**Released SOL Test Questions**

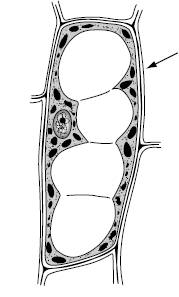
**2002-2012**

**Sorted by Topic**

**Compiled by SOLpass – www.solpass.org**

**5.5 Living Systems**

The student will investigate and understand that organisms are made of one or more cells and have distinguishing characteristics that play a vital role in the organism’s ability to survive and thrive in its environment. Key concepts include

1. basic cell structures and functions;
2. classification of organisms using physical characteristics, body structures, and behavior of the organism; and
3. traits of organisms that allow them to survive in their environment.

CELLS

1. Which of these organisms has ***cells*** with cell walls?

(2011 test – question 32)

1. A bluebird
2. A pine tree
3. A ladybug
4. A fox squirrel
5. Which structure does a plant ***cell*** have that an animal cell does not have?

(2010 test – question 9)

1. Vacuole
2. Cytoplasm
3. Cell membrane
4. Cell wall
5. Which structure surrounds and protects an ***animal cell***?

(2009-11)

1. Nucleus
2. Vacuole
3. Cytoplasm
4. Cell membrane
5. Which part of a ***plant cell*** is responsible for controlling the activities of the other parts of the cell?

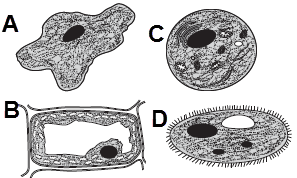
(2008 test – question 30)

1. Vacuole
2. Nucleus
3. Cell wall
4. Chloroplast
5. Which of these is the main function of a ***cell wall***?

(2008-31)

1. To make food
2. To store water
3. To provide support
4. To make the plant green
5. Which of these ***cells*** most likely came from a plant? (b)

(2007-40)



1. What part of the ***plant cell*** is shown at the arrow?

(2002 test – question 3)

1. Cell wall
2. Cell membrane
3. Vacuole
4. Nucleus
5. The part of a ***plant cell*** that gives the cell its green color is the —

2004 test – question 31)

1. nucleus
2. cytoplasm
3. vacuole
4. chloroplast
5. The internal parts of a ***cell*** are suspended in a jelly-like liquid called the —

(2001 test – question 23)

1. nucleus
2. cell membrane
3. cytoplasm
4. chloroplasts

VASCULAR / NONVASCULAR

1. A student sees many plants around a pond. The student can determine which plants are ***nonvascular*** by —

(2007-38)

1. observing if they lack true stems, roots, or leaves
2. examining the plants for spores
3. counting the number of leaves on each stalk
4. noticing if the plants are near rocks
5. ***Trees***, wild flowers, and grasses are all considered to be

(2004-34)

1. vascular plants
2. nonvascular plants
3. woody plants
4. nonwoody plants
5. ***Moss*** is best classified as —

(2010-36)

1. a type of mold
2. an evergreen plant
3. a species of fungus
4. a nonvascular plant
5. Which of these plants does not have special tissues to deliver food and water to its cells?

(2005-20)

1. Maple
2. Dogwood
3. Tomato
4. Liverwort
5. Which of the following plants is an example of a ***nonvascular*** ***plant***?

(2002-20)

1. Dogwood
2. Moss
3. Ginkgo
4. Pine tree
5. Redwood ***trees*** can grow to be very tall. They can grow so tall because they are —

(2003-27)

1. vascular
2. deciduous
3. nonvascular
4. flowering

VERTEBRATES/ INVERTEBRATES

1. Which of these would best describe the tube worms shown?

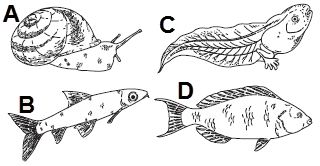
(2011 test – question 39)

1. Mammals
2. Vertebrates
3. Amphibians
4. Invertebrates
5. Which of the following animals is an invertebrate?

(2007 test – question 21)

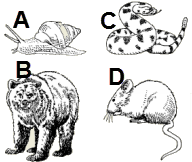
1. Squirrel
2. Sea gull
3. Cricket
4. Lizard
5. Which of these animals is an invertebrate? (a)

(2008 test – question 24)



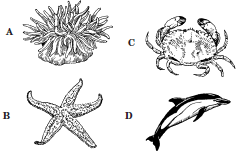
1. Which of the following is an invertebrate? (a)

(2002 test – question 29)



1. Which of the following would be classified as a ***vertebrate***? (d)

(2005 test – question 33)



1. How is a fish different from a jellyfish?

(2004 test – question 4)

1. A fish has a backbone.
2. A fish is in the animal kingdom.
3. A fish can reproduce.
4. A fish lives in water.
5. Which of the following sea animals would be classified as an ***invertebrate***?

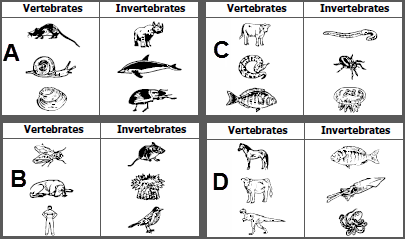
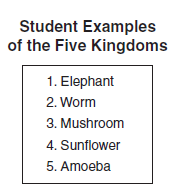
2003 test – question 28)

1. Sea horse
2. Squid
3. Shark
4. Seal
5. The jellyfish is an ***invertebrate*** because it lacks —

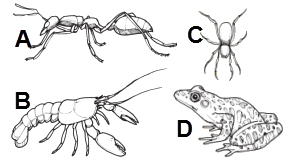
(2001 test – question 2)

1. eyes
2. bones
3. blood
4. cells
5. In which chart are all the organisms sorted correctly? ©

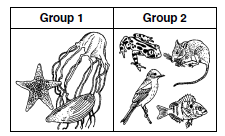
(2010 test – question 29)

1. A student made a list of examples of each of the ***five kingdoms***. The list contains two examples from the same kingdom. Which one of these should be removed from the list?

(2007 test – question 6)

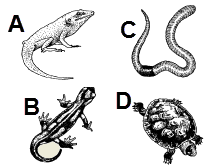
1. Worm
2. Mushroom
3. Sunflower
4. Amoeba
5. Which of these animals has a different body support system than the others? (d)

(2009 test – question 37)



1. Which animal belongs in ***group*** one? ©

(2006 test – question 5)

1. The picture shows a bumblebee. Which part of the bumblebee is most helpful in identifying it as an insect?

(2005 test – question 30)

1. Shape of eyes
2. Number of legs
3. Presence of wings
4. Location of antenni

**NOTE – the 2010 VDOE Curriculum Framework no longer mentions the five kingdoms, so questions like the following will presumably no longer be included on the 5th grade test.**

1. A kingdom is the largest classification of living things. What other organisms, besides plants and animals, make up the ***five kingdoms***?

(2006 test – question 7)

1. Fungi, protists, and monerans
2. Fungi, protists, and viruses
3. Monerans, protists, and viruses
4. Monerans, protists, and vertebrates
5. The picture shows a Venus’s flytrap.

This unusual organism can trap flies with its leaves, but it gets most of its food from photosynthesis. To what ***kingdom*** does this organism belong?

(2003 test – question 18)

1. Monera
2. Protista
3. Fungi
4. Plantae
5. The American dogwood is a member of which ***kingdom*** of living things?

(2002 test – question 36)

1. Monera
2. Animal
3. Protist
4. Plant
5. Although the mushroom looks like a plant, it is in a different kingdom. The main difference between the ***fungi kingdom*** and the plant kingdom is that fungi —

(2008 test – question 23)

1. Use chlorophyll to make sugar
2. have special tissues
3. absorb nutrients from other organisms
4. depend on the Sun for energy
5. Which of these belong to the ***kingdom*** Monera?

(2001 test – question 16)

1. Ferns
2. Mosses
3. Mushrooms
4. Bacteria