Spaying & Neutering Notesheet *by C. Kohn*

Name: Hour Date:

Date Assignment is due: Why late? Score: + ✓ -
 Day of Week Date If your project was late, describe why

What is actually removed when an animal is neutered?

What is actually removed when an animal is spayed?

What are some problems that can occur if a pet is not spayed or neutered? Describe five problems.

What are five benefits of spaying and neutering?

*Page through this notesheet. Then answer the questions below:*
Circle one: *I need to review my notes & practice before the quiz.* Definitely – Yes – Sort of - No

Circle one: *I have never seen or heard of some of these concepts.* Definitely – Yes – Sort of - No

Circle one: *This may be a challenging unit for me personally.* Definitely – Yes – Sort of - No

Circle one: *I may need extra strategies for some topics/vocab.* Definitely – Yes – Sort of - No

**Units**

1. Lab Safety

2. Pet Portfolio

3. Animal Handling & Care

4. Physical Exams

5. Wounds & Healing

6. Bandages

7. Sutures

8. Emerg. Responses

9. Pet Nutrition

10. Pet Obesity

11. Repro Health

 **Weekly Schedule**

Why do people put off spaying and neutering?

**Directions**: use the accompanying PowerPoint (*available online*) to complete the questions below. This sheet will be due upon the completion of the PowerPoint in class. These assignments are graded on a +/✓/- scale.

1. What are three reasons that spaying and neutering is a good idea?
2. The spaying or neutering is performed, the
3. This is a choice that should be

and should be
4. What are four reasons for why neutered/spayed animals make better pets?
5. An unneutered male dog is
6. Unneutered males are also more likely to
7. Unneutered male cats may have
8. Unspayed female cats go
9. During this \_\_\_\_\_\_\_\_\_ day period, the cat may
10. Unspayed female dogs may
11. Unspayed or unneutered pets will also
12. What is asexual reproduction?
13. Bacteria can reproduce through

	1. What does this mean?
14. What is cell mitosis?
15. Provide examples of asexual reproduction for each of the following:

Hydra:

Sharks:

Plants:
16. What are three major disadvantages of sexual reproduction?
17. What is the main advantage of sexual reproduction?
18. Through sexual reproduction, a species is more likely to
19. Genetic diversity also enables
20. It is only through

that species are able to
21. Almost all eukaryotic cells are . What does this mean?
22. What is a chromosome?
23. Different species have
24. Is DNA normally found in chromosomes? When would we find chromosomes?
25. DNA needs so that the genes can be
26. When DNA is packed into these
27. Packing DNA into chromosomes allows it to be evenly between
28. What is a gamete?
29. Each gamete has
30. Why is this necessary?
31. What is meiosis?
32. Draw meiosis in the space below (use the image on the slide):
33. The process of creating sperm cells is called
34. In males,
35. What are spermatogonia?
36. Spermatogonia are germ cells. What are germ cells?
37. Meiosis has two stages. Summarize each below:

Meiosis I:

Meiosis II:
38. Before of begins, all DNA is

packed into
39. Each spermatogonium germ cell begins with
40. After doubling the DNA, there will now be
41. A chromosome normally looks like a
42. Once the DNA has been doubled, it causes the
43. During Meiosis I, each pair of chromosomes
44. What is are homologous chromosomes?
45. What is crossing over?
46. Why is this necessary?
47. Draw crossing over below (based on the image on the slide):
48. Instead of passing on a

crossing over enables
49. This allows for more than if
50. After crossing over occurs,
51. The cell , creating

Each of the two new cells has
52. In Meiosis II, the two cells
53. The two cells that

have now become
54. These four cells become
55. Draw the stages of Meiosis of spermatogonium in the space below (use the image on the slide). Label each part:
56. Once the sperm cells form, they must

in order to
57. Sperm cells are formed in the .
58. What are the testicles?
59. What is the scrotum?
60. Why are the testicles found outside the body?
61. What happens if the sperm get too warm?
62. The testicles are made of coiled tubules called
63. The is where
64. During intercourse, the sperm is moved into , a long
65. The adds additional that
66. What is semen?
67. From the , the sperm cells and fluids enter the , which runs
68. What is the glans penis?
69. How is a dog’s penis unique?
70. What is the purpose of the bone in the dog’s penis?
71. What is a prepuce?
72. During intercourse, the semen will be

into
73. What is the path of semen from ejaculation to fertilization?
74. How is the production of eggs in a female different from the production of sperm in males?
75. Meiosis II then occurs

until
76. Why is a female more likely to have offspring with genetic abnormalities as she gets older?
77. What is the second difference between meiosis in females compared to males?

1. Why must the eggs be larger than the sperm?
2. Because the egg cell needs to be , the meiosis only
3. During Meiosis I, the doubled-chromosomes are split
4. Most of the goes to
5. Half of the and just go to

 ( )
6. Polar bodies ensure that

by
7. What happens to the polar body?
8. During Meiosis II, the cell with again splits,

this time forming
9. Draw the stages of meiosis of egg cells and polar bodies in the space below (using the image on the slide):
10. Where do the stages of meiosis that produce the eggs occur in the reproductive tract?
11. Eggs are released into the (or ), where

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ takes place.
12. If fertilized, the egg (now called a ) will move into the

and implant on the
13. What does the cervix do?
14. What is the function of the vagina?
15. What is the function of the vulva?
16. What do the ovaries do in addition to producing the eggs?
17. How often do dogs go into heat?
18. Summarize each stage of the canine heat cycles:

Proestrus:

Estrus:

Diestrus:

Anestrus:
19. Spaying and neutering ensure that without
20. Spaying and neutering procedures are designed to be while ensuring
21. Most pets are able to be after a spaying or neutering operation

with
22. Most neutering procedures can be completed
23. A neutering process begins with to ensure there will be
24. Next, the dog undergoes to ensure that it will not

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25. Once asleep, a tube is to ensure that
26. The tube delivers both
27. The scrotum is to prevent
28. An incision is made and both

are removed
29. The leading to the are

and the
30. How soon can an animal usually go home after neutering?
31. What two minor problems might occur after neutering?
32. If the dog licks or bites at the stiches, it will need
33. How long after the operation are the stitches removed?
34. Why should a professional remove the stitches?
35. What about the glands, the production of semen, and the rest of the male reproductive tract? Why can those stay in the dog?
36. What is another term for spaying?
37. Where is the incision made for a spaying operation?
38. The midline is used because
39. Once the incision is made, and the uterine horn is located, what is the first step?
40. Once the blood supply has been sutured, what happens next?

1. Why is a spaying procedure more at risk for complications?
2. What are two possible complications that can result from a spaying procedure?
3. If a spaying procedure is more at risk for complications, why is it still a good idea to get an animal spayed?

Unit Wrap-up C. Kohn, Agricultural Sciences - Waterford WI

1. Write the 3 topics that you most need to review before the quiz:

1\_

2\_

3\_
2. Create 3 **high-level questions** related to this material
(*These questions could be something you still don’t know or questions that reflect understanding that you have now that you did not have before.*)

1\_

2\_

3\_
3. List 6 **vocabulary words** that you did not know before or have not used very often prior to this unit:

1\_ 2 3

4 5 6

1. In the spaces below, fully write three strategies that will help you to remember specific vocabulary words or topics from this unit. **NOTE**: A strategy is *not* an activity such as reviewing your notes, studying hard, etc. A strategy is a mnemonic, rhyme, analogy, or other brain-based device that is specific to one item from the unit.

1.\_

2.\_

3.\_

1. Circle the most appropriate response. You will only be graded on whether or not you completed this section, so be entirely honest with yourself when completing this section.

Circle one: *I used my notes outside of class to prepare for the quiz.* Definitely – Yes – Sort of - No

Circle one: *I took extra notes in the margins for very difficult concepts.* Definitely – Yes – Sort of - No

Circle one: *I created a personal strategy for at least three difficult items.* Definitely – Yes – Sort of - No

Circle one: *I was very involved and actively studying during the quiz review.* Definitely – Yes – Sort of - No

Circle one: *I think I will be satisfied with the quiz grade I received this week.* Definitely – Yes – Sort of - No