Bridging Work Year 10 September 2020

Biology

The tasks below are designed to support you as you prepare to start GCSE *Biology*.

These tasks have been developed to build on your knowledge and help with the transition to IKB Academy in September, using your time wisely over the coming months to ensure you maintain a level of education that will be needed to be successful in your subjects.

Respiration and The Effect Of Exercise on the Body

1. Research task: What is respiration? Find out where respiration takes place, why it is important, the products and the reactants (if possible try to find the balanced chemical equation)

2. Investigating The Effect of Exercise on Breathing and Pulse rate. Design an experiment to investigate how breathing rate and pulse rate are effected by exercise.

   In order to do this you need to:

   a) Write a method for your experiment:
      - Describe how to take your pulse rate
      - Make a list of equipment you will need in order to do your experiment.
      - Choose a type of exercise to carry out (e.g. sit ups, jogging on the spot, star jumps)
      - Decide how many different readings you will take and how many repeats you will do. (e.g. if you are jogging on the spot you could jog for 30s, 60s and 90s)
      - Decide when will you take your pulse/breathing rate? I would recommend taking a reading before each bout of exercise, immediately afterwards and then a minute later.
      - List your dependant, independent and control variables.

   b) Design a results table. Remember to leave room for repeats and then a calculation of your mean result.

   c) Present your results in the form of a graph (think: what is the most suitable type of graph for this data)

   d) Write a conclusion which:
      - Summarises the results of your experiment.
      - Explains the results by relating them to the process of respiration that you researched in task 1.

For some background information on the process of aerobic respiration and the body's response to exercise click here: https://www.bbc.co.uk/bitesize/guides/zcjy97h/revision/1