Name: _____ Block: _____

Science 9 - Chapter 10.3: Cells in Series and Parallel

For the following arrangements, predict the potential difference (voltage) across the cells. Then, build the circuit and use a voltmeter to measure the potential difference.
*** note: remember that the voltmeter must be connected in parallel to the circuit element being measured ***

Part A: Cells connected in series

Number of cells connected in **series**	Circuit Diagram	Prediction: Potential difference (voltage) across the cell(s)	Measured with a voltmeter: Potential difference (voltage) across the cell(s)
1			
2			
3			
6			//do not build this circuit//

State and explain the rule for determining the potential difference across cells that are connected in series:

Name: _____ Block: _____

Part B: Cells connected in parallel

Number of cells connected in **parallel**	Circuit Diagram	Prediction: Potential difference (voltage) across the cell(s)	Measured with a voltmeter: Potential difference (voltage) across the cell(s)
1			
2			
3			
6			//do not build this circuit//

State and explain the rule for determining the potential difference across cells that are connected in parallel:

Name: _____ Block: _____

Part C: Combination circuit: Cells connected in series and parallel

Circuit Diagram	Prediction: Potential difference (voltage) across the cell(s)	Measured with a voltmeter: Potential difference (voltage) across the cell(s)
2 cells in parallel, connected in series to a single cell		
2 cells in parallel, connected in series to another group of 2 cells in parallel		

State and explain the rule for determining the potential difference across cells that are connected in series and in parallel:

Name: _____ Block: _____

Complete the following questions from the textbook:

Chapter 10.3 --- Page 314 # 6 to 12