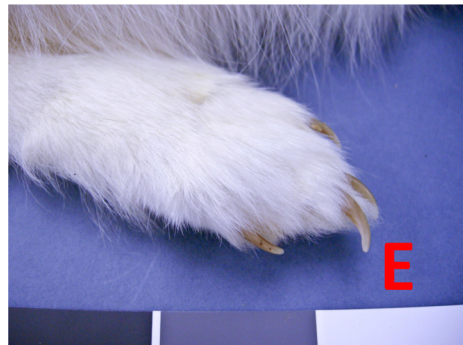


NC Science Olympiad Samples

Station 4

Whose feet are these? Write the **letter** of the foot on your answer sheet next to the environment it came from.

Laminate and cut out these pictures



(1)



(3)



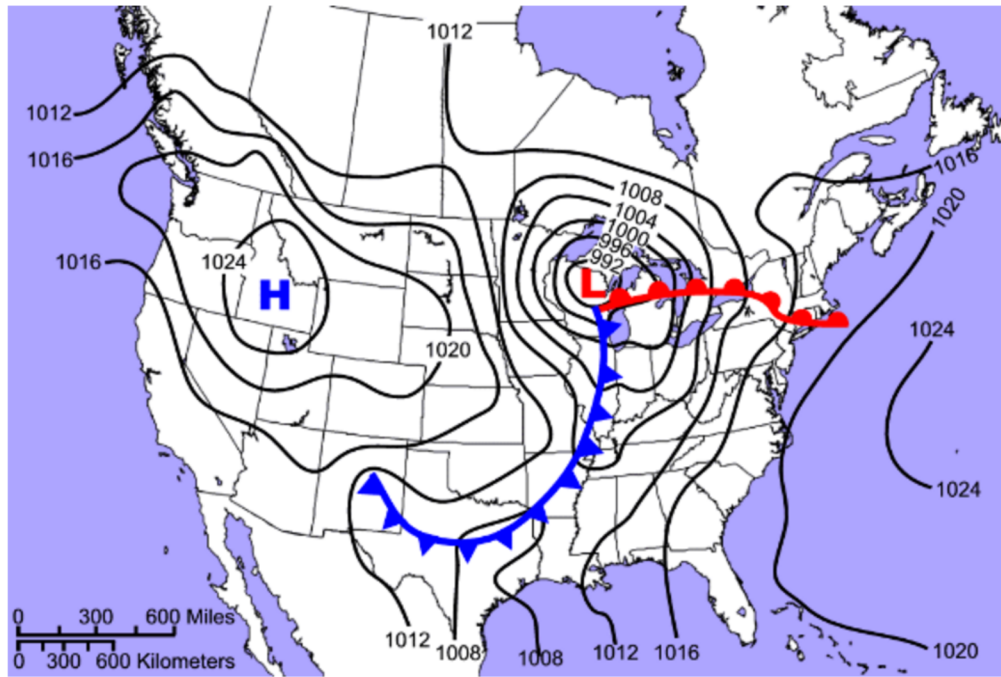
(2)



(4)



STATION 8



source:<http://www.dnr.sc.gov/climate/sco/Education/wxmap/wxmap2.php>

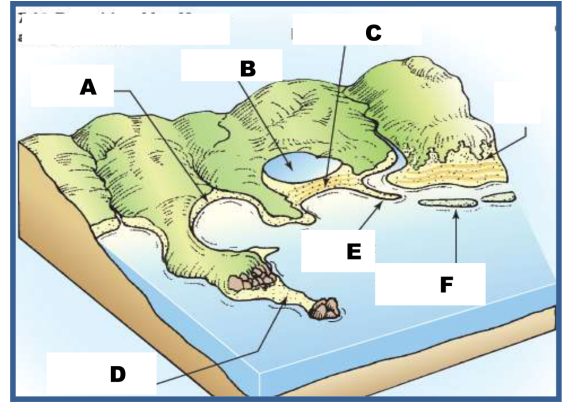
You have several smaller versions of this map on your answer sheet. Use the highlighter to mark your answer sheet for these questions.

(5) Highlight the area where you would expect precipitation to occur.

(6) Highlight in the area where you would expect to find the highest pressure.

(7) Highlight the area where you would expect the highest wind speeds to occur.

(8)



Which is best characterized by erosional landforms?

- A. Large sediment deposits such as the coast of North Carolina
- B. Rugged terrain such as the coast of England
- C. Subsidence of the coastal plain such as the coast of Louisiana
- D. Calving of ice bergs such as the coast of Iceland

(9) What is the action that caused landform *E*?

- A. rip current
- B. upwelling
- C. spring tides
- D. longshore drift

Station 4



Swallowtail Goldfish



Rainbow Silverfish

(10) What is it called when a fisherman catches fish that are too small or a different species than they are looking for and then just toss them away?

(11) You are a swallowtailed goldfish fisherman. You catch these fish by casting a net in to the water and hauling it back on board. Swallowtailed goldfish often live with schools of rainbow silverfish, which are smaller and not good to eat. Which net should you use to catch the goldfish but not the silverfish?

(12) Name one problem that catching and throwing away the little fish could cause.

(13) **Station 2**

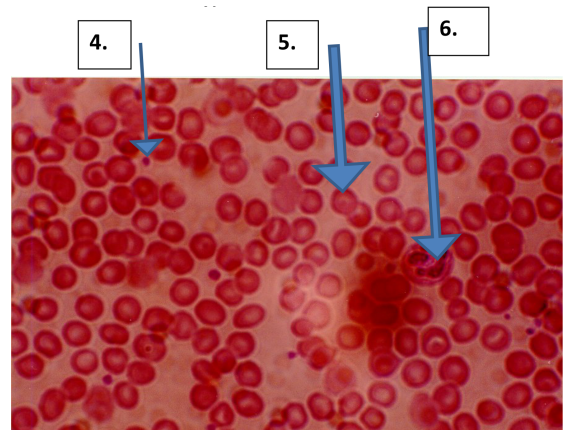
Compared to an artery, the wall of a vein *differs* in which of the following ways?

- A. Veins have an extra layer of muscle
- B. It has valves
- C. It consists of three coats called tunics
- D. It is lined by a thin layer of endothelium

(14) Blood exits the left ventricle via which blood vessel?

- A. pulmonary artery B. superior vena cava
- C. aorta D. pulmonary veins

(15) Match the blood cell types shown below.



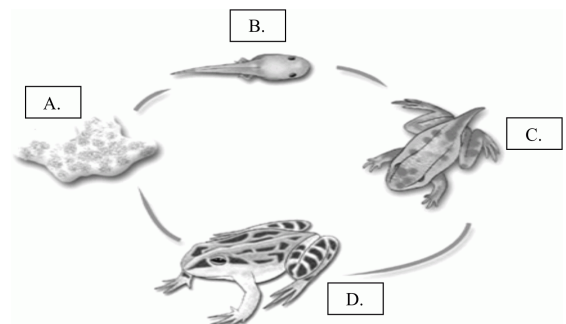
- A) white blood cell
- B) platelet
- C) red blood cell

(16) **Station 5**



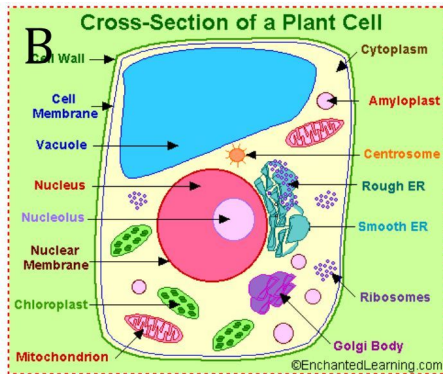
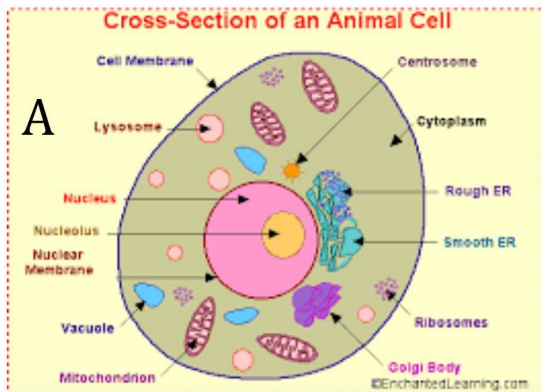
What is the name of this organism?

(17) Give the name for each of the life stages of a frog seen in the diagram below.



(18) **Station 12**

Shown here is a basic animal cell (A) and plant cell B).



True or False: Both plant and animal cells contain DNA.

(19) DNA is most likely to be found in which compartment of the cell?

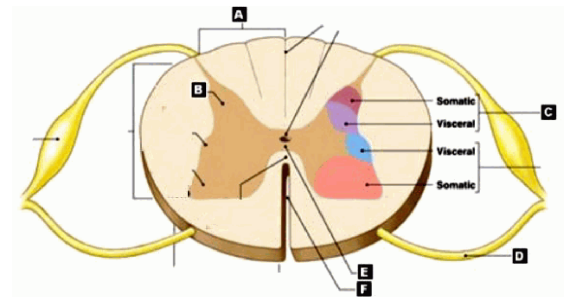
- A. Cytoplasm
- B. Golgi body
- C. Cell Wall
- D. Nucleus

(20) **Station 7**



Rank these minerals from Hardest to Softest.

(21) **Station 8**



The following questions pertain to the diagram of the spinal cord cross section above. Letters may be used more than once.

Select the letter that corresponds to an area of white matter.

(22) Select the letter that corresponds to a motor neuron.

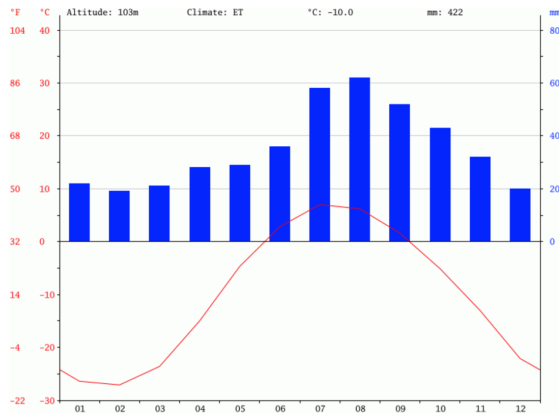
(23) Which type of ganglion is visible in the diagram above?

- A. Sympathetic trunk ganglion
- B. Parasympathetic ganglion
- C. Basal ganglion
- D. Dorsal root ganglion
- E. Ventral root ganglion

(24) **Station 7**

Tell if the climate is related to the:

- A. tundra
- B. taiga
- C. deciduous forest



(25) Tell if the climate is related to the:

- A. tundra
- B. taiga
- C. deciduous forest

