DP unit planner 1

Teacher(s)	Meladee Hopkins	**Subject group and course**	Group 4, Sports, Exercise and Health Sciences		
Course part and topic	Chapter 2 - Cardio-respiratory exercise physiology	**SL or HL/Year 1 or 2**	SL/1	**Dates**	1/31/23 - 2/22/23

Unit description and texts	**DP assessment(s) for unit**
-Understand the concept of homeostasis -Describe the structure & function of the ventilatory system -the relative importance of static & dynamic lung volumes - explain the processes of gas exchange & transport - state the structure & function of blood cells -describe the structures & function of the cardiovascular system - detail the main responses of the ventilatory & cardiovascular systems during exercise, including how training affects these responses - discuss the importance of blood pressure & redistribution of blood flow - introduce the functional importance of maximal oxygen uptake [VO_2 max] - identify some of the factors that contribute to differences in VO_2max	- labs - unit test - worksheets

INQUIRY: establishing the purpose of the unit

Transfer goals *List here one to three big, overarching, long-term goals for this unit. Transfer goals are the major goals that ask students to "transfer" or apply, their knowledge, skills, and concepts at the end of the unit under new/different circumstances, and on their own without scaffolding from the teacher.*
Understand the structure and functions of the ventilatory and cardiovascular systems for optimal output during exercise and/or sports.

ACTION: teaching and learning through inquiry

Content/skills/concepts—essential understandings	**Learning process** *Check the boxes for any pedagogical approaches used during the unit. Aim for a variety of approaches to help facilitate learning.*
<u>Students will know the following content:</u> -Understand the concept of homeostasis -Describe the structure & function of the ventilatory system	Learning experiences and strategies/planning for self-supporting learning: x Lecture

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<td>-the relative importance of static & dynamic lung volumes
- explain the processes of gas exchange & transport
- state the structure & function of blood cells
-describe the structures & function of the cardiovascular system
- detail the main responses of the ventilatory & cardiovascular systems during exercise, including how training affects these responses
- discuss the importance of blood pressure & redistribution of blood flow
- introduce the functional importance of maximal oxygen uptake [VO_2 max]
- identify some of the factors that contribute to differences in VO_2max

<u>Students will develop the following skills:</u>
How to take their pulse in various locations of the body.
How to take their pulse with a finger pulse oximeter
How to take their blood pressure with a sphygmomanometer and stethoscope.
How to take their blood pressure with a wrist electronic blood pressure monitor
How to maintain homeostasis with respiration during exercise and sports.

<u>Students will grasp the following concepts:</u> <u>(Knowledgeable: We develop and use conceptual understanding, exploring knowledge across a range of disciplines.)</u></td>
<td>☐Socratic seminar
x Small group/pair work <u>(Communicators: We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.)</u>
x Powerpoint lecture/notes
☐Individual presentations
☐Group presentations
☐Student lecture/leading
☐Interdisciplinary learning
Details:
x Other/s: Labs, Edpuzzle quizzes

Formative assessment:
Unit 2 exam
Edpuzzle quizzes
Heart labelling worksheet

Summative assessment:
Heart rate Lab
Pulse Rate & Blood Pressure Lab</td>
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What factors affect maximal VO_2 levels during exercise and what to do to improve lung capacities. How to regulate maximum oxygen/carbon dioxide exchange during exercise and/or sports.	
	Differentiation: ☐Affirm identity—build self-esteem x Value prior knowledge x Scaffold learning ☐Extend learning Details:

Approaches to learning (ATL)

Check the boxes for any explicit approaches to learning connections made during the unit. For more information on ATL, please see the guide.

x Thinking

☐Social

x Communication

x Self-management

☐Research

Details: Students have to communicate during the labs to record timed measurements during various types of exercise. Students have to self-manage their time in class to complete the various tasks during the labs. Students have to think about ways to maintain homeostasis throughout the various activities during the labs. *(Communication)*

Language and learning *Check the boxes for any explicit language and learning connections made during the unit. For more information on the IB's approach to language and learning, please see the guide.*	**TOK connections** *Check the boxes for any explicit TOK connections made during the unit*	**CAS connections** *Check the boxes for any explicit CAS connections. If you check any of the boxes, provide a brief note in the "details" section explaining how students engaged in CAS for this unit.*
x Activating background knowledge x Scaffolding for new learning ☐Acquisition of new learning through practice ☐Demonstrating proficiency Details: Students have to use the knowledge they have in relation to the anatomy and nervous system unit. They also have to build upon new information as they go through the various activities in the labs.	x Core theme ☐Optional themes ☐Areas of knowledge Details: There are statements that Kenyan runners are elite due to genetics. In this unit, students learn about the ventilatory and respiratory systems and how it works during activities. For TOK connections, we will look at the "Why" they are elite? The concept that it is more than genetics. There are other factors such as culture, elevation, climate, and/or discipline (Inquirers and thinkers - Investigating the why)	☐Creativity ☐Activity ☐Service Details:
Resources *List and attach (if applicable) any resources used in this unit*		

- **textbook**
- **lab equipment**

Stage 3: Reflection—considering the planning, process and impact of the inquiry

What worked well *List the portions of the unit (content, assessment, planning) that were successful*	**What didn't work well** *List the portions of the unit (content, assessment, planning) that were not as successful as hoped*	**Notes/changes/suggestions:** *List any notes, suggestions, or considerations for the future teaching of this unit*
Hands-on experience with the labs helped the students grasp a better understanding of what was occurring in their bodies as they did the various activities.	*Some of the equipment malfunctioned and/or the batteries died. A few of the students had trouble with working the equipment.*	*Try to take some time to practice using the equipment.*