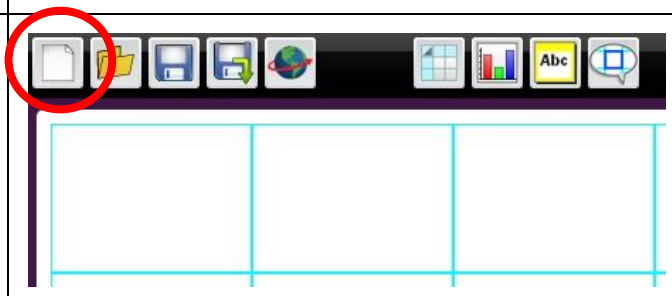
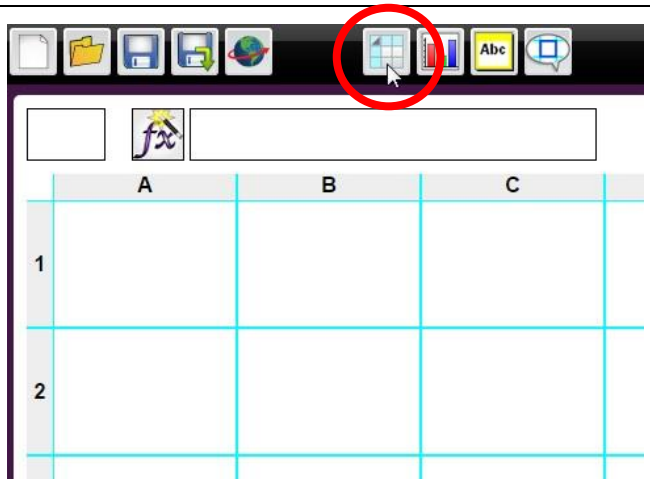
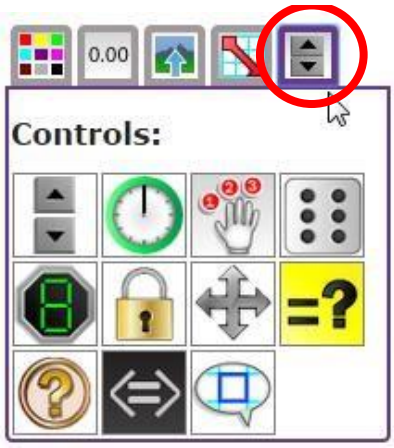
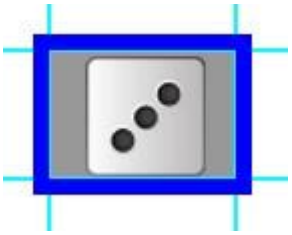
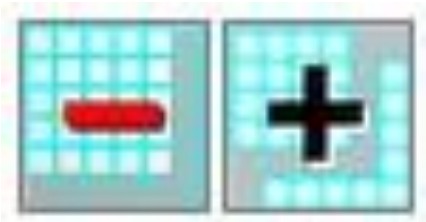
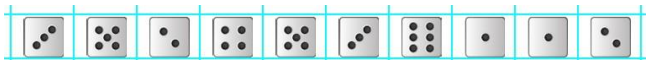
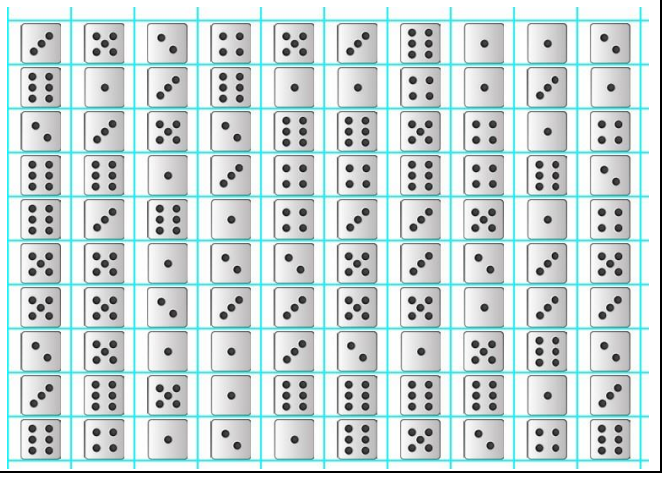
2Calculate – Activity Helpsheet & Lesson Ideas

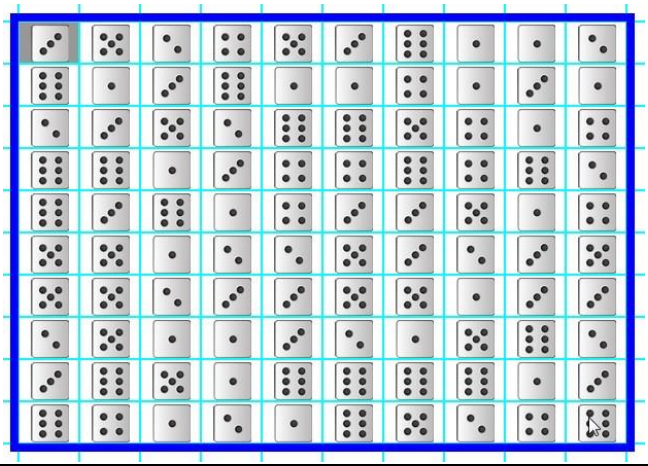
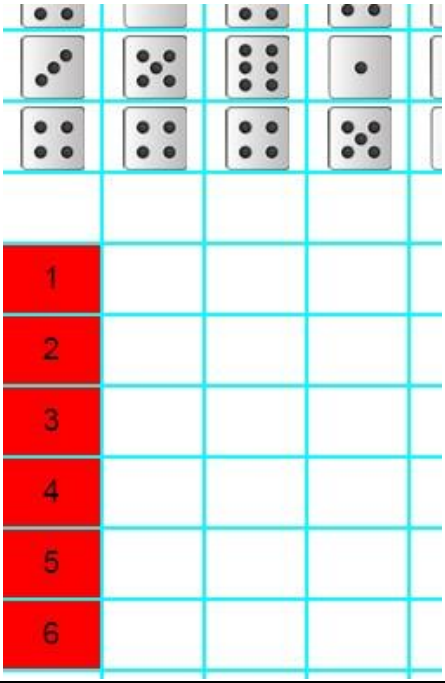
Year Group:	Upper KS2
Lesson:	Throw a 4
Curricular Links	Computing, Numeracy
National Curriculum Link	• Numeracy – Year 6 - use simple formulae • Computing - KS2 - select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
Aim:	To create a spreadsheet to answer a probability question
Success Criteria:	• I can drag dice into a cell • I can use copy and paste to populate multiple cells • I can use the count button to solve a problem
Lesson Overview	Use the dice in 2Calculate to try and find out the probability of throwing certain numbers.

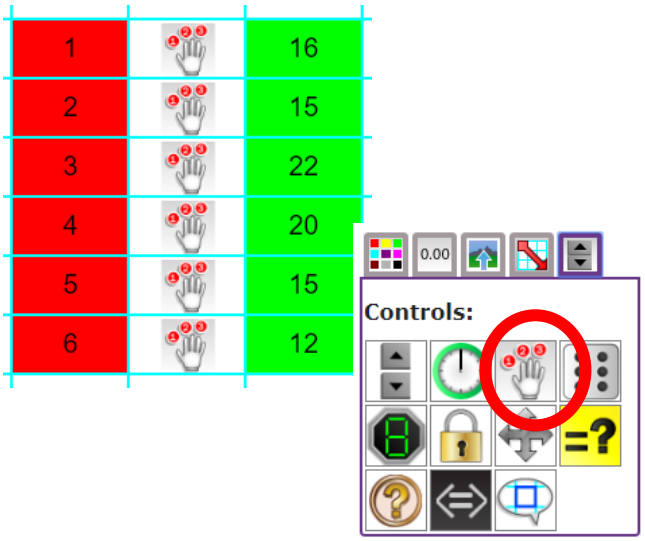
Details and Explanations:	Screenshots:
1. Create a blank worksheet by clicking on the new page icon at the top left of the screen	
2. Click on the little spreadsheet icon (indicated by the mouse) to change to the advanced spreadsheet format which you will need for this lesson.	

Details and Explanations:	Screenshots:
3. Click on a blank cell. Then click on the control icon, in the right hand side toolbar, and click on the dice. This will make a dice will appear in the cell.	

4. Click on the dice to make it change number. The dice will roll each time you click on it.	
5. For this lesson, you need to create a row of 10 dice. To add extra cells to your spreadsheet, look at the bottom right of the screen and find the 'add and delete cells' icons. Click the add cells icon until the sheet is the size you want it to be.	
6. To create the row of 10 dice you have two options. You can either click on each cell and add a dice using the method we used before or you can click on the cell with the dice and press "ctrl+c" to copy. Then click on the cells where you want to place the dice and press "ctrl+v" to paste the dice.	

Details and Explanations:	**Screenshots:**
7. To create the rest of the 100 dice. Click on the first cell on the left and drag to the right hand cell. Press 'ctrl+c'. Click on the next row down and press 'ctrl+v'. Repeat until you have 100 dice.	

8. To change the numbers on the dice click on the first cell and then holding the left mouse button down drag to the bottom right hand cell. Once you have all the dice selected, when you click any dice they will all roll new numbers.	
9. We are now going to use the computer to count how many times each number was rolled. You need to add in all the possible numbers into the cells below the dice.	
Details and Explanations:	**Screenshots:**

10. We can use the "How Many" tool to automatically count how many times each number appears. Click on the cell to the right of each number and then click the count button. The "how many" tool can be found in the control section of the toolbar. The "how many" tool must be put on the right-hand side of the variables it should be counting. Re-colour the cells that display the result to green; this improves accuracy for the count tool.	
11. Looking at your answers, investigate various mathematical scenarios. Is this answer correct if we change the numbers rolled? **To re-roll all 100 dice at once, select the dice area and then click on one of the dies.**	Further Questions: **Q** How likely is it we will roll a 4? **Q** How likely we will roll a 0? **Q** How likely is it we will roll a 7? **Q** Are we more likely to roll an odd or an even number?