Name: KEY

Blood Flow through the Heart & Lungs

(Outcome 23)

Date: _____

Right side of the heart – works at the same time as the left side of the heart

Blood enters the heart through the **inferior and superior vena cava** (brings **oxygen-poor** blood from the body into the right atrium)

→ The right atrium contracts
- → oxygen-poor blood flows into the right ventricle through the tricuspid valve
  - → the right ventricle fills
    - → the tricuspid valve shuts (prevents backflow into the atria)
      - → The right ventricle contracts
        - → oxygen-poor blood leaves the heart through the pulmonary valve
          - → blood flows into the pulmonary artery
            - → **blood goes into the lungs** to be oxygenated (gas exchange)

Left side of the heart – works at the same time as the right side of the heart

Blood enters the heart through the **pulmonary vein** (brings **oxygen-rich** blood from the lungs to the left atrium)

→ The left atrium contracts
- → oxygen-rich blood flows into the left ventricle through the mitral valve
  - → the left ventricle fills
    - → the mitral valve shuts (prevents backflow into the atria)
      - → the left ventricle contracts
        - → oxygen-rich blood leaves the heart through the aortic valve
          - → blood flows into the aorta
            - → blood goes to arteries to circulate **blood to body**

Blood Flow through the Heart to the Lungs

Blood enters your lungs from the **pulmonic valve** (pulmonary circulation)

→ blood travels to the pulmonary artery to capillaries in the lungs
- → oxygen travels from alveoli in the lungs, through the capillary walls, into the blood
  - → once blood is oxygenated, it travels back to the left atrium through **pulmonary veins**
- → carbon dioxide (waste) passes from the blood into the alveoli
  - → carbon dioxide leaves the body during **exhale**