

# Chapter 6

## Human Circulatory System

### LESSON PLAN

#### SPECIFIC OBJECTIVES

The students will learn about

- ❖ human circulatory system
- ❖ components and functions of blood
- ❖ blood vessels, their types and functions
- ❖ structure, function and working of the heart
- ❖ blood groups and blood transfusion
- ❖ blood donation and blood bank
- ❖ keeping the heart healthy

#### Teaching Aids

**Pictures/charts/models/animation** on blood cells in human blood, structure of blood vessels, part of vein showing valves, capillaries connecting veins and arteries, structure of human heart, circulation of blood in humans, cardiac cycle, ABO system of blood groups; sphygmomanometer; stethoscope; blood donation; blood bank; ways to keep the heart healthy

#### Teaching Strategy

- ❖ Teacher will start the chapter by defining human circulatory system and its main parts.
- ❖ Teacher will describe the blood, its functions and components by performing Activity 1.
- ❖ Using suitable teaching aids, teacher will describe the blood vessels, their types and role in circulatory system.
- ❖ Now, teacher will ask students to solve 'Check Point 1'.
- ❖ Then, teacher will discuss structure of the heart and circulation of blood through it.
- ❖ Teacher will define heartbeat, cardiac cycle, blood pressure and heart sounds.
- ❖ Teacher will explain the pulse and pulse rate by performing Activities 2 and 3 in the class.
- ❖ Teacher will ask students to solve 'Check Point 2'.

- ❖ Teacher will discuss ABO blood groups by describing antigen and antibody interaction and clumping reaction.
- ❖ Then, teacher will discuss blood transfusion, its need, principle of blood transfusion.
- ❖ Teacher will discuss blood donation, its need and blood bank.
- ❖ Teacher will discuss the ways for keeping the heart healthy.
- ❖ Teacher will ask students to solve 'Check Point 3'.
- ❖ At last, teacher will sum up the lesson by going through the points given under the head 'Wrapping It Up'.
- ❖ Teacher will finally help students to answer the questions given under the head 'Test Yourself'.

### Boost Up

- ❖ Teacher can help students to perform the Activities 2 and 3 given in the chapter.
- ❖ Teacher can make students revise new terms given under the head 'Know These Terms'.
- ❖ Teacher can encourage students to learn the facts given under the head 'Something More'.
- ❖ Teacher can show animations related to the topics taught, if possible.

### Expected Learning Outcomes

The students understand and know:

- ❖ human circulatory system and its parts
- ❖ course of blood in humans and the blood groups
- ❖ heartbeat, heartbeat rate, cardiac cycle, blood pressure, heart sounds, pulse and pulse rate
- ❖ blood transfusion and its principle
- ❖ blood donation and its requirement
- ❖ ways for keeping the heart healthy

### Evaluative Questions

The teacher should ask the following questions to evaluate the students:

1. What is circulatory system?
2. Why is blood red in colour?
3. How many chambers are there in human heart?
4. What are blood groups in human population?
5. What is universal donor?
6. What are the ways to keep the heart healthy?