

Basketball Course — Anatomy of the Heart

Knowledge needed

Students should know that the heart and lungs work together to deliver oxygen to the entire body through blood. There are four chambers of the heart that provide a path for blood to follow as it picks up and delivers oxygen and waste products.

Objective

Students will learn the four chambers of the heart and learn the path for the blood through those four chambers.

Materials and Setup

- Four hula hoops are set up throughout a gym to represent the four chambers of the heart. Position the hula hoops (chambers) evenly distanced from each other.
- Cones are placed between the two left and two right chambers to create "passageways" representing the valves the blood passes through to go to the next chamber.
- A basketball will represent the blood molecule moving through the heart chambers.

Procedure

- Students are divided into groups of four with each student standing next to the designated chamber. Student 1 states that he or she is in the right atrium as he or she dribbles a basketball around the hula hoop, then passes the ball (blood molecule) through the cone passageway (valve) to Student 2. When passing the ball through the passageway, the student states that he or she is passing through the valve.
- Student 2 receives the ball, dribbles around the right ventricle hula hoop (stating his or her location), continues through the valve to the pulmonary trunk, and passes to Student 3.
- Student 3 dribbles around the left atrium hula hoop and passes the ball through the passageway (valve) to Student 4 in the left ventricle.
- Student 4 dribbles around the left ventricle hula hoop and passes the blood molecule out through the valve to a target on the wall that represents the body. For a variation, set up the course so that the basketball goal is in the center and students can shoot at the goal to represent the blood leaving the aorta and going to the body.
- Have students rotate within each heart group after two trials at each chamber.

Discussion

Explain that the blood exits from the right ventricle and passes to and from the lungs (via the pulmonary artery and pulmonary vein) returning to the left atrium. Replace the left ventricle hula hoop with a bigger hula hoop and discuss how the left ventricle is larger than the other chambers. Explain that the reason for the size difference is that the left ventricle pumps oxygenated blood to the rest of the body via the aorta.

