Lab sheet: Monoculture vs. Polyculture

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Materials needed	· a standard six-sided die · six groups of six to eight matching-coloured pieces. Each group of pieces must be a different colour (i.e. coloured beads, small building blocks, coloured candy pieces, etc.) · a piece of paper to draw your two "farms" on · something to write with (like a pen or pencil) · the handout called "Experiment Scenarios"
Hypothesis – what do you think will happen?	

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Procedure	On the piece of paper, draw two identical large rectangles. Label one "Monoculture Farm" and the other "Polyculture Farm". Separate all your pieces into groups of matching colours and place them around the piece of paper. Each colour will represent a species of plant. To begin, place six pieces of one colour in your "Monoculture Farm" rectangle (i.e. all red pieces). In your "Polyculture Farm" rectangle, place six pieces that are each a different colour (Note: do not use the same colour as you did in the Monoculture Farm! Choose six NEW colours). Roll your die. Starting at scenario #1 on your handout called "Experiment Scenarios", compare the number that you rolled to the instructions listed under scenario #1 to know what actions to perform in each of your farms. If you roll an exact match of a number listed, roll again!

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Procedure	Keep rolling and performing the actions listed under each scenario until you have completed all eight scenarios. Record your final results and any observations made throughout the experiment. Consider repeating the entire experiment at least 3 times and compare the overall results.
Observations *Remember observations can be recorded with pictures, numbers and/or words!	**Monoculture** · The number of crops at the end of Experiment 1 = · The number of crops at the end of Experiment 2 = · The number of crops at the end of Experiment 3 = **Polyculture** · The number of crops at the end of Experiment 1 =

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Observations *Remember observations can be recorded with pictures, numbers and/or words!	· The number of crops at the end of Experiment 2 = · The number of crops at the end of Experiment 3 = Other observations:
Conclusions	· Which method of farming yielded the most crops: monoculture or polyculture? · Explain why you think this occurred.