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| **Prac5****Physics Practical** |
|  | P:\Drayton Logo\Drayton Manor logo filled 2014.JPG**Y12 Core Practical****Interference & Diffraction** |
| 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. |  |
| 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.  |  |
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| Introduction |
| In this investigation you will look into determining the wavelength of a coherent source by examining interference and diffraction, including the Young’s slit experiment and interference by a diffraction grating.  |
| Equipment* Small laser
* Retort stand
* Boss clamp
* White screen
* Diffraction Grating
* Young’s Slits
* Ruler
* Metre ruler
* Vernier Calipers
 | MethodYou will need to research and plan ***two*** methods that will provide sufficient, valid data to find a value for the wavelength of the laser. You will be expected to use a ***graphical method*** for the Young’s Slits, but ***not*** for the diffraction grating.  |
| Relevant equations;$w=\frac{λD}{s}$ and $nλ=d\sin(θ)$ |