Year 6 Handling Data 3 Checking My Heart Rate (Choice)

Timing 2 sessions of approximately 45 minutes**.**	**Children will** • Use data loggers and other devices to conduct an investigation into levels of fitness (**The activities will need planning over time if children are carrying out the investigation in groups)** • Present the findings of the investigation
e-safety links I can explain the consequences to myself and others of not communicating kindly and respectfully (as we work together)	**Objectives** **Handling Data** • I can plan the process needed to investigate the world around me. • I can select the most effective tool to collect data for my investigation. • I can check the data I collect for accuracy and plausibility. • I can interpret the data I collect. • I can present the data I collect in an appropriate way.
Links to other learning **Computing: Programming**, children could create their own timer in Scratch or using a Micro:Bit; **Multimedia** to present findings **Science**: Recognise the impact of exercise on the way their bodies function **Mathematics:** Use appropriate software and data loggers to create and interpret line graphs. Complete and interpret tables to present and understand information.	
Resources: Easysense Q/ Vu datalogger, or TTS Logbox / LogtIT Explorer OR other heart rate logging device Finger pulse oximeter (optional) Non-contact thermometer (optional)	**Preparation** Investigation based on: https://store.data-harvest.co.uk/vu-ebook Make sure you have a heart rate monitor for your datalogger. Finger Pulse Oximeter with LED Display can be purchased for under £20, a non-contact thermometer for about the same amount. Their use is included in the sessions but these are optional extras, adding to the investigation but not essential. Decide whether to run this as a whole class investigation or allow children to work in small groups to develop their own investigation. It is preferable to allow children to work in groups but this will depend on time available and class organization. Provide investigation template or display this for children.

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1	**Handling Data** I can select the most effective tool *(a datalogger)* to collect data for an investigation.	**How does exercise change us?** • Whole class discussion about effects of exercise: What happens to your body when you exercise? This discussion could take place after an energetic PE session when you can refer to the recent experience. Make sure the discussion includes heart rate (or pulse), temperature, breathing, appearance. • How can we investigate the effects on our bodies? Which of the things we have discussed can be investigated using technology? What will we need to think about to show that exercise has changed us? (Make sure children consider the data they will need to collect before they start to exercise.) • What can we use to measure the effects we have identified? Show the datalogger, pulse oximeter, non-contact thermometer, exercise app available. • Put the children in small groups and ask them to plan an investigation to show how exercise changes us. You could give them an investigation template. • Discuss investigations with each group and plan their 'time slots' for collecting their data OR Collect ideas and agree a whole class investigation. • See https://store.data-harvest.co.uk/vu-ebook for ideas on the investigation.	Gold: Can I generate reliable results from an investigation using a data logger? Silver: Can I use a data logger to collect information? Bronze: Can I use technology to help with an investigation?
2	**Handling Data** I can interpret and present the data I collect in an appropriate way. I can check the data I collect for accuracy and plausibility.	**Analyse and present data collected** • What have we found out from the data? How could this be important? • Groups work on analysing and presenting their data including checking the reliability of the data they have collected. These could be presented online through a blog or website or could be presented in an assembly or presented to each other in the class. • Discuss how technology has helped us with the investigation. What other investigations could we do using this technology?	Gold: Can I talk about the accuracy of the data and present it effectively when explaining what we have found out? Silver: Can I present the outcomes of my investigation? Bronze: Can I tell you what we have found out from the data I collected?