

BLM Answers

BLM 11-1 Respect for Life Contract

- Answers will vary. For example:
 - Students/scientists can examine structures in organisms.
 - Students/scientists can learn more about how organs and systems work and compare with human organs and systems.
- Answers will vary but should include at least one of the following ideas:
 - under supervision
 - with a clear set of goals and purposes (i.e. learn about specific organs and systems)
- Answers will vary. For example:
 - People gain understanding about human organs and systems and how systems are connected.
 - In research, people gain understanding about the effects of the environment on the health of animals and extrapolate to human health.

BLM 11-2 Virtual Dissection

- Answers will vary but should include many of the following external parts: ear, eye, head, nose, mouth, front legs, back legs, trunk.
- Wording will vary but should include the following points.
 - Cut along the middle of the frog to its neck.
 - Cut between the front legs.
 - Cut between the back legs.
- skin and muscle
- Answers will vary but should include some of the following organs: heart, liver, stomach, small intestine, and large intestine.
- Answers will vary but may include organs such as the esophagus, lungs, and gall bladder.

BLM 11-3 Compare the Human and Frog Circulatory System

Frog Differences: 3 chambers; gets oxygen-rich blood from *skin*

Similarities: *heart, arteries, veins* organs; gets oxygen-rich blood from *lungs*

Human Difference: *4 chambers*

Answers are in italics.

The circulatory systems of frogs and humans have many similarities. They both have the following organs: *heart, arteries, and veins*. They both get oxygen-rich blood from the *lungs*. However, there are

some differences between frog and human circulatory systems. Frog hearts have *three* chambers, while human hearts have *four*. Frogs get oxygen-rich blood from the lungs and the *skin*, while humans get oxygen only from the *lungs*.

BLM 11-4 Compare the Human and Frog Respiratory System

Frog Differences: has a *glottis*; breathes through *skin*
Similarities: *windpipe, lungs* organs; breathes in *oxygen* breathes out *carbon dioxide*

Human Differences: has a *diaphragm*; stronger *lungs*
 Wording in paragraph for differences will vary but should include the following information.

The respiratory systems of frogs and humans have many similarities. They both have the following organs: *windpipe* and *lungs*. They both breathe in *oxygen* and breathe out *carbon dioxide* through the *lungs*. However, there are some differences between frog and human respiratory systems. Frogs *have a glottis, which helps force air to the windpipe and lungs. Unlike humans, frogs can breathe through their skin when they are in water. Humans have a diaphragm, which helps them breathe. Human lungs are stronger and better developed.*

BLM 11-5 Compare the Human and Frog Digestive System

Frog Differences: swallows *prey whole*; *sticky* tongue used to *catch prey*

Similarities: *mouth, esophagus, stomach, small intestine, large intestine* organs; *mechanical digestion, chemical digestion, absorption* processes

Human Differences: teeth used to *chew food into small pieces*; *more complex system*

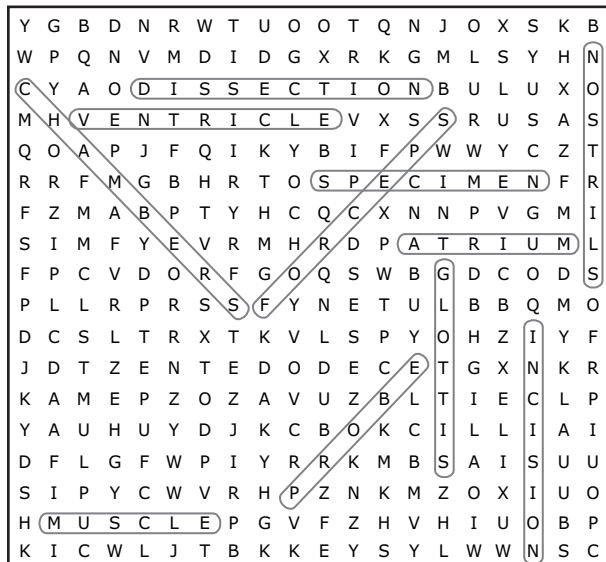
Wording in paragraph will vary but should include the following information.

The digestive systems of frogs and humans have many similarities. They both have the following organs: *mouth, esophagus, stomach, small intestine, and large intestine*. Digestion for both involves the same processes: *mechanical digestion, chemical digestion, and absorption*. However, there are some differences between frog and human digestive systems. Frogs swallow food whole. Frogs have *sticky tongues to catch prey*. Humans use teeth to *chew food while frogs use teeth to hold prey in place*.

The digestive system of a human is more complex and measures longer.

BLM 11-6 Dissection Word Puzzle

1. l) ventricle
2. e) glottis
3. j) probe
4. f) incision
5. d) forceps
6. h) muscle
7. k) specimen
8. a) atrium
9. b) chambers
10. c) dissection
11. i) nostrils



BLM 11-7 Chapter 11 Practice Test

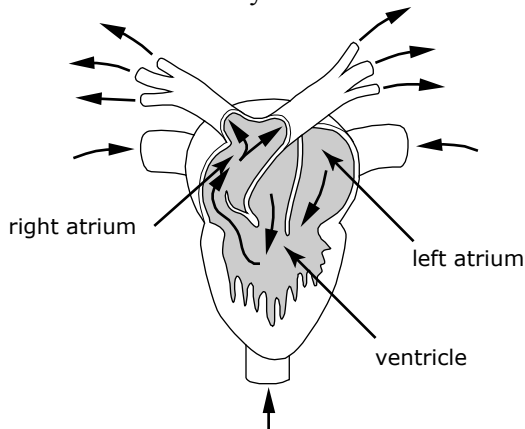
1. e) forceps
2. d) probe
3. a) incision
4. c) specimen
5. b) muscle
6. a) Wording will vary but should include the idea of avoiding contact with the specimen and the preservatives.
- b) Wording will vary but should include the idea of removing any traces of preservatives that may have come in contact with skin. There are health risks if the hands become contaminated with bacteria or toxic chemicals.

7. a) arteries
- b) heart
- c) veins
- d) glottis
- e) windpipe
- f) lungs
8. Sketch should be reasonably accurate. Descriptions of the lung will vary. For example:
 - The lungs have thin walls and are spongy, not smooth.
9. The following organs should be circled: mouth, small intestine, stomach, esophagus, and large intestine.
10. **Human Differences:** teeth used to *chew food into small pieces*
more complex system
 Similarities: *mouth, esophagus, stomach, small intestine, large intestine organs; mechanical digestion, chemical digestion, absorption processes*
Frog Differences: swallows *prey whole*
sticky tongue used to catch prey
11. **Human Difference:** 4 chambers
Similarities: *heart, arteries, veins organs; gets oxygen-rich blood from lungs*
Frog Differences: 3 chambers; gets oxygen-rich blood from *skin*

BLM 11-8 Chapter 11 Test

1. c) glottis
2. e) forceps
3. b) muscle
4. a) incision
5. d) dissection
6. a) Wording will vary but should include the idea of reducing the risk of injuring yourself or others with its sharp ends.
- b) Wording will vary but should include the idea of avoiding direct contact with the specimen and the preservatives.
7. a) arteries
- b) heart
- c) veins
- d) mouth
- e) esophagus
- f) stomach
- g) small intestine
- h) large intestine

8. Sketch should be reasonably accurate. Look for 3 chambers correctly labeled.



9. Wording will vary but should include the organs in the respiratory system. For example:
Air enters the frog's nose and passes into the

frog's mouth. The glottis, which is the opening to the windpipe, opens. Air enters the windpipe and goes into the lungs.

10. Human Difference: *4 chambers*

Similarities: *heart, arteries, veins* organs; gets oxygen-rich blood from *lungs*

Frog Differences: *3 chambers*; gets oxygen-rich blood from *skin*

11. Human Differences: has a *diaphragm*; stronger *lungs*

Similarities: *windpipe, lungs* organs; breathes in *oxygen* breathes out *carbon dioxide*

Frog Differences: has a *glottis*; breathes through *skin*