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| **Lent 2: Data Logging**  **Subject Computers  Year 4   Medium Term Planning** | | | | | | |
| **National Curriculum Objectives**   * Use sequence, selection, and repetition in programs; work with variables and various forms of input and output * Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information | | | | | | |
|  | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 |
| **Learning intention for each lesson:** | I know that data can be gathered over time can be used to answer questions | I know how to use a digital device to collect data automatically | I know how to explain that a data logger collects ‘data points’ from sensors over time | I know how to recognise how a computer can help us analyse data | I know how to identify the data needed to answer questions | I know how to use data from sensors to answer questions |
| **Recall and retrieval** | E safety new vocabulary and assess existing knowledge linked to previous learning. | E safety  Which data set will answer the question. | E safety  Which is the right answer?  What data can be collected using sensors? | E safety  Explain the data. | E safety  Name ways of viewing data. | E safety  What question could you ask about this logged data? |
| **Sequence of knowledge throughout the lesson**    **:** | **Key Knowledge**   * I know how to consider what data can be collected and how it is collected overtime. * I know what questions that can and can’t be answered using available data. * I know how to reflect on the importance of collecting the right data to answer questions. | **Key Knowledge**   * I know how to begin to understand that collecting data can be done automatically using computers such as data loggers. * I know how to become aware that computers can capture data from the physical world using input devices called ‘sensors’. * I know that sensors can be connected to data loggers, which can automatically collect data while not attached to a computer. | **Key Knowledge**   * I know how to explore how data loggers work. * I know how to record data at set moments in time and draw parallels with the data points that a data logger captures at regular intervals. * I know how to use data loggers away from a computer, then they will connect the loggers to a computer and download the data. | **Key Knowledge**   * I know how to open an existing data file and use software to find out key information. * I know how to analyse a data file which shows hot water cooling over time. | **Key Knowledge**   * I know how to choose a question to focus on. * I know how to plan the data logging process that they need to complete in order to answer the question * I know how to set up the data loggers to check that their plan will work. | **Key Knowledge**   * I know how to access and review the data that they have collected using a data logger. * I know how to use the data collected to answer the question that they selected in the previous lesson. * I know how to reflect on the benefits of using a data logger. |
| **Scaffolding** | Prompts for question to be answered. | Paired with HA to perform investigation. | Scaffolded recording. | Simple viewing of data. | Mixed groups | Simple interpretation using prompts. |
| **Challenge** | Answer each other questions related to the data. | Paired with HA to perform investigation. | Write about the data they have captured. | Explain different ways of viewing. | Mixed groups | Write a conclusions explaining results and relating them to the benefits of using a data logger. |
|  | **Key Vocabulary**  Database, field, record, graph, chart, presentation | **Key Vocabulary**  Input device, sensor, data logger | **Key Vocabulary**  Data logger, logging, data point, interval | **Key Vocabulary**  Analyse, data set, import, export | **Key Vocabulary**  Data, data logger, logged, collection | **Key Vocabulary**  Analyse, review, conclusion |