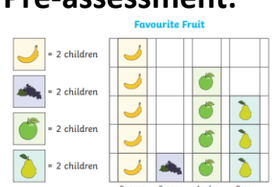
Old Town Infant School and Nursery

Coastal Learning PARTNERSHIP

MATHS MEDIUM TERM PLANNING

Year 2 – Statistics (Approximately 2 weeks)	
Objectives from Progression Document	**interpret tally charts,** e.g. how many ___ are there? **interpret simple pictograms with simple ratios 1, 2**, e.g. how many of x are there? **interpret simple pictograms with simple ratios 10,** 5, e.g. how many of x are there? **interpret block diagrams** **count objects in different categories showing the results in a simple table** **construct tally charts** **construct simple pictograms (ratio 2 or 10)** **construct block diagrams** **solve problems that need adding up of objects in different categories** **compare how many objects there are in different categories,** e.g. which fruit is there most of? **ask a friend a question that needs adding up or comparing** **sort objects in different categories by quantity**
Previous Learning	**interpret simple tables** **present results using lists and simple tables, with support** **compare how many objects there are in simple categories shown in a table** e.g. are there more apples or more oranges?
Vocabulary	vote, graph, block graph, pictogram, represent, most popular, most common, least popular, least common, tally
Key fact(s)	To know that a symbol or picture can represent an amount of data To know that 𝍸 = 5
Number facts for fluency	Addition and subtraction facts within 100, using known facts to 20
DfE Ready to Progress Guidance Pages https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897806/Maths_guidance_KS_1_and_2.pdf	**2MD-1** Multiplication as repeated addition pages 30 -32
NCETM Ready to Progress Exemplification https://www.ncetm.org.uk/classroom-resources/exemplification-of-ready-to-progress-criteria/	**2MD -1** Multiplication as repeated addition
Problem Solving and Reasoning Skills Objectives	use lists and tables to organise and interpret given information, with support
Pre-assessment: 	Year 1 statistics – interpret simple tables Counting in 5's (in preparation for tallies) Finding the difference – can they work out the difference between heights of towers of cubes? What information do you think we can get by looking at this? Listen in to see who can work out key information already from this pictogram

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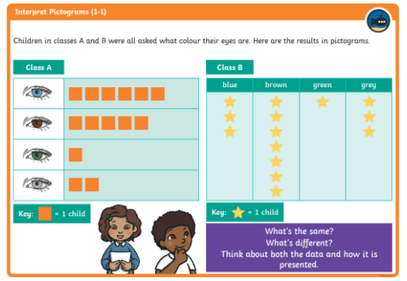
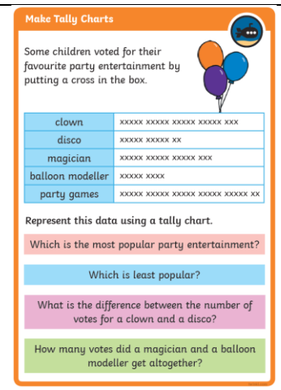
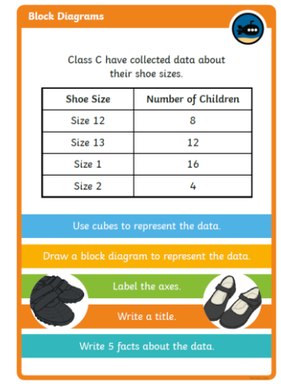
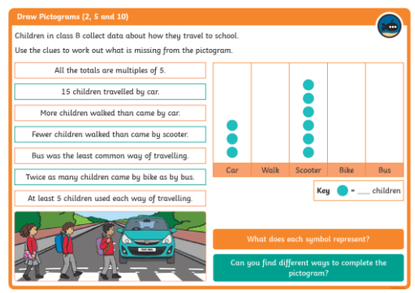
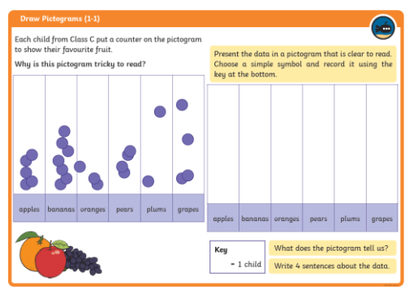
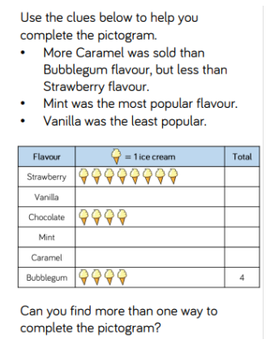
Sequence of Learning

White Rose Small Steps	Learning Intention	Key Questions	Sentence Stems	Problem-solving links	Comments	Extension/Greater Depth opportunities
Make tally charts	To use tally representations to create tally charts	What is a tally chart? How do you show 1, 2, 3, 4 in a tally? What happens when you show 5? How do you show 15? How do you show 17? What number does the tally show? How do you know? How do you show zero as a tally? Why are tally charts useful? When would you use a tally chart? How can you avoid counting an object more than once?	To show ____ as a tally, I need to draw ___ groups of 5 and ____ single lines. The tally chart shows ____ groups of 5 and ___ single lines. The total is ___.	Ladybird Count (maths.org) Questioning and representing data	**Children will need support to read a table or complete a table e.g. tracking across the rows.** **You may want to consider spending more than one lesson on this small step.** It is important that children understand how different numbers are represented and when to use a "gate" to represent a group of 5. Tallies are used throughout this block, so children must be confident using them before moving on to the next step.	 
Tables	**To answer and ask questions about tables.**	How are tally charts and tables similar? How are they different? When is it better to use a tally chart? When is it better to use a table? Which is the most/least popular? How can you tell? How can you use tallies to complete a table?	The tally shows ___ groups of 5 and ___ single lines. The total is ___. ___ people chose ___.		Children can compare tally charts and tables and think about when it is more efficient to use each one. They may come to understand that a table is easier to read, but a tally chart is more efficient when collecting data. Begin to focus on vocabulary associated with statistic particularly words like fewer/more than/less than	
Block diagrams	**To answer and ask questions about block graphs**	How is a block diagram similar to a tally chart/table? How is it different? What does each block represent? What information can you find out from the block diagram? How do you know which item is the most popular? How can you tell without counting? How could you show this data in a block diagram?	There are ____ blocks shaded. This means that ____ people chose ____. The most/least popular item is ____ because …	Sticky Data (maths.org) Constructing a whole class block graph	**Ensure you teach block graphs rather than bar graphs.** *Children explore block diagrams that use one-to-one correspondence, where each block represents one item.* This is a new concept and it may be beneficial to explore the similarities/differences between this and previous representations of data. Children can then create their own block diagrams, firstly using concrete resources such as cubes or sticky notes, and then by drawing on paper. Explain that block diagrams can be shown vertically or horizontally.	 
Draw pictograms (1-1) (2MD 1)	**To represent data using pictograms where 1 picture represents 1 object.**	What does each symbol represent? How many symbols do you need to draw in the row/column for___? How can you tell which is the most popular without counting? What is a key? Why is it important? What would/would not be a sensible symbol to use? Why? Why do you use the same symbol for each category?	The key shows that 1 ___= 1 ____. ____ children chose ____, so I need to draw ____ symbols.	Ladybird Count (maths.org) Questioning and representing data	**This small step could start your second week of learning.** The first pictograms they draw use one-to-one correspondence, where each symbol represents one item. Children may draw different symbols to represent the different categories and may draw symbols inconsistently, for example using different sizes	 
Interpret pictograms (1-1) (2MD 1)	**To ask and answer questions about pictograms where 1**	What is a pictogram? What do you know? What can you find out?	There are ___ symbols. This stands for ___ people. I can find the total by adding together ___ and ____		**Ensure you explore both horizontal and vertical pictograms**	

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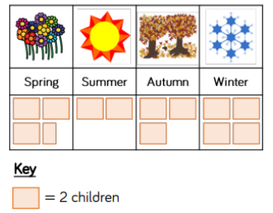
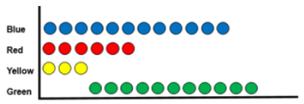
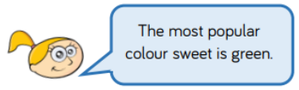
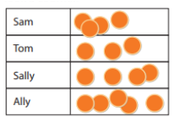
	picture represents 1 object.	Which category was the most/least popular? What is a key? Why is it important? How many more people chose___ than ____? How many ____ are there in total?	___ more/fewer people chose ___ than ___		Children start by identifying totals for different categories before comparing totals Ensure children have the opportunity to solve multi-step problems as well.	Teddy writes these statements about his pictogram: • There were more cows than sheep. • There were the same number of sheep and horses. • There were more chickens than any other animal. • There were less cows than goats. • There were 8 goats. Can you draw a pictogram so that Teddy's statements are correct? What title would you give it?
Draw pictograms (2, 5 and 10) (2MD 1)	**To represent data using pictograms where 1 picture represents 2, 5, 10 objects.**	What is a key? Why is it important? What does the key show? What does each symbol represent? How do you know? Why should you use the same symbol for each category? Will each symbol in your key represent 1, 2, 5 or 10 items? How will you decide? If the key shows that 1 symbol stands for 2/10 people, how will you show 1 person/5 people?	The key shows that 1 symbol = ___ people. To show people, I need to draw ___ symbols. The greatest number of items is ___, so I will choose 1 symbol = ___ items.		**Spend time focusing on the key – what does it tell us?** **Children need to be confident counting in 2s, 5s and 10s.** Children need to spend time considering what is efficient to count/draw the pictogram in. They also need to interpret what number is represented by half a symbol. Children may choose symbols that are not easily halved.	Create a pictogram to show who was born in what season in your class. Use what you know about pictograms to help you. Here is an example.  Key = 2 children Split into groups. Everyone needs to write their name on a sticky note. Use your sticky notes to create a block diagram to answer each question. • How many boys and how many girls are there in your group? • Which month has the most birthdays for your group? • What is your favourite sport? What other information about your group could you show? 
Interpret pictograms (2, 5 and 10) (2MD 1)	**To ask and answer questions about pictograms where 1 picture represents 2, 5, 10 objects.**	What do you know? What can you find out? What is a key? Why is it important? What does the key show? Which category is the most popular? Which is the least popular? How many more people chose ___ than ___? How many ___ are there in total? What would change if the key changed?	The key shows 1 symbol = ___people. So ___ symbols represent ___ people. The key shows 1 symbol = ___ people. So half of a symbol represents ___ people.		Children encountered how to interpret part symbols in the previous step, but this is challenging and may need some reinforcement Questions should include reading from a single row/ column of a pictogram, making comparative statements and solving simple multi-step problems.	Here is a pictogram.   Do you agree with Eva? Explain why and correct any mistakes.  **Convince me** There are more ice-creams sold at the weekend than during the rest of the week. **True or False (Why?)** Three ice creams were sold on Tuesday. **Justify** If the staff needed to pick one day to have off during the week, which would be the best day and why? Four children played racing games at break time. Each time they won a game they took a counter.  Present the information in a different way to make it clearer and answer the following questions: Who won the most races? How many more races did Ally win than Sally? Does the information answer the question: Who is the fastest runner?

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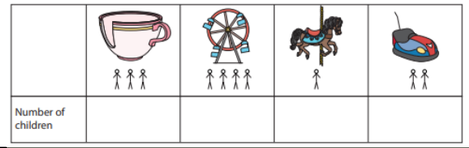
						Ten friends went to the fair. The picture below shows each friend's favourite activity. Fill in the number of children under each picture. *Challenge children to compare different ways of representing the same information.*  Number of children

Post-assessment:	Snip relevant parts from WRH end of unit statistics assessment Previous statistics SATs questions – snip as feel appropriate