

Teaching and Learning Content: Kilimanjaro Project (Science)

Year Group: 8

Autumn and Spring Term

An expedition is organised to climb Kilimanjaro in order to raise money for charity. You are going to plan and lead a group of people to climb Africa's highest mountain.

Key Questions:

- What food should you take with you?
- How can you store and use the energy?
- What should you have in your first aid kit?
- What would you take in case of indigestion?
- How can you prepare your body before climbing the mountain?
- What happens in your body when you exercise?
- How can you prepare your body before climbing the mountain?
- What happens inside your body when you exercise?
- What is Kilimanjaro?
- How was Kilimanjaro formed?

Students will:

- State three types of rocks
- Give examples of food that belong to different groups
- Explain and evaluate what food should be taken with you when planning the expedition
- List 8 forms of energy and describe what energy efficiency means
- Explain what an energy transfer is and how it can be represented
- Explain what energy conservation is
- Explain what energy transfer processes take place in the body
- State what acids and alkalis are
- Explain that pH describes the acidity of a solution

- Explain that the acids and alkalis neutralise each other when they are mixed in the right ratio
- State effects of the exercise on the body
- Describe what respiration is and where it takes place in a cell
- Explain why the structure of the lungs at taking in a lot of oxygen
- Describe how oxygen and glucose are transported around the body
- Describe factors that can affect circulation
- Describe types of muscles in the body State the difference between cells, tissues and systems
- Describe how sedimentary, igneous and metamorphic rocks are formed
- Describe the main stages of a rock cycle
- Explain why a volcanic eruption occurs State three types of rocks

Websites that can support learning:

http://www.bbc.co.uk/schools/ks3bitesize/science/environment_earth_universe/rock_cycle/revise1.shtml

<http://www.rocksforkids.com/RFK/howrocks.html>

<http://www.bbc.co.uk/learningzone/clips/metamorphic-rock-formation/10622.html>

http://www.bbc.co.uk/schools/ks3bitesize/science/chemical_material_behaviour/acids_bases_metals/revise1.shtml

<http://www.lcc.ukf.net/KS3Chem/acidalkali.htm>

http://www.bbc.co.uk/schools/gcsebitesize/science/aqa_pre_2011/energy/heatrev4.shtml

<http://www.zephyrus.co.uk/energy2.html>

<http://www.gosh.nhs.uk/children/general-health-advice/eat-smart/food-science/>