

ALL ABOUT THE BODY

NAME _____ SCHOOL _____

DATE STARTED _____ DATE COMPLETED _____

PREREQUISITE: None.

HOW TO DO THIS COURSE: Do the steps one at a time, in order. When you finish a step, put your initials and the date on the sign-off line on the right. A split line means to get a pass (and an initial) from another student (or your Academic Supervisor if it says that). Essays are turned in to the Academic Supervisor.

PURPOSE: Learn parts of the body and what they do.

ESTIMATED TIME: 8–10 hours.

MATERIALS NEEDED FOR THIS COURSE

Data Sheet (DS) #9885 Flashcard List and Map for All About the Body, attached to the back of this study guide

All About the Body: A Beginning Book of the Human Body

Flashcards for All About the Body (DS #9885 includes a list of all the flashcards in the pack)

Exam: 9622, 9623 (answers)

Other materials:

From biological supplier: human anatomy model at least 18 in. high for classroom use (the larger the better, smaller would be workable for home study), model of human skeleton with flexible joints, human heart model (showing outside and inside of heart).

Chewing gum or cracker, heavy book or bottle, butcher paper, markers, stethoscope, internet access, stopwatch or watch that shows seconds.

NOTE TO ACADEMIC SUPERVISOR

Several optional, fun, online anatomy activities are provided in section G of this course. Any other suitable anatomy games may be substituted at supervisor discretion.

A. INTRODUCTION

1. READ: *All About the Body* (AAB), Introduction. _____
2. READ: AAB, Chapter 1: Cells. _____
3. DEMONSTRATION: Draw a picture of the three things cells take in and the three things they get rid of as waste. _____
4. READ: AAB, Chapter 2: Cells Work Together. _____

5. DEMONSTRATION: Show how “Cells work together to form tissue. Tissues work together to form organs. Organs work together to form systems.”

B. SKELETAL SYSTEM

1. READ: AAB, Chapter 3: Skeletal System. As you are reading, locate the parts of this system on your own body.

2. DEMONSTRATION:

- a) Touch your rib cage on both sides at the same time. _____
- b) Start with your spine and feel your ribs all the way around to your front. _____
- c) Touch your breastbone in the center of your chest. _____

3. DEMONSTRATION:

- a) Touch your elbow. _____
- b) Feel the bone in your upper arm. _____
- c) See if you can feel the two bones in your lower arm. _____

4. DEMONSTRATION: Count the joints in the fingers of one of your hands.

5. DEMONSTRATION: Use a skeleton model to do this demonstration. Find each part of the skeletal system listed below.

- a) joint _____
- b) skull _____
- c) teeth _____
- d) spine _____
- e) rib cage _____
- f) bones of the hands _____
- g) bones of the feet _____
- h) elbow _____

6. DEMONSTRATION: Look at the ribs on the back of the skeleton model. Then turning the skeleton around, find some ribs that are attached to the breastbone and some that are not attached.

7. DRILL:

a) Get together all the skeletal system flashcards. Study them until you think you can look at any of them and say the name of the body part and what it does without having to read the flashcard. ____

b) Get a coach to do the drill with you. The coach shows you the flashcard pictures one at a time and you name each part. If you have trouble, the coach shows you the name on the other side of the card. Continue until you can name each part quickly and correctly. ____

c) The coach shows you the flashcard pictures one at a time and you name each part *and* say what it does. (You don't have to say *exactly* what it says on the back of the card.) If you have trouble, the coach shows you the name and job on the other side of the card. ____

You pass the drill when you can name each part of the skeletal system and say what it does quickly and correctly.

C. MUSCULAR SYSTEM

1. READ: AAB, Chapter 4: Muscular System. As you are reading, locate the parts of this system on your own body.

2. DEMONSTRATION: Use your biceps and triceps muscles.

a) Pick up a heavy book or bottle with one hand and lift it by bending your arm at the elbow. With your other hand, feel your flexed biceps on the front part of your upper arm. ____

b) Hold the book or bottle in one hand above your head with your arm straight. Then bend your upper arm back at the elbow so that you are holding the object behind your head. With your other hand, feel your flexed triceps on the back side of your upper arm. ____

3. DEMONSTRATION: Find each part of the muscular system listed below on a body model.

- a) biceps ____
 - b) triceps ____
 - c) calf muscles ____
 - d) Achilles tendon ____
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4. DRILL:

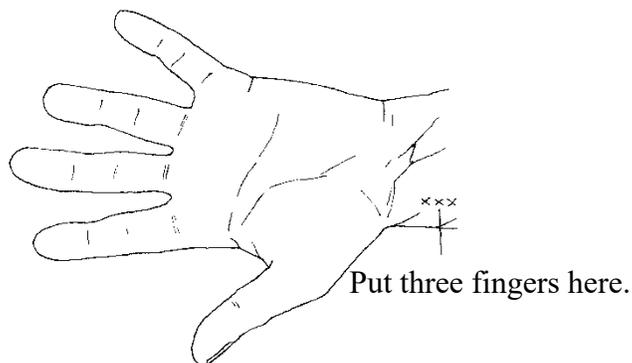
- a) Get together all the muscular system flashcards. Study them until you think you can look at any of them and say the name of the body part and what it does without having to read the flashcard. ____
- b) Get a coach to do the drill with you. The coach shows you the flashcard pictures one at a time and you name each part. If you have trouble, the coach shows you the name on the other side of the card. Continue until you can name each part quickly and correctly. ____
- c) The coach shows you the flashcard pictures one at a time and you name each part *and* say what it does. (You don't have to say *exactly* what it says on the back of the card.) If you have trouble, the coach shows you the name and job on the other side of the card. ____

You pass the drill when you can name each part of the muscular system and say what it does quickly and correctly.

D. CIRCULATORY SYSTEM AND RESPIRATORY SYSTEM

- 1. READ: AAB, Chapter 5: Circulatory System. As you are reading, locate the parts of this system on your own body as well as you can.
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2. DEMONSTRATION: Turn your wrist so that one hand is palm up. Take your other hand and gently press three fingers against your wrist just above your thumb.



Push your fingers against your wrist until you can feel a throbbing. This is the feeling of your blood being pushed through an artery. It is called your pulse.

3. DEMONSTRATION: Find some veins just under the surface of your skin by looking for some bluish or bluish-green lines on your hands or the inside of your wrists.
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4. DEMONSTRATION: Hold your fingers close to a bright light bulb. Notice that the edges of your fingers are red. They are colored red from the blood circulating through the capillaries in your fingers.
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5. DEMONSTRATION: Get a stethoscope and listen to your heart beat. Get help from the supervisor if you need to.
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6. DEMONSTRATION: Find each part of the circulatory system listed below on a body model.

a) arteries ____

b) veins ____

c) capillaries ____

d) heart ____

7. READ: AAB, Chapter 6: Respiratory System. As you are reading, locate the parts of this system on your own body as well as you can.
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8. DEMONSTRATION:

- a) When you take a deep breath, your diaphragm pulls down and draws air into your lungs. That makes your lungs bigger and makes your ribs rise. Put your hands on your ribs. Take a deep breath and notice that your ribs rise. ____
- b) When you let go of your breath, you are relaxing your diaphragm. Put your hands on your ribs, take another deep breath and then let go of your breath. Notice that air goes out of your lungs and your ribs go down. ____

9. DEMONSTRATION: Find each part of the respiratory system listed below on a body model.

- a) trachea ____
- b) bronchi ____
- c) lungs and alveoli ____
- d) diaphragm ____

10. DEMONSTRATION: Using the picture of the lungs and heart on page 37, start anywhere in the heart and trace the blood flow through the circulatory system and lungs back to that spot.

11. DRILL:

- a) Get together all the circulatory and respiratory system flashcards. Study them until you think you can look at any of them and say the name of the body part and what it does without having to read the flashcard. ____
- b) Get a coach to do the drill with you. The coach shows you the flashcard pictures one at a time and you name each part. If you have trouble, the coach shows you the name on the other side of the card. Continue until you can name each part quickly and correctly. ____
- c) The coach shows you the flashcard pictures one at a time and you name each part *and* say what it does. (You don't have to say *exactly* what it says on the back of the card.) If you have trouble, the coach shows you the name and job on the other side of the card. ____

You pass the drill when you can name each part of the circulatory and respiratory systems and say what it does quickly and correctly. _____

E. DIGESTIVE SYSTEM AND URINARY SYSTEM

1. READ: AAB, Chapter 7: Digestive System. _____
2. DEMONSTRATION: Chew some gum or a cracker to produce some saliva in your mouth. Then feel the back of your jaw with your fingers where your jawbone curves up. A little in front of that curve, but at the top of your throat, you can feel little lumps. These are two of your salivary glands. _____
3. DEMONSTRATION: Find each part of the digestive system listed below on a body model.
 - a) salivary glands _____
 - b) esophagus _____
 - c) stomach _____
 - d) small intestine _____
 - e) pancreas _____
 - f) liver _____
 - g) large intestine _____
 - h) rectum __________
4. READ: AAB, Chapter 8: Urinary System. _____
5. DEMONSTRATION: Find each part of the urinary system listed below on a body model.
 - a) kidneys _____
 - b) bladder __________
6. DRILL:
 - a) Get together all the digestive system and urinary system flashcards. Study them until you think you can look at any of them and say the name of the body part and what it does without having to read the flashcard. _____
 - b) Get a coach to do the drill with you. The coach shows you the flashcard pictures one at a time and you name each part. If you have trouble, the coach shows you the name on the other side of

the card. Continue until you can name each part quickly and correctly. ____

- c) The coach shows you the flashcard pictures one at a time and you name each part *and* say what it does. (You don't have to say *exactly* what it says on the back of the card.) If you have trouble, the coach shows you the name and job on the other side of the card. ____

You pass the drill when you can name each part of the digestive and urinary systems and say what it does quickly and correctly. _____

F. NERVOUS SYSTEM AND HORMONAL SYSTEM

- 1. READ: AAB, Chapter 9: Nervous System. _____
- 2. DEMONSTRATION: Move some part of your body. Then make a drawing showing how your nervous system made that happen. _____
- 3. DEMONSTRATION: Use your nervous system. Close your eyes. With your eyes closed, touch several different things. See what you notice about the textures just by touching. _____
- 4. DEMONSTRATION: Find each part of the nervous system listed below on a body model.
 - a) nerves (If your body model doesn't show these, look at some nerves on the internet.) ____
 - b) brain ____
 - c) spinal cord ____ _____
- 5. READ: AAB, Chapter 10: Hormonal System. _____
- 6. DEMONSTRATION: Find each part of the hormonal system listed below on a body model. Then find it on your own body as best you can.
 - a) adrenal glands ____
 - b) thyroid gland ____
 - c) pituitary gland ____
 - d) pancreas ____ _____

7. DRILL:

- a) Get together all the nervous system and hormonal system flashcards. Study them until you think you can look at any of them and say the name of the body part and what it does without having to read the flashcard. ____
- b) Get a coach to do the drill with you. The coach shows you the flashcard pictures one at a time and you name each part. If you have trouble, the coach shows you the name on the other side of the card. Continue until you can name each part quickly and correctly. ____
- c) The coach shows you the flashcard pictures one at a time and you name each part *and* say what it does. (You don't have to say *exactly* what it says on the back of the card.) If you have trouble, the coach shows you the name and job on the other side of the card. ____

You pass the drill when you can name each part of the nervous and hormonal systems and say what it does quickly and correctly. _____

8. READ: AAB, The Amazing Human Body. _____

G. MORE FUN

1. PRACTICAL APPLICATION: Pick one of the following activities and check the box. Then do it.
 - Go to the website KidsHealth by typing in *KidsHealth.org*. Click on the tab "For Kids," then "How the Body Works." The screen will show icons of body parts. Click on one you are interested in, even if you haven't studied it yet.
 - a) Watch the movie for the body part. ____
 - b) Do the activity for the body part. ____
 - Go to the website KidsHealth by typing in *KidsHealth.org*. Click on the tab "For Kids," then "How the Body Works." The screen will show icons of body parts. Click on one you are interested in, even if you haven't studied it yet.
 - a) Read the article on the body part. ____
 - b) Do the Word Finder activity for the body part. ____

- In the Google searchbox, type *Anatomy Arcade - jigsaws*. Then choose a puzzle and do it. There will probably be some body parts in the puzzle that you have not yet learned.
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H. FINAL APPLICATION SECTION

1. DRILL:

- a) Get together all the flashcards. Study them until you think you can look at any of them and tell the name and job without having to read the flashcard. ____
- b) Get a coach to do the drill with you. The coach shows you the flashcard pictures one at a time and you name each part. If you have trouble, the coach shows you the name on the other side of the card. Continue until you can name each part quickly and correctly. ____
- c) The coach shows you the flashcard pictures one at a time and you name each part *and* say what each part does. (You don't have to say *exactly* what it says on the back of the card.) If you have trouble, the coach shows you the name and job on the other side of the card. ____

You pass the drill when you can name and say what each part does quickly and correctly.

2. DRILL:

- a) Get the pack of flashcards and a piece of butcher paper that is long enough for a student to lie on. ____
- b) Draw an outline of another student's body while he or she is lying on the butcher paper. ____
- c) Take out these flashcards from the pack and set them aside: ____
skeletal system veins nervous system
muscular system capillaries and nerves
circulatory system respiratory system hormonal system
blood vessels digestive system
arteries urinary system
- d) Take all the remaining flashcards and turn them so that the pictures face up. ____

e) Have a coach time you while you practice putting the flashcards on the body outline in the right places. You pass when you can do this without mistakes in less than two minutes. If needed, the coach can use the attached map of flashcard labels to check your work. _____

3. PRACTICAL APPLICATION: Think of a question about the body that you would like to know the answer to. Research the answer and write down what you find out. (You might be able to find the answer at the KidsHealth website.) Then tell someone what you found out. _____

4. ESSAY: Tell about several things you learned from this course that you think are important and why. **Supervisor pass.** _____

I have done all of the steps on this course. I understand what I studied and can use it.

Student _____ Date _____

The student has completed the steps of this course and knows and can apply what was studied.

Academic Supervisor _____ Date _____

The student has passed the exam for this course.

Examiner _____ Date _____

FLASHCARD LIST AND MAP FOR ALL ABOUT THE BODY

FLASHCARD LIST

Skeletal System

1. Skeletal System
2. Skull
3. Teeth
4. Spine
5. Rib Cage
6. Bones of the Hands
7. Bones of the Feet
8. Elbow

Muscular System

9. Muscular System
10. Biceps
11. Triceps
12. Calf Muscles
13. Achilles Tendon

Circulatory System

14. Circulatory System
15. Blood Vessels
16. Arteries
17. Veins
18. Capillaries
19. Heart

Respiratory System

20. Respiratory System
21. Trachea
22. Bronchi
23. Lungs
24. Alveoli
25. Diaphragm

Digestive System

26. Digestive System
27. Salivary Glands
28. Esophagus
29. Stomach
30. Small Intestine
31. Pancreas
32. Liver
33. Large Intestine
34. Rectum

Urinary System

35. Urinary System
36. Kidneys
37. Bladder

Nervous System

38. Nervous System
39. Nerves
40. Brain
41. Spinal Cord

Hormonal System

42. Hormonal System
43. Adrenal Glands
44. Thyroid Gland
45. Pituitary Gland
46. Pancreas

MAP OF FLASHCARD LABELS

