

CASE

*Curriculum for Agricultural
Science Education*

Principles of Agricultural Science – Animal

Respiratory and Circulatory Anatomy

Unit 4 – Lesson 4.3 Breathing, Beating, and
Body Controls

Upper Respiratory Tract

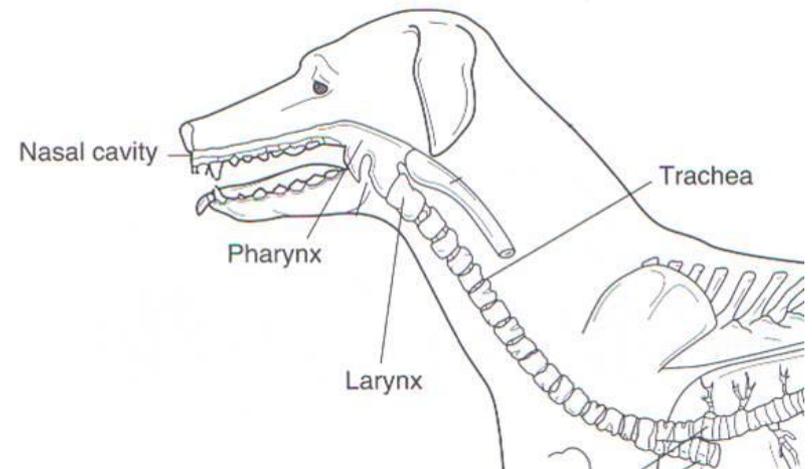
1. Nose/mouth – entry and exit of air

2. Nasal cavity –
warms and moistens air

3. Pharynx – nose and
mouth passages join

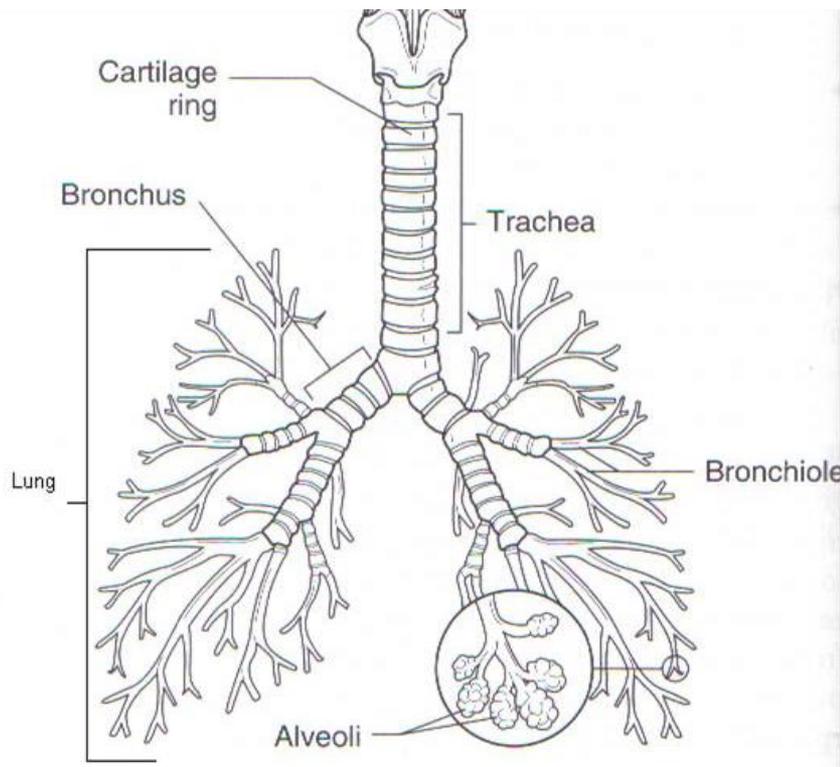
4. Larynx – vocal cords

5. Trachea – windpipe, attaches larynx to lung



Romich, J.A. (2006). *An illustrated guide to veterinary medical terminology* (2nd ed.). Clifton Park, NY: Thompson Delmar Learning.

Lower Respiratory Tract



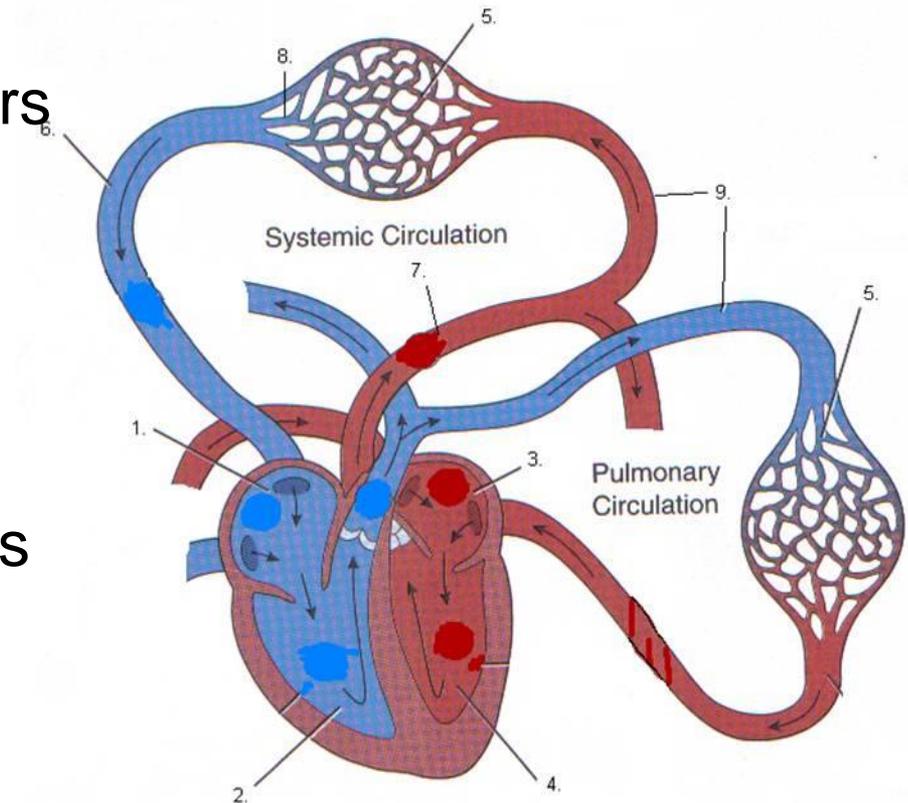
Romich, J.A. (2006). *An illustrated guide to veterinary medical terminology* (2nd ed.). Clifton Park, NY: Thompson Delmar Learning.

6. Bronchiole – small branches of the bronchi
7. Alveoli – air sacs where gas exchange occurs
8. Lung – main organ of respiration
9. Bronchi – two main branches of the trachea that lead to each lung

Circulatory Parts and Their Function

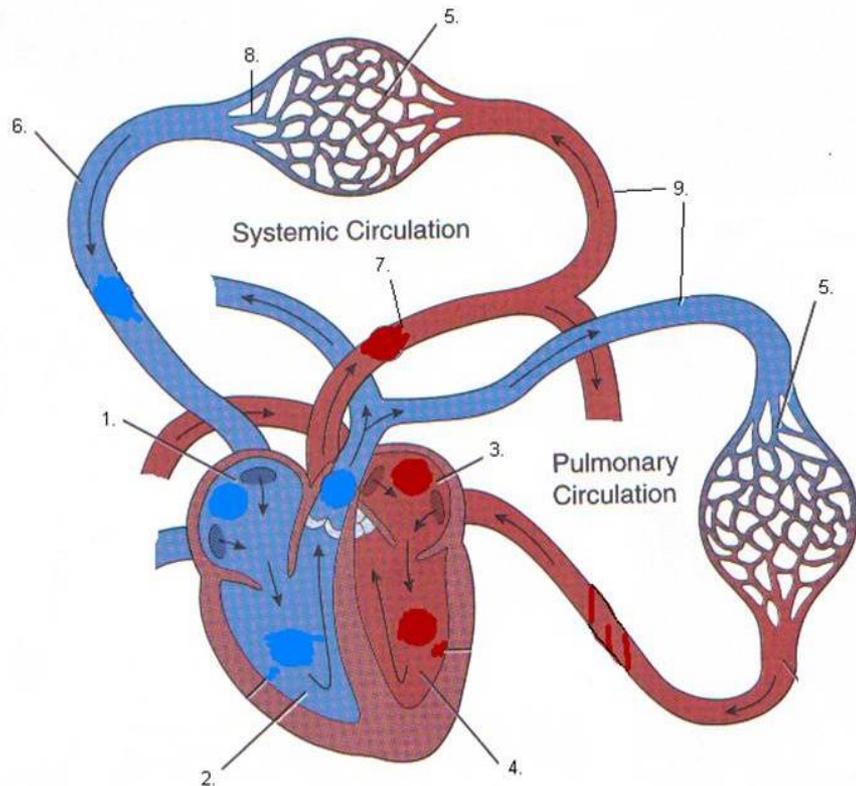
Heart Parts:

1. Right atrium – blood enters from vena cava, \downarrow O_2 , \uparrow CO_2
2. Right ventricle – sends blood to lungs via pulmonary artery
3. Left atrium – blood returns from lung oxygenated via the pulmonary vein
4. Left ventricle – sends oxygen rich blood to the body via aorta.



Lawhead, J., & Baker, M. (2005). *Introduction to veterinary science*. Clifton Park, NY: Delmar.

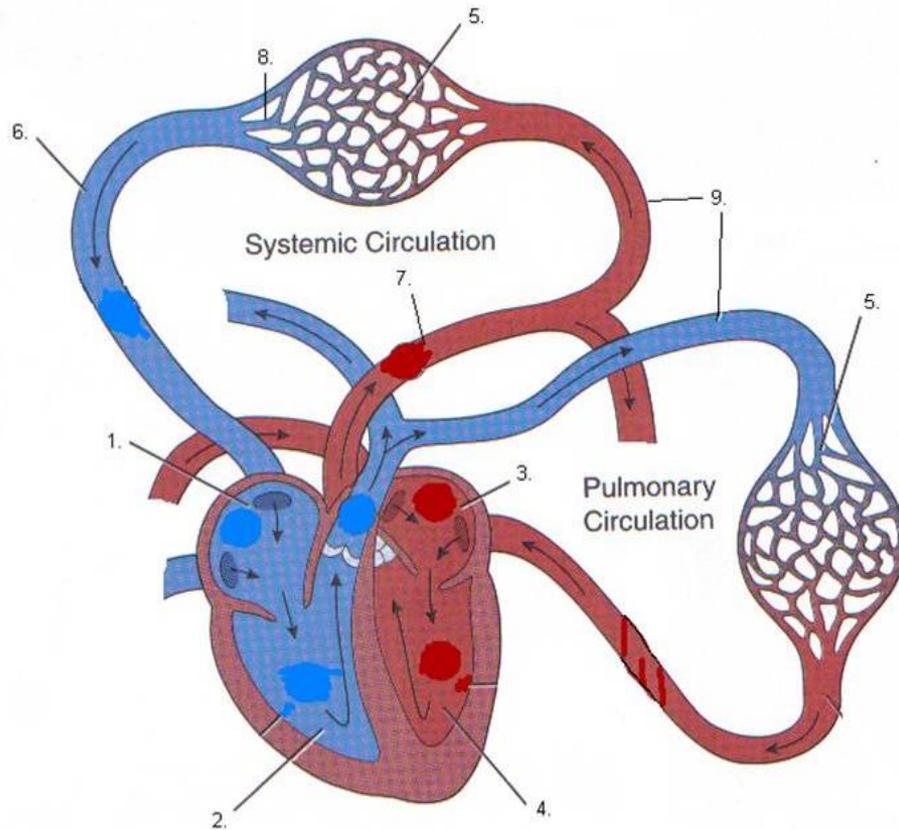
Circulatory Parts and Their Function



5. Capillaries – smallest vessel carrying blood, site of nutrient and gas transfer
6. Vena cava – large vein entering the heart
7. Aorta – main vessel that carries blood to all organs except lungs

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Circulatory Parts and Their Function



- 8. Vein – carry blood toward the heart
- 9. Artery – carry blood away from the heart

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Finalize *Activity 4.3.1 Show
What I Know* and answer
Conclusion questions

References

- Gillespie, J.R., & Flanders, F.B. (2015). *Modern livestock and poultry production (9th ed.)*. Clifton Park, NY: Delmar.
- HowStuffWorks.com. (2005). *How your lungs work*. Retrieved from <http://health.howstuffworks.com/human-body/systems/respiratory/lung2.htm>
- HowStuffWorks.com. (2005). *How your heart works*. Retrieved from <http://health.howstuffworks.com/human-body/systems/circulatory/heart.htm>
- Lawhead, J., & Baker, M. (2005). *Introduction to veterinary science*. Clifton Park, NY: Delmar.
- Romich, J.A. (2006). *An illustrated guide to veterinary medical terminology (2nd ed.)*. Clifton Park, NY: Thompson Delmar Learning.