# **Title:**

# Oddity in Physical Education Curriculum

# at Primary level.

**Overview:**

Primary school-age children love playing traditional games (the most of them are anaerobic games), but the fact is that students at primary level do not have such a good biological and physiological capacity to carry out that type of exercises (anaerobic games).

Students will gain knowledge and understanding of this open-ended problem found in trigger material and they will solve it by working in small groups.

**Topic: Anaerobic** versus **Aerobic games in Primary School.**

**Subjects: Physical Education, Natural Science, Spanish, Arts and Craft and English.**

**Grade:** Primary 5 & 6.

**Length of time:** two weeks.

**Objectives:**

Students will:

* **Find out about the “oddity” of playing anaerobic games in the Physical Education classroom.**
* **Compare the main differences between aerobic and anaerobic cellular respiration.**
* **Measure heart rate after playing a traditional game.**
* **Identify anaerobic activities/games they enjoy.**
* **Classify traditional games being anaerobic or aerobic.**
* **Solve an open-ended problem found in trigger material.**

**Key competences: Competence in Linguistic Communication (in Spanish and English), Mathematical competence and basic competences in science and technology, Digital competence and Learning to learn competence.**

**Contents:**

**Heart rate measurement.**

**Aerobic cellular respiration.**

**Anaerobic cellular respiration.**

**Aerobic games.**

**Anaerobic games.**

**Measurable Learning Standards stated in Decree 103/2014 of June 10th, which established the Curriculum for Primary Education in Extremadura, Spain:**

**Physical Education:**

EF 2.7.2. Identifica su frecuencia cardíaca y respiratoria, en distintas intensidades de esfuerzo. (CMCT)

EF 2.7.3. Adapta la intensidad de su esfuerzo al tiempo de duración de la actividad. (CPAA)

**Natural Science:**

CNAT 1.5.1. Realiza experiencias sencillas y pequeñas investigaciones: planteando problemas, enunciando hipótesis, seleccionando el material necesario, realizando, extrayendo conclusiones, y comunicando los resultados. (CMCT, CPAA, CCL)

CNAT 1.1.4. Desarrolla estrategias adecuadas para acceder a la información de los textos de carácter científico. (CMCT, CPAA, CD)

**Spanish:**

LCL 3.8.1. Usa con eficacia las nuevas tecnologías para escribir, presentar los textos y buscar información. (CCL, CD

LCL 3.7.1. Planifica y redacta textos siguiendo unos pasos: planificación, redacción, revisión y mejora. Determina con antelación cómo será el texto, su extensión, el tratamiento autor-lector, la presentación, etc. Adapta la expresión a la intención, teniendo en cuenta al interlocutor y el asunto de que se trata. Presenta con limpieza, claridad, precisión y orden los escritos. Reescribe el texto. (CCL, CPAA)

**English:**

ING 6r) Redacta un texto sobre algún tema conocido. (CCL)

**Art and Craft:**

PLA 1.2.5. Elabora carteles con diversas informaciones considerando los conceptos de tamaño, equilibrio, proporción y color, y añadiendo textos utilizando la tipografía más adecuada a su función. (CCL, CEC)

**Teaching approach: Learner-centered Teaching** and **Cooperative Learning.**

**Methodology:**

**Problem**-**based learning** (PBL) and **Learning by Doing**.

**Material Resources:**

**Internet connection, computers, mobile phones, art tools, cardboards and Emaze software.**

**Classroom seating arrangement: Separate areas for working in small groups.**

**Procedure:**

**Opening to lesson using trigger material**

**.** Children will start playing the traditional ***“Tag”*** **game** for 10 minutes at the gym.

**.** Just after stopping the game, each child will measure his/her heart rate by **taking his/her wrist or neck pulse.**

Teacher’s previous explanation: *“You can take your pulse using your carotid artery in your neck or the radial artery in your wrist”.*

**. Pupils will/may conclude that their heart rate is about 180 beats per minute after a short and intense exercise, such as sprinting for up to 90 seconds.**

PE Teacher will show them this warming poster as a **trigger material**:

WARNING

DO NOT SPEED UP YOUR HEART RATE MORE THAN 140-160 BEATS PER MINUTE!!

**Body of lesson**

Step 1: **Understanding the open-ended problem found in the trigger poster.**

**.** The Natural Science teacher will dividepupils into groups of 4 o 5. Each group will compare the **main differences between aerobic and anaerobic cellular respiration** by searching it on the internet.

**.** Whole class discussion about the most interesting differences between anaerobic and anaerobic cellular respiration and how to show/display these differences.

Step 2: **Putting into practice the knowledge acquired in step 1**.

**.** The PE teacher will divide pupils into 5 o 6 and after playing several traditional games:

**-** Student will identify anaerobic activities/games they enjoy.

**-** Student will classify traditional games being anaerobic or aerobic.

Step 3: **Solving the open-ended problem found in the trigger poster.**

. Whole class discussion about the possibility of turning common/traditional anaerobic games into aerobic games.

. The PE teacher will divide children into 4 o 5. Each group will choose three anaerobic games and discuss how to turn this games into aerobic games.

Step 4: **Displaying the pupils’ outcomes and proposals**.

**.** Each group will make posters in the Art and Craft classroom to display their findings and proposals in order to solve the “oddity” of playing anaerobic games at Primary level.

**.**Teacher/s will make an Emaze presentation to show the procedure followed in this lesson plan and for collecting the pupils’ outcomes and proposals to solve the “oddity”.

**Assessment & Evaluation:**

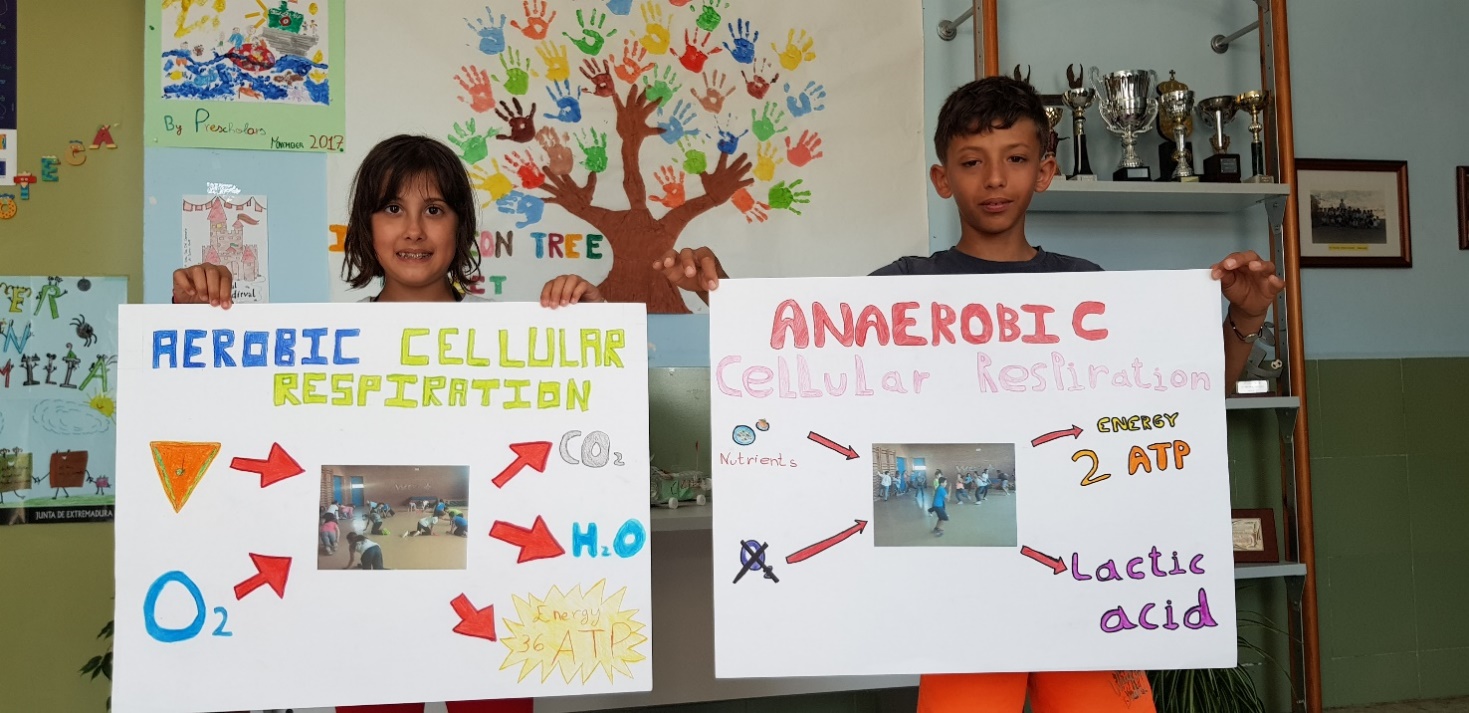
. Teacher's observations of student written work samples, student oral presentations and participation in group activities.

. Interview with students.

. The teacher will register on the personal evaluation sheet whether students fulfil the tasks or not.

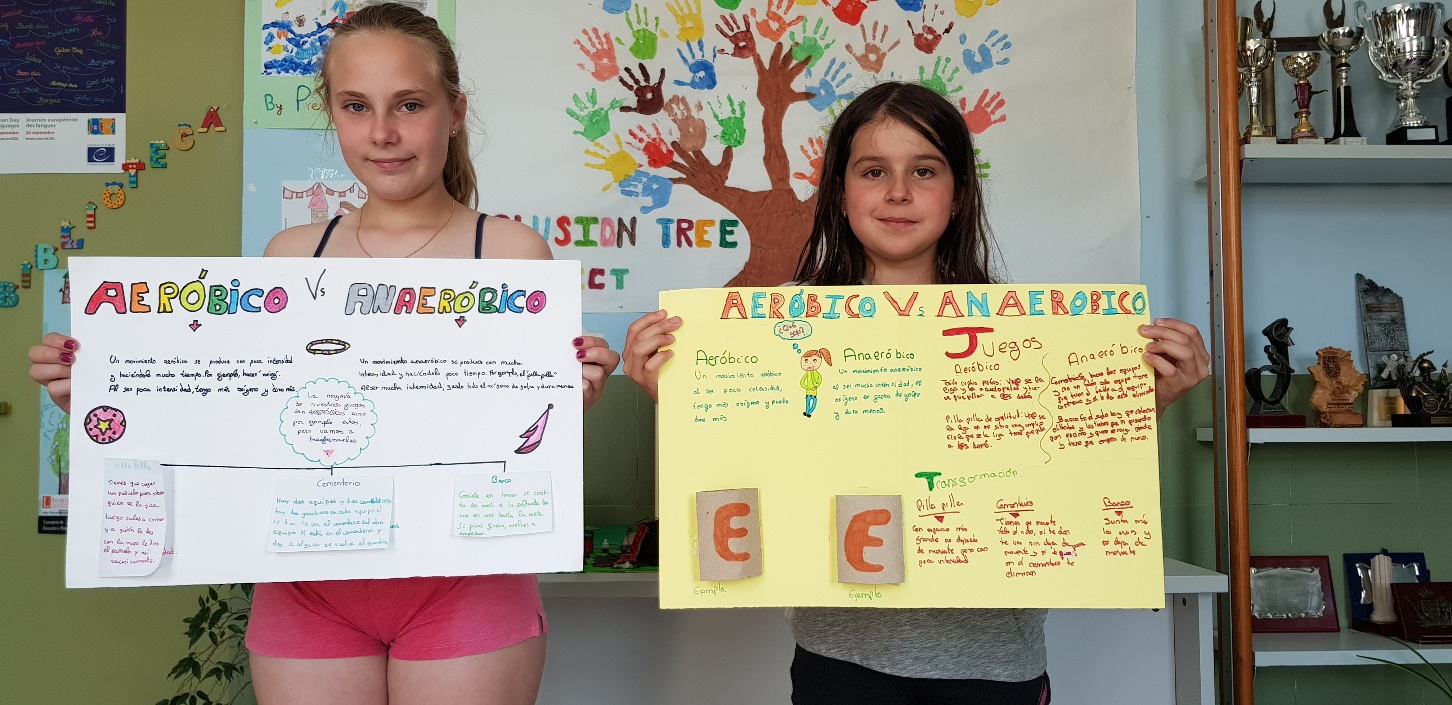
**Outcomes:**

**Posters** that will **explain aerobic** and **anaerobic cellular respiration:**



**Posters that will explain how to transform traditional (anaerobic) games into aerobic games:**





**Emaze presentation collecting the pupils’ outcomes and proposals.**

<https://youtu.be/ZdS_xZ2Gl_4>

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