LESSON PLAN

School: II Liceum Ogólnokształcące in Giżycko, Poland

Time: 45 min

Grade: 11th

Topic: **Virtual journey with Google Expeditions**

Number of students: 30

Objectives:

1. Create innovative learning environment for students and teachers based on Google apps.
2. Introduce your students to a new way of learning with virtual reality (VR).
3. Increase students’ motivation to learn science and English language.
4. Revise English vocabulary

Form: groupwork

Equipment and resources: mobile phones, selfie sticks, wi-fi connection, projector, screen recorder, learningapps, Quizlet

Selected Expeditions:

1. Human Anatomy – Circulatory system
2. Geography: Volcanoes
3. History: Ancient Egypt
4. Biology: Pregnancy
5. Chemistry: An introduction to fluids

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| Step | Activity | Objective | Classroom organisation | Equipment/apps | Time |
| 1. | Teacher greets students and visitors and they sit down. |  | Frontal work |  | 2’ |
| 2.  | Let’s solve this Hangman Game. <https://learningapps.org/display?v=pnicj3wct20>Teacher opens a website <https://edu.google.com/products/vr-ar/expeditions/?modal_active=none>Discussing questions:What is Google Expeditions? (Google app used for guiding virtual trips with students)What can you use it for? (studying, visiting places virtual tours)Let’s see how it works | Warm-upIntroducing the subject | Frontal work | Interactive board, projector | 5’ |
| 3. | Flash cards<https://quizlet.com/pl/471351914/expeditions-flash-cards/> | Pre-teach vocabulary |  | Quizlet | 6’ |
| 4. | Give students an activity to complete concurrently with the expedition (each group receives a set of questions to find answers during VR journey)Group I - Human Anatomy: Circulatory system:Group II – Geography: VolcanoesGroup III – History: Ancient EgyptGroup IV – Biology: PregnancyGroup V –Chemistry: An introduction to fluids | Main part of the lesson:Students are divided into 5 groups | Groupwork | Google ExpeditionsCardboardsSelfie sticks | 15’ |
| 5. | During the expeditions: Ss find answers to the questions.Students make screen recordings of what they learnt from the Expedition and forward them to the teacher. | Selfie sticks |
| 6. | Group leaders present their answers to the class and the teacher. | Developing Speaking Skills | Frontal work | Interactive board, projector | 10’ |
| 7 | Watching group screen recordings. | Summary | Frontal work | Interactive board, projector | 5’ |
| 8. | Google forms https://docs.google.com/forms/d/e/1FAIpQLSc-iTOb\_nCjR36W9kdUDHp-P2wKw410Eqmd4vy3E\_ibhwc5yg/viewform?usp=sf\_link | Evaluation | Individual work | Google Classroom | 2’ |

Group I – Biology

Human Anatomy – Circulatory system:

1. Name the three main components of the circulatory system?
2. How many times does the average human heart beat per minute?
3. Describe the size of the average human heart.
4. Make a short screen recording of your Expedition journey. (15 seconds)

Group II – Geography: Volcanoes

1. What is a volcano?
2. What is the difference between magma and lava?
3. What are the three categories of volcanoes?
4. Make a short screen recording of your Expedition journey. (15 seconds)

Group III – History: Ancient Egypt:

1. Who built the Great Pyramids?
2. Why is Egypt considered the gift of the river?
3. What was the KA?
4. Make a short screen recording of your Expedition journey. (15 seconds)

Group IV – Biology: Pregnancy

1. How many trimesters are there in a human pregnancy?
2. Can the baby breathe inside the womb?
3. What is the purpose of the „tail” of the sperm cells?
4. Make a short screen recording of your Expedition journey. (15 seconds)

Group V –Chemistry: An introduction to fluids

1. What is a liquid?
2. What happens when we change the temperature of a fluid?
3. What is a shape of plasma?
4. Make a short screen recording of your Expedition journey. (15 seconds)

**Answers**

Group I – Biology

Human Anatomy – Circulatory system:

1. Name the three main components of the circulatory system? (the heart, the lungs, the veins, arteries and blood vessels)
2. How many times does the average human heart beat per minute? (The heart pumps an average of 70 times per min)
3. Describe the size of the average human heart. (size of a fist)

Group II – Geography:

1. What is a volcano? (crack in the crust of the earth from which hot magma and gases erupt)
2. What is the difference between magma and lava? (lava is a magma that has found its way onto the surface of Earth)
3. What are the three categories of volcanoes? (active, inactive, extinct)

Group III – History: Ancient Egypt:

1. Who built the Great Pyramids? (Workforce of about 20 thousand labourers)
2. Why is Egypt considered the gift of the river? (Because people in Egyptian civilization were so dependent on the Nile for survival)
3. What was the KA? (The KA was the force that escaped when a person body died

Group IV – Biology: Pregnancy

1. How many trimesters are there in a human pregnancy? 3 trimesters
2. Can the baby breathe inside the womb? No, the baby gets all the oxygen it needs from the mother via the umbilical cord.
3. What is the purpose of the „tail” of the sperm cells? The tail allows the sperm to swim in liquid in order to reach the egg.

Group V –Chemistry: An introduction to fluids

1. What is a liquid? (a substance that flows freely and has a fixed form, has no rigidity)
2. What happens when we change the temperature of a fluid? (we can change its properties)
3. What is a shape of plasma? (plasma has no defined shape or volume)
4. Make a short screen recording of your Expedition journey. (15 seconds)