

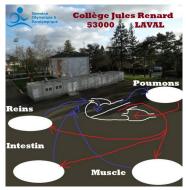
### **Presentation :**

In a secure place (middle school course) representing the human body, your mission is to follow one of the three blood paths with the members of your team and to carry out the activities in the organs you pass through.

Exemple in college Jules Renard, LAVAL FRANCE :

# **Objectives :**

- Build group cohesion
- Engage in physical activity
- Discover how the human body works



### How to motivate :

Going through the human body and giving it what it needs to perform at the Olympics:

"Hello,

*I* am a selected athlete for the 2024 Olympic Games and I train regularly to achieve the best performance on the day. In my body, my blood circulates tirelessly, making the necessary exchanges for the functioning of my muscles that allow me to carry out my physical activity.

ALL TOGETHER, you are the essential elements of the blood to recover the oxygen and nutrients that will give me energy and to eliminate waste products such as carbon dioxide and urea.

I am counting on you to carry out these exchanges by following the path inside my body in the right way and to succeed in the activities proposed in each organ.

When you arrive at the different places, you will find a detailed description of your activity and you will have to write down your result on this sheet.

The sports doctor who follows me wants to consult this sheet to allow me to adapt my training and show that I am not doping. Thank you to all of you for giving the best of yourselves, which will allow me to obtain the coveted medal. »

# Organization of the game :

Three teams equipped with an android tablet follow the route indicated by the SITULEARN application

When team members arrive at an organ, they must scan a qrcode that will trigger an activity related to the organ they arrived in.

The students then complete the activity and take the readings or MCQs indicated by the application before continuing.



### Parcours vert :

Intestin →	Coeur droit →	Poumons →	Coeur gauche →	Muscle →	Coeur droit2 →	Poumons2 →	Coeur gauche2 →	Reins

#### Parcours jaune :

Muscle →	Coeur droit →	Poumons →	Coeur gauche →	Reins →	Coeur droit2 →	Poumons2 →	Coeur gauche2 $\rightarrow$	Intestin

#### Parcours orange :

Reins →	Coeur droit →	Poumons →	Coeur gauche →	Intestin →	Coeur droit2 →	Poumons2 →	Coeur gauche2 →	Muscle

### Activities carried out in the organs:

In the left and right hearts : students will have 2 passes and each time they will have a multiple-choice question on how the human body works.

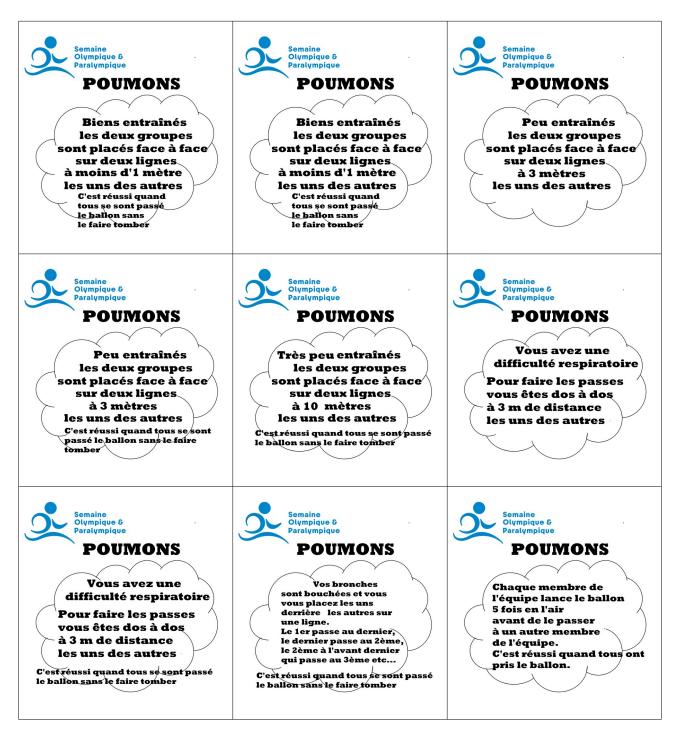
In the lungs : Students will have 2 passes.

**Exchange activity** : The lungs are the essential organs to eliminate CO2 from the functioning of my muscles and recover the oxygen necessary for energy production. It is an organ of exchange thanks to the large surface area of the alveoli and its richness in blood vessels. Exchanges are encouraged by regular training but sometimes disrupted by illnesses or by smoke inhalation.

Equipment: a ball, a few masks...

Procedure: Make two teams and carry out the instructions drawn at random when arriving in the lungs – Take a photo of the exchanges





In the intestines: Students will have only 1 pass.

**Processing activity** : In the intestine, you will be able to recover nutrients that are essential for muscle function. These nutrients come from the processing of food as it travels through the digestive tract. Large molecules of carbohydrates, lipids and proteins will be broken down thanks to the action of enzymes into very small molecules that you can carry into the bloodstream.

Material: plastic cups (ECOCUP type) + a foam ball.



Procedure: Initially, the glasses form a pyramid (symbolizes a large molecule of food) and by respecting a rule to be defined, this food is transformed into a nutrient.

Examples of rules:





#### In the muscles: Students will have only 1 pass.

**Sporting activity** : Muscles are the essential organs for achieving our athletic performance. Thanks to the power of her contractions I could go faster, jump and throw farther. It consumes nutrients and oxygen and releases carbon dioxide and urea.

Equipment: depending on the route and a stopwatch

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Equipment: depending on the route and a stopwatch

#### In the kidneys: Students will have only 1 pass.

**Communication activity** : In the kidneys, you will be able to eliminate waste products from the functioning of the muscles, such as urea. This waste product circulates in the bloodstream. When it gets to the kidneys, it can pass through the filters and end up in the urine.

Materials: masks and small plastic bottles (as many students in the group)

Procedure: Initially, you have as many urea molecules (small bottles) as there are members of the team in the nephron (more than 5 m from a starting line). Then, guided by the other members, you must retrieve (each in turn) a MOLECULE while blindfolded.

### QRCODE

