Kingslea Primary School Planning for Maths	**Year Group:** 6 **Term:** Summer 2 **Date:** Week 1 - 2	**Unit:** Statistics **Weekly vocabulary:** data, discrete data, continuous data, graph, mean, set of data, conversion graphs, unit, axis (x and y), plot, frequency

Previous learning: This is the first time this year chn have come across the unit and have been taught these skills explicitly. Chn will build on their experience of interpreting data in context from Year 5, using their knowledge of scales to read information accurately. Chn need to read information accurately, including where more than one set of data is on the same graph. They will have come across several of these style questions in SATs busters and during online homework.

NC Objectives and Learning Challenge	Mental Warm-up	Teacher Input:	Activities:	Scaffolding and Support:	Notes: (e,g, retrieval practice, marking focus)
Session: 1 **NC Objective:** calculate and interpret the mean as an average **LC:** Can I interpret the mean of a set of data?	**Converting Measures** Measures Warm-up PowerPoint – Slide 3 (Measures PPA folder)	**Working out the mean of a set of data** *What is an average? What are the different types called?* Could briefly mention the mode, median and range but chn need to focus on the mean. Ensure the children understand that the mean (or average) of a set of data is the total divided by the number of items in the set. Look through some examples. Put up further examples for the chn to work through on their WBs. Make sure examples include several numbers to add up and where the answer is a decimal. Discuss whether the answer can be a decimal (yes for this type average). *What problems might you come across when working out the mean?* Elicit that simple addition (or division) errors could make it more difficult to find the correct mean. Later in this session, introduce the idea that a 0 in a set of data still needs to be included as an item when working out the mean.	Chn to work out the mean of different sets of data. (Target 6 Page 150)	**Scaffold** Method for how to work the Mean out should be on display. **Support** Numbers easier to add and then divide will be given for those whose mental calculations may not be as strong.	Answers to be read out to class and chn to mark their own answers.
Session: 2 **NC Objective:** calculate and interpret the mean as an average **LC:** Can I use the mean to solve problems?	**Miles and Kilometres** Measures Warm-up PowerPoint – Slide 4 (Measures PPA folder)	**Using the mean to solve problems** Remind the chn what the mean is – can they remember? *How is it worked out?* Work through a couple of examples. Look at examples where the mean is given, but other information is missing. *How can we use our knowledge of how the mean is worked out to find the missing information?* As questions are worked through ask key questions: ➢ What have you been asked to find? ➢ What do you already know? ➢ How do you work out this information? Ensure questions take the form of word problems only by the end of the input for most groups of chn.	Chn to work out the missing information using their knowledge of how the mean is worked out. (Target 6 Page 152)	**Scaffold** Use of pictures will help to break down the problems. **Support** Ind. chn to continue to work on finding the mean only. **Ext:** Chn to given mean and number of items only and then work out what the different sets of data could be.	Answers to be read out to class and chn to mark their own answers. Numbers in the input can be changed for those who struggle with mental calculation.
Session: 3 **NC Objective:** Interpret line graphs and use these to solve problems **LC:** Can I read and interpret line graphs?	Working out the mean of three sets of data	**Line graphs – reading and interpreting** Revise: *What is a line graph? What kind of data does it represent?* Look at the two graphs from WR and compare and contrast them. *What is the same and what is different about the two graphs?* Look at further examples of line graphs and model answering a range of questions relating to the graph – drawing on the graph to help with answers. Show the chn the example of the line graph with two lines from WR and ask the listed questions to ensure understanding.	Chn to complete questions on interpreting line graphs, which show journeys and temperature. (Target 6 pages 146 – 149)	**Support** Questions are based on a range of graphs which have different scales of varying difficulty. Some bubbles will have an extra adult to support those chn who are struggling.	Answers to be read out to class and chn to mark their own answers.

Session: 4 **NC Objective:** Interpret line graphs and use these to solve problems **LC:** Can I read and interpret line graphs?	Line graph check – true or false questions	**<u>Line graphs – reading and interpreting</u>** Discuss any difficulties or misconceptions from yesterday's lesson. Look at True or False statements about Eva's graph.	Chn continue questions from yesterday's lesson on reading and interpreting a line graph.	As above. **Ext** Write stories to match the given line graphs.	Answers to be read out to class and chn to mark their own answers.
Session: 5 **NC Objective:** Interpret and construct line graphs and use these to solve problems **LC:** Can I draw line graphs?	Working out the mean word problems	**<u>Line graphs – Drawing</u>** Tell the chn they will need to decide on the most appropriate scales and intervals to use depending on the data they are representing. Look at the data in the table showing the height a rocket reached between 0 and 60 seconds. Examine the data and decide how to represent it on a line graph. Model how to draw the line graph. *What will the x-axis represent? What intervals will you use? What will the y-axis represent? What intervals will you use?* For some groups of chn it may be useful to model (or at least discuss) how to draw a line graph for data which requires two lines. *How will you make it clear which line represents which set of data? Why is it useful to have both sets of data on one graph?*	Select questions from Target 6 page 142-149 to allow the children to practise drawing line graphs using the data provided.	**Scaffold** Provide children with a checklist of features to include in their line graphs **Support** Provide children with templates of line graphs for them to complete. Provide assistance with the scale of the axis where necessary. **Ext** Chn to draw line graphs which require more than one line to represent the data.	Chn to leave books open after this session, so adults can see if scales are drawn correctly – any feedback to be put on a post-it note.
Session: 6 **NC Objective:** Interpret line graphs and use these to solve problems **LC:** Can I use a line graph to solve a problem and reason?	What's wrong with the line graph?	**<u>Line graphs – using them to solve problems</u>** Look at the example line graphs and discuss the following questions to check understanding: • What do you notice about the scale on the vertical axis? Why might it be misleading? • What other scale could you use? • How is the information organised? Is it clear? • What else does this graph tell you? What does it not tell you? • How can you calculate _____? • Why would this information be placed on a line graph and not a different type of graph? Then, ask the chn specific questions linked to the graphs where they have to reason.	Chn complete reasoning tasks linked to line graphs.	**Scaffold** Examples of reasoning can be modelled on the board to remind chn how to structure their writing. **Support** List of vocabulary up on the board for chn to use	Answers to be read out to class and chn to mark their own answers. Some of this lesson may be used to finish drawing the line graph from the previous session.