**Practical Endorsement – skills log** Name:

**Activity – PAG2.2 Springs in series and parallel**

|  |  |  |  |
| --- | --- | --- | --- |
| **1.2.1 Practical skills assessed** | | | |
|  | **Detail** | **Achieved** | **Date** |
| (b) | Safe and correct use of equipment and materials |  |  |
| (c) | Follow written instructions |  |  |
| (d) | Make and record observations/measurements |  |  |
| (f) | Present information and data in a scientific way |  |  |
| **1.2.2 Use of apparatus and techniques** | | | |
| (a) | Use appropriate analogue apparatus… |  |  |
| (b) | Use appropriate digital instruments… |  |  |
| (c) | Use methods to increase accuracy of measurements…. |  |  |
| **Skill Focus** | | | |
|  | Write up to include:  Explanation linking graph to equations and how gradient used to calculate strain for single spring |  |  |
|  | Error bars completed accurately for springs in series experiment. |  |  |
|  | Line of best and worst fit drawn and used appropriately to determine uncertainty in strain |  |  |
|  | Explanation of choice of graph to show relationship for springs in parallel |  |  |

**Practical Endorsement – skills log** Name:

**Activity – PAG2.2 Springs in series and parallel**

|  |  |  |  |
| --- | --- | --- | --- |
| **1.2.1 Practical skills assessed** | | | |
|  | **Detail** | **Achieved** | **Date** |
| (b) | Safe and correct use of equipment and materials |  |  |
| (c) | Follow written instructions |  |  |
| (d) | Make and record observations/measurements |  |  |
| (f) | Present information and data in a scientific way |  |  |
| **1.2.2 Use of apparatus and techniques** | | | |
| (a) | Use appropriate analogue apparatus… |  |  |
| (b) | Use appropriate digital instruments… |  |  |
| (c) | Use methods to increase accuracy of measurements…. |  |  |
| **Skill Focus** | | | |
|  | Write up to include:  Explanation linking graph to equations and how gradient used to calculate strain for single spring |  |  |
|  | Error bars completed accurately for springs in series experiment. |  |  |
|  | Line of best and worst fit drawn and used appropriately to determine uncertainty in strain |  |  |
|  | Explanation of choice of graph to show relationship for springs in parallel |  |  |

**Practical Endorsement – skills log** Name:

**Activity – PAG2.2 Springs in series and parallel**

|  |  |  |  |
| --- | --- | --- | --- |
| **1.2.1 Practical skills assessed** | | | |
|  | **Detail** | **Achieved** | **Date** |
| (b) | Safe and correct use of equipment and materials |  |  |
| (c) | Follow written instructions |  |  |
| (d) | Make and record observations/measurements |  |  |
| (f) | Present information and data in a scientific way |  |  |
| **1.2.2 Use of apparatus and techniques** | | | |
| (a) | Use appropriate analogue apparatus… |  |  |
| (b) | Use appropriate digital instruments… |  |  |
| (c) | Use methods to increase accuracy of measurements…. |  |  |
| **Skill Focus** | | | |
|  | Write up to include:  Explanation linking graph to equations and how gradient used to calculate strain for single spring |  |  |
|  | Error bars completed accurately for springs in series experiment. |  |  |
|  | Line of best and worst fit drawn and used appropriately to determine uncertainty in strain |  |  |
|  | Explanation of choice of graph to show relationship for springs in parallel |  |  |

**Practical Endorsement – skills log** Name:

**Activity – PAG2.2 Springs in series and parallel**

|  |  |  |  |
| --- | --- | --- | --- |
| **1.2.1 Practical skills assessed** | | | |
|  | **Detail** | **Achieved** | **Date** |
| (b) | Safe and correct use of equipment and materials |  |  |
| (c) | Follow written instructions |  |  |
| (d) | Make and record observations/measurements |  |  |
| (f) | Present information and data in a scientific way |  |  |
| **1.2.2 Use of apparatus and techniques** | | | |
| (a) | Use appropriate analogue apparatus… |  |  |
| (b) | Use appropriate digital instruments… |  |  |
| (c) | Use methods to increase accuracy of measurements…. |  |  |
| **Skill Focus** | | | |
|  | Write up to include:  Explanation linking graph to equations and how gradient used to calculate strain for single spring |  |  |
|  | Error bars completed accurately for springs in series experiment. |  |  |
|  | Line of best and worst fit drawn and used appropriately to determine uncertainty in strain |  |  |
|  | Explanation of choice of graph to show relationship for springs in parallel |  |  |