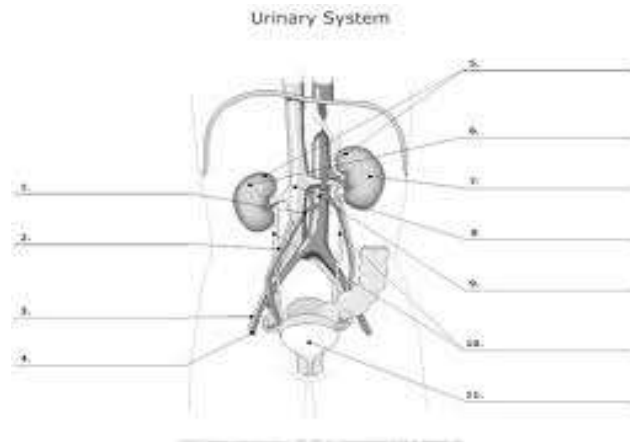




# Human Biology

## Urinary System Assignment

1. What is the primary organ of excretion? \_\_\_\_\_
2. \_\_\_\_\_ is the elimination of feces from the body and is a function of the \_\_\_\_\_ system. \_\_\_\_\_ is a function of the \_\_\_\_\_ system and eliminates \_\_\_\_\_.
3. What are the four functions of the urinary system?
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_
4. How is urea made? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Gout is caused by \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. List 3 things other than water and salt that the kidneys maintain:
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
7. What should your blood pH be? \_\_\_\_\_ Urine pH? \_\_\_\_\_
8. \_\_\_\_\_ stimulates red blood cell production.
9. What is the function of vitamin D? \_\_\_\_\_
10. Label the diagram:



11. Pathway of urine: (describe the function of each organ in the pathway)

- a. Kidneys: \_\_\_\_\_
- b. Ureters: \_\_\_\_\_
- c. Urinary bladder: \_\_\_\_\_
- d. Urethra: \_\_\_\_\_
  - i. Female: \_\_\_\_\_
  - ii. Male \_\_\_\_\_

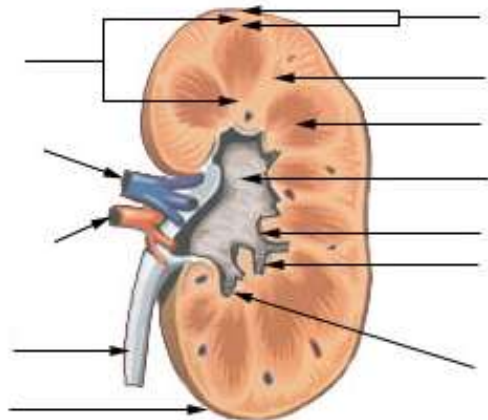
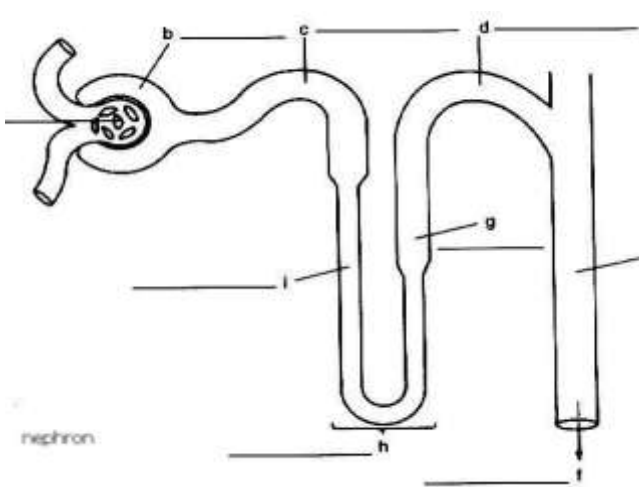
12. Urination:

- a. Stretch receptors: \_\_\_\_\_
- \_\_\_\_\_
- b. Nerve impulses: \_\_\_\_\_
- \_\_\_\_\_

13. Kidneys:

- a. Cortex: \_\_\_\_\_
- b. Medulla: \_\_\_\_\_
- c. Renal Pelvis: \_\_\_\_\_
- d. Nephrons: \_\_\_\_\_
  - a. glomerulus: \_\_\_\_\_
  - b. Bowman's capsule: \_\_\_\_\_
  - \_\_\_\_\_
  - c. proximal (near) convoluted tubule: \_\_\_\_\_
  - d. loop of Henle: \_\_\_\_\_
  - e. e: distal (far from) convoluted tubule: \_\_\_\_\_
  - f. collecting duct: \_\_\_\_\_

14. Label the diagrams:



15. In what sections of the nephron does Glomerular Filtration occur? \_\_\_\_\_

16. During Glomerular Filtration what blood components can be filtered? \_\_\_\_\_

17. What Blood components cannot be filtered? \_\_\_\_\_

18. At the end of Glomerular Filtration, what is the concentration of glomerular filtrate to plasma? \_\_\_\_\_

19. In what sections of the nephron does Tubular reabsorption occur? \_\_\_\_\_

20. Fill in the table below.

Substance	Amount filtered (per day)	Amount excreted (per day)	Reabsorption (%)
Water, L			
Sodium, g			
Glucose, g			
Urea, g			

21. What is reabsorbed? \_\_\_\_\_

22. List the substances that enter the loop of nephron. \_\_\_\_\_

23. What substances are removed from blood and added to the tubular fluid during Tubular Secretion? \_\_\_\_\_

24. Where does Tubular Secretion occur? \_\_\_\_\_

25. What does reabsorption of require? \_\_\_\_\_

26. How much of the sodium that is filtered is returned to the blood? \_\_\_\_\_

27. What is ANH and what does it do? \_\_\_\_\_

28. Why is the first urine of the day more concentrated? \_\_\_\_\_

29. What are Diuretics and what do they do? \_\_\_\_\_



# Urinary System Project

Choose a Urinary System Disease from the list and create a News Cast or Talk Show segment about the disease. Follow the rubric below. You may use any of the apps on your iPod to create this project. Your project must be uploaded to YouTube and shared with Ms. Strong ([mwiebe-strong@graniteschools.org](mailto:mwiebe-strong@graniteschools.org)) by \_\_\_\_\_.

- |                                |                                  |                                    |                         |
|--------------------------------|----------------------------------|------------------------------------|-------------------------|
| Bladder Cancer                 | Impotence / Erectile Dysfunction | Peyronies Disease                  | Urinary Incontinence    |
| Cystocele (Fallen Bladder)     | Interstitial Cystitis            | Prostate Disease                   | Urinary Tract Infection |
| Hematuria (Blood in the Urine) | Infertility in Men               | Benign Prostatic Hyperplasia (BPH) | Vesicoureteral Reflux   |
|                                | Neurogenic Bladder               | Prostate Cancer                    |                         |

Criteria	Gold (10 pts)	Silver (6 pts)	Bronze (2 pt)
Podcast (x2)	Is within time limits, completed on time, and uploaded onto school computer		Is not within time limits, not completed on time
Explanation of Health Problem or recommendation	Health concern is clearly stated using terminology/concepts learned in class. Scientific background knowledge is clearly evident.	Health concern is clearly stated. Scientific background knowledge is evident.	Health concern is not clearly stated. Scientific background knowledge is not evident.
Creativity	Students use resourcefulness and imagination in the presentation of the information.	Students present information in a resourceful way.	Information is not presented in an imaginative or resourceful way.
Presentation	Presentation is mature and well organized. There are no grammatical or vocabulary errors.	Presentation is organized. There are few grammatical or vocabulary errors.	Presentation is disorganized. There are many grammatical or vocabulary errors.
Content	Research beyond the classroom has been done on the health concern/recommendation. 3 or more resources have been referenced.	Content learned in class is used as the basis for the PSA. 1-2 resources have been referenced.	Incorrect or irrelevant information has been presented in the PSA. No resources have been referenced.