

### 3.1 What is the Circulatory System?



The \_\_\_\_\_ moves material around the body.

Think of the circulatory system as \_\_\_\_\_. The transportation system in a city consists of roads, trucks, buses, and cars to move people and things around a city.

#### **The Body's Transportation System (p. 63)**

The circulatory system is the body's transportation system.

It moves \_\_\_\_\_ and \_\_\_\_\_ to each cell and then takes away cells' wastes.

There are three major parts of the circulatory system:

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

### **Blood – A Liquid Tissue (p. 64)**

Blood is made up of 4 different parts:

1) \_\_\_\_\_ -

a) carries \_\_\_\_\_

b) carry \_\_\_\_\_ to cells

c) carries away \_\_\_\_\_

d) moves \_\_\_\_\_ around the body

*EX: \_\_\_\_\_ is made in the lower back and  
then sent to heart and muscle cells to tell the body to be more*

\_\_\_\_\_

2) \_\_\_\_\_ Blood Cells-

a) carry \_\_\_\_\_ to your body's cells

- these cells are \_\_\_\_\_ when they are carrying  
oxygen

- after they deliver oxygen to the cells, they turn a \_\_\_\_\_

\_\_\_\_\_

- make up nearly \_\_\_\_\_ of your blood

*DISORDER:* \_\_\_\_\_ – *disease in which red blood cells do not carry oxygen to cells as well as normal cells*



*(Red blood cells)*

3) \_\_\_\_\_ Blood Cells- are like \_\_\_\_\_ or blood

\_\_\_\_\_

a) they protect your body from \_\_\_\_\_ and other harmful things

in 2 ways:

1) they \_\_\_\_\_ and break down germs, pieces of waste, and dead cells

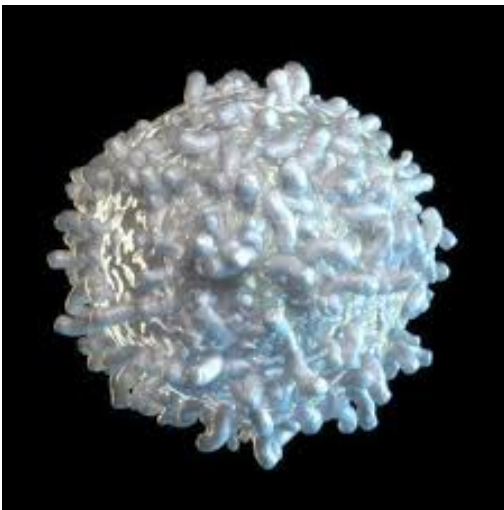
2) make \_\_\_\_\_ that kill germs

b) when the body has an \_\_\_\_\_, the number of white

blood cells \_\_\_\_\_.

EX: people with \_\_\_\_\_ have \_\_\_\_\_ white blood cell counts because their bodies are trying really hard to fight the disease

*DISORDER: \_\_\_\_\_ - a form of cancer in which the person's white cells increase too quickly*



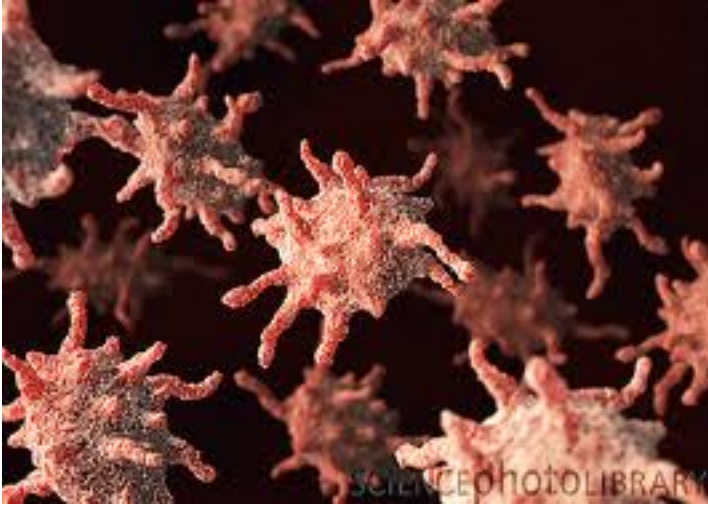
*(White blood cell)*

4) \_\_\_\_\_ - pieces of cell that float in the blood

a) stop \_\_\_\_\_ by clumping together and sticking to the edges of a cut

b) they form \_\_\_\_\_ (a plug) to stop the bleeding

*DISORDER: \_\_\_\_\_ – when a blood clot moves from where it forms and \_\_\_\_\_ a blood vessel*



*(Blood platelets)*

### **Blood Vessels (p. 66)**

Blood vessels are like the \_\_\_\_\_ of your body. They carry blood through different types of vessels or tubes.

There are 3 types of blood vessels:

- 1) \_\_\_\_\_ - blood vessels that carry blood with lots of oxygen away from your heart to other parts of your body
- 2) \_\_\_\_\_ - smallest type of blood vessel which are the connectors from your arteries to your veins
- 3) \_\_\_\_\_ - take blood back to the heart which will circulate it to the lungs for oxygen
  - a) \_\_\_\_\_ – act like doors to keep blood flowing in one direction

EX: valves close if blood begins to flow away from the  
heart

\* If all your blood vessels were laid out on the ground, they would stretch  
around the \_\_\_\_\_ more than \_\_\_\_\_.

### **The Heart (p. 68)**

The heart has two sides: the \_\_\_\_\_ and the \_\_\_\_\_.

The right side pumps blood to the \_\_\_\_\_ where it gets  
\_\_\_\_\_.

The blood then flows to the left side of the heart where it is \_\_\_\_\_  
through the body.

Each side of the heart has two parts: \_\_\_\_\_ and \_\_\_\_\_.

Upper part = \_\_\_\_\_

Lower part = \_\_\_\_\_

When you are running, your heart pumps \_\_\_\_\_ to get more  
oxygen to your \_\_\_\_\_.

When you are sleeping, it beats much \_\_\_\_\_.

\* Your heart might beat nearly \_\_\_\_\_ times during your  
life!