

## Young cardiologists: Embodied learning activities for teaching about the circulatory system

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The work instruction is part of a wider learning package, which you can watch a video here: <https://youtu.be/RVx7o0uijws?si=FLBDDGh5uXTnWL3U>

1. Read the following text.

### Pulmonary and systemic circulation

The blood flow from and to the lungs is called pulmonary circulation. Pulmonary circulation starts from the right side of the heart. Blood with carbon dioxide coming from all the parts of our body is transferred to the lungs. The blood takes oxygen from the lungs and moves to the left atrium.

Then, blood moves to the left ventricle. From there, the systemic circulation starts. Oxygen goes through the arteries to all organs. The organs produce carbon dioxide due to their function. The carbon dioxide is transferred through the veins to the right atrium and then moves to the right ventricle and finally to the lungs. This cycle is repeated constantly.

2. In a small group, carry out the following activity. You will need red and blue balls or other similar color symbols.

The balls represent the blood flow.

Red balls = Blood with \_\_\_\_\_

Blue balls = Blood with \_\_\_\_\_

One member of your group has the role of blood, and the rest of the members have the roles of organs shown in the scenarios at the end of the page. Read the following scenarios and move accordingly.

CAUTION: You need to decide what kind of blood each organ gives or takes. For example, if an organ takes oxygen, it will get \_\_\_\_\_ balls. If an organ gives carbon dioxide, it will give \_\_\_\_\_ balls.

Scenarios:

1. heart → liver → heart
2. heart → lungs → heart
3. heart → eye → heart
4. small and large intestines → heart → small and large intestines
5. heart → liver → heart → lungs → heart
6. eye → heart → lungs → heart → eye