



General Certificate of Secondary Education
2021

Physics

Unit 3A: Practical Skills

Booklet A

Foundation Tier

[GPY31]

APPARATUS AND MATERIALS LIST AND CONFIDENTIAL INSTRUCTIONS

To be accessed by Head of Department only

It is the responsibility of the centre to ensure that appropriate risk assessments are carried out for all practical skills assessments.

Experiment 1 Extension of a spring

Apparatus and Materials List

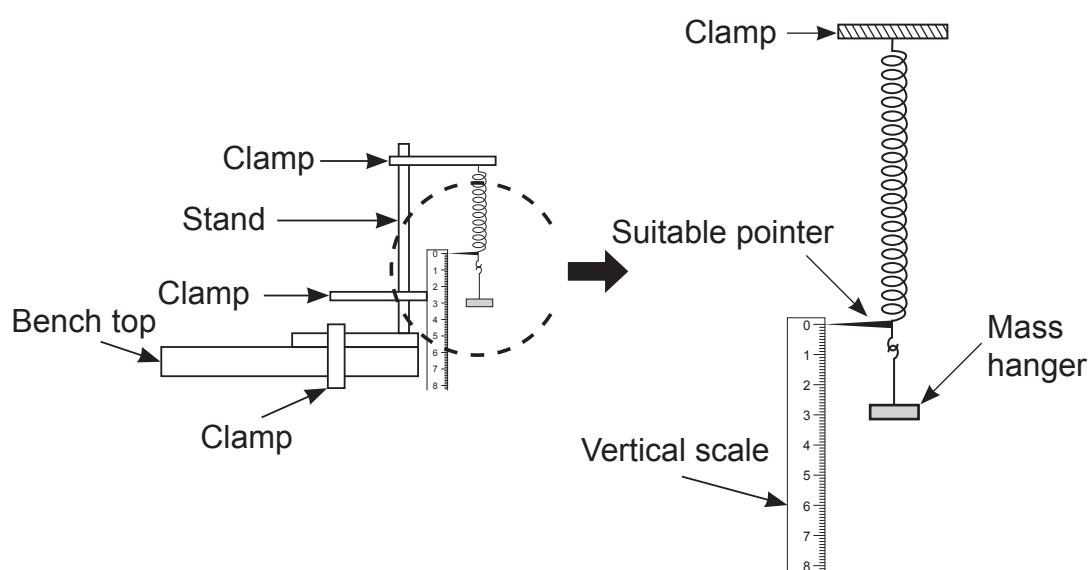
- Helical spring, Timstar p 13863 Spring 20 × 16 mm (Pack of 100)
- A 100 g mass hanger permanently attached to the spring so that students cannot remove. Any markings on the hanger should be covered
- 5 × 100 g masses – **each should be clearly marked as 1 N**
- Metre rule with 1 mm divisions. If the metre rule has divisions on two sides then one side should be covered with tape.
- Retort stand and clamp
- Suitable pointer, e.g. optical pin attached using blutac as shown in the diagram below.
- Safety glasses if deemed appropriate by the school.

Instructions to the teacher

The apparatus shown below should be set up prior to the student using it.

Teachers should ensure that the base of the spring is in line with the 0 cm mark on the ruler.

It is the responsibility of the school to ensure appropriate Health and Safety measures are followed by pupils undertaking this task.



Supervision of the Practical

Skills Assessment

Up to 30 minutes collecting results, with the students working individually or collectively in a group of maximum size three.

Then 30 minutes with all students working individually under full examination conditions with a high level of control to complete the booklet.

Experiment 2 Refraction of Light

Apparatus and Materials List

- A suitable power supply
- Rectangular plastic or glass block
- Ray box to shine a single light ray
- A4 sheet with a range of angles marked (Page 4)
- Pencil
- Protractor
- Transparent ruler

Instructions to the teacher

Connect power supply to ray box only.

Supervision of the Practical Skills Assessment

Up to 30 minutes collecting results, with the students working individually or collectively in a group of maximum size three.

Then 30 minutes with all students working individually under full examination conditions with a high level of control to complete the booklet.

