Bug's Life

Purpose

Many living organisms rely closely on another organism for survival. This life-sustaining relationship is referred to as symbiotic. Symbiotic relationships can be mutualistic (beneficial to both organisms), commensalistic (beneficial to one organism, not harmful to the other), and parasitic (beneficial to one organism and harmful to the other).

Parasites cause significant economic and health damage to animals every year. Knowing the life cycle of a parasite and the controls for the different life stages is important in reducing and eliminating parasites in animals. What is the life cycle of a bug?

Materials

Per student:

- *Modern Livestock and Poultry Production* textbook
- Agriscience Library
- Computer with Internet access
- 11"x17" paper
- Pencil
- *Agriscience Notebook*

Procedure

Research and diagram the life cycle of a parasite. Building on what you learned in *Unit 2 History and Use of Animals* regarding classifying animals, classify the parasites by their living arrangement and their phylum in Part Two of this activity .

Part One – Life Cycle Diagram

1. Select a parasite from the list below. Check with your teacher to determine if anyone else has selected the same parasite. Work with your classmates to avoid any repetition.

Anaplasma	Heartworm	Pinworm
Ascarid	Hookworm	Screwworm
Bot	Horn fly	Stomach worm
Cattle grubs	Horsefly	Strongyle
Chigger	Ked	Tapeworm
Coccidia	Lice	Tick
Flea	Mite	Toxoplasmosis
Giardia	Mosquito	Trichomonads
Liver fluke		Whipworm

2. Determine the life cycle of your parasite. Answer the questions below in your research about the parasite.
   - What is the phylum and scientific name of the parasite?
   - Is it external or internal?
   - What are the stages of development?
   - Where does the parasite live during each stage?
   - What hosts are involved?

3. Draw a diagram depicting the life cycle of the parasite. Use drawings and sketches to show each stage of development. Include the answers to the above questions as well as the following questions at the appropriate points on your diagram.
    - At what points can eradication be effective?
    - What should be used to treat this parasite?
    - What other management practices can be used to eliminate or reduce the occurrence the parasite?
4. When you are finished, hang your diagram on the wall as instructed by your teacher.

Part Two – Classifying Parasites

1. Observe the diagrams around the classroom.
2. Determine if the parasite on each diagram is an internal parasite or an external parasite, if it is an arthropod, helminth, or protozoa, and the recommended treatment.
3. Use *Activity 8.3.1 Student Worksheet* to record your observations.

Conclusion

1. Why is studying the life cycle of parasites important to animal producers?

2. How does the life stage of a parasite influence the control method chosen?

3. Why is correct classification of parasites essential for treatment?

Name: _____

Activity 8.3.1 Student Worksheet

Directions: Work your way around the classroom, observing each diagram. Record the parasite presented, whether it is external or internal and a helminth, arthropod, or protozoa, and the treatment recommended.

	Parasite	External/ Internal	Helminth/ Arthropod/ Protozoa	Treatment
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				