



Science planning with Sustainable Travel Links for Year 5 and 6 Working scientifically to investigate the benefits that exercise has on us

Links to maths (data handling), PE, English & IT

Objectives:	<ul style="list-style-type: none"> • plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • take and record measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • use test results to make predictions to set up further comparative and fair tests • report and presenting findings from enquiries, including conclusions
Success Criteria:	<ul style="list-style-type: none"> • Co operative group work, sharing ideas to find relevant “big questions” that can be answered • Knowledge of the fair tests and variables that will need to be considered • Accurate measuring and recording that can then be transferred into another format • Use of data to create further tests • Persuasive reporting of findings
Teacher Input with key questions: Explain that today’s lesson is about keeping healthy through exercise.	
<p>Intro: Talk partners write down all the things we need to keep healthy. Group them into the main four: Food, Water, Exercise, Rest. Which ones are easiest to obtain? Which ones are trickier? http://www.bbc.co.uk/bitesize/ks2/science/living_things/keeping_healthy/read/1/ http://www.bbc.co.uk/bitesize/ks2/science/living_things/keeping_healthy/play/ http://downloads.bbc.co.uk/schools/teachers/ks2worksheets/bbc_teachers_ks2_science_worksheet_keeping_healthy.pdf</p>	
<p>Highlight the importance of recording pulse in BPM – beats per minute – this will be very useful in their recording. Work through this activity – what do we notice? How easy is it to find our pulses? What do we know about hearts that are not looked after well? How do we feel after exercise? What stops us taking enough exercise?</p>	
<p>Main input: Thinking about Exercise: Why is it important? What kinds are there? Do we do enough? What ways can we do more? Go through the following sentences and fill in the gaps to emphasise the importance of exercise. http://www.tes.co.uk/teaching-resource/Heart-Rate-Investigation-PowerPoint-6304350/ How does exercise affect our heart rate?</p>	
<p>Work through the PowerPoint. Look at the recording sheet (same link as the PowerPoint) – is this easy to use, read, transfer information? Emphasise that the recording sheet will need to be relevant to their exercise. Discuss what will need to be on such a sheet and how it can be transferred into a different format. E.g. tally charts are quick to gather information but do they show comparisons?</p>	
<p>Task The school is going to be part of a Healthy Schools Project (change scenario to fit the school) and has asked each class to come up with some effective exercises that can be done easily on the play ground using the equipment available in school. Each exercise can then be photographed and put into a book with data to support how effective it is and an explanation of how and why that exercise is effective.</p> <p>What big questions can we think of? E.g. How can we increase our heart beat? How can we strengthen our stamina? How can reduce getting puffed out? How can we keep it interesting for everyone?</p> <p>In groups of 3 or 4 choose to decide the big question they want to answer, The equipment they will need, How they will record and measure – number of jumps etc, How they will keep it fair, How they will know if it was successful, How they will convert the results into other data, What the next step will be from the data, How they will present their enquiry. Take answers to some of these questions. Give time for enquiry</p>	
<p>Resources PE equipment – ropes, bean bags, balls etc Chalk for defining spaces Clip boards Stop watches Pedometers Camera Books / paper for recording</p>	
<p>Mini plenary when time for discussion completed. What exercises are going to be carried out? Did your exercise answer the question?</p>	
<p>Plenary Chance to look at and participate in the exercises.</p>	
<p>Assessment</p> <ul style="list-style-type: none"> • Can work co operatively in a group, sharing ideas to find relevant “big questions” that can be answered • Can use knowledge of the fair tests and variables that will need to be considered • Can accurately measure and record data and transfer it into • Can use the data to create further tests • Can report findings persuasively 	

Science



Number of heart beats in 10 seconds

30				
29				
28				
27				
26				
25				
24				
23				
22				
21				
20				
19				
18				
17				
16				
15				
14				
13				
12				
11				
10				
9				
8				
7				
6				
5				
4				
3				
2				
1				
	Resting	Warm up	Exercise	Cool Down

Science



Name: _____

Date: _____

Extension activity (Science/English/IT) – In groups, children discuss their activities and findings, and those of others presented during the plenary, and use their findings to plan and write an information leaflet about exercise. They may wish to research exercise on the internet (such as http://kidshealth.org/parent/nutrition_center/staying_fit/exercise.html) to add to their findings or source some illustrative images.

Planning an information leaflet about (the benefits of) exercise...

Describe the exercise...	
Promote your chosen exercise...	
Describe the muscles used and which parts of the skeleton...	
An explanation of why the heart pumps faster to increase the blood supply to the muscles...	
How and why is exercise good for your health and which medical conditions can it prevent...	
Additional section:	