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| **Prac4**  **Physics Practical** | | | |
|  | P:\Drayton Logo\Drayton Manor logo filled 2014.JPG**Y12 Core Practical**  **EMF & Internal Resistance** | | |
| Skills Assessed | | Met? |
| 2. Applies investigative approaches and methods when using instruments and equipment | a. Correctly uses appropriate instrumentation, apparatus and materials (including ICT) to carry out investigative activities, experimental techniques and procedures with minimal assistance or prompting. |  |
| b. Carries out techniques or procedures methodically, in sequence and in combination, identifying practical issues and making adjustments when necessary. |  |
| c. Identifies and controls significant quantitative variables where applicable, and plans approaches to take account of variables that cannot readily be controlled. |  |
| d. Selects appropriate equipment and measurement strategies in order to ensure suitably accurate results. |  |
| 3. Safely uses a range of practical equipment and materials | a. Identifies hazards and assesses risks associated with these hazards, making safety adjustments as necessary, when carrying out experimental techniques and procedures in the lab or field. |  |
| b. Uses appropriate safety equipment and approaches to minimise risks with minimal prompting. |  |
| 4. Makes and records observations | a. Makes accurate observations relevant to the experimental or investigative procedure. |  |
| b. Obtains accurate, precise and sufficient data for experimental and investigative procedures and records this methodically using appropriate units and conventions. |  |
| 5. Researches, references and reports | a. Uses appropriate software and/or tools to process data, carry out research and report findings. |  |
|  | b. Cites sources of information demonstrating that research has taken place, supporting planning and conclusions |  |

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| Introduction | |
| In this investigation you will determine the EMF and internal resistance of electric cells and batteries by measuring the variation of the terminal pd of the cell with current in it. | |
| Equipment   * Battery pack * Low voltage variable DC supply * Ammeter * Voltmeter * Crocodile clips * Connecting leads * Variable Resistor * Rheostat * 6V bulb | Method  You need to plan a method that will provide sufficient, valid data, to find a value for the EMF and the internal resistance of the power supply ***using a graphical method*** |
| Relevant equation:  E = V + Ir  E = I (R + r) | |