SUBJECT: Science YEAR: 7 MTP TITLE: Working Scientifically HALF TERM: 1 NO. OF LESSONS (approx): 10

Deliberate and specific retrieval of expected prior knowledge (be specific)

KS2

- Asking relevant questions and using different types of scientific enquiries to answer them.
- Setting up simple practical enquiries, comparative and fair tests
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Gathering, recording, classifying and presenting data in a variety of ways to help in questions
- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

Academic transformation (be specific)

Your core curriculum must do all of the following:

- Emphasise the importance of health and safety including rules of secondary science laboratories and hazard symbols.
- Introduce students to scientific apparatus and how to draw them.
- Practice scientific skills around measurements.
- Identify variables in an investigation and use them to draw a table to collect data.
- Introduce how to draw a bar chart.
- Introduce how to draw a line graph.
- Use all the skills students have gained over the topic to plan a practical investigation.
- Carrying out the investigation that is planned in the previous lesson.
- Analyse the practical completed in the previous lesson by drawing the relevant graph and drawing conclusions from it.

Personal transformation (2 or 3)

- Use data based on current issues and news to plot graphs and analyse.

Can I Learning Questions

Can I identify hazard symbol?
Can I draw scientific apparatus?
Can I use appropriate measurements to improve accuracy and precision?
Can I display scientific data in a graph?
Can I use all my knowledge gained over the topic to plan, complete and analyse a scientific investigation?

Literacy

Key vocabulary
Independent, dependent, control, variables, tables, graphs, bar, line, continuous, categoric, analyse
Disciplinary reading

Classroom talk

Misconceptions (5 or 6 examples)

- Students often think the dependent variable is the measurement they use when they set up the investigation, rather than what they are using to measure the effect of independent variable .
- Focus on data that is categoric such as shoe size as students often think that is continuous.