

Surname	Centre Number	Candidate Number
First name(s)		0



GCSE



S25-3430U70-1E

MONDAY, 6 JANUARY – FRIDAY, 21 FEBRUARY 2025

SCIENCE (Double Award) – Unit 7 (3430U70)

PRACTICAL ASSESSMENT

**INVESTIGATING THE EFFECT OF DROP HEIGHT
ON THE SIZE OF AN IMPACT CRATER**

SECTION A

1 hour

For Examiner's use only		
	Maximum Mark	Mark Awarded
Section A	6	

ADDITIONAL MATERIALS

A calculator.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

You may use a pencil for graphs and diagrams only.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. If you run out of space, use the additional page(s) at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The total number of marks available for this section of the task is 6.

The number of marks is given in brackets at the end of each question or part-question.

This task is in 2 sections, **A** and **B**. You will complete Section **A** in one lesson and Section **B** in the next science lesson.



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Introduction

Your task is to investigate the effect of drop height on the diameter of an impact crater.

Apparatus Required

The following apparatus is required for each group: (each group should consist of no more than three candidates).

- 1 × small steel ball
- 1 × clamp and stand
- 1 × metre ruler
- 1 × tray containing dry sand
- 1 × 30 cm ruler

Diagram



Read the method and answer questions 1.(a) and 1.(b) before carrying out the experiment and recording your results.

Method

1. Clamp the metre ruler into the clamp and stand. Place the 0 cm end of the metre ruler on top of the sand inside the tray.
2. Hold the ball level with the 20 cm mark on the metre ruler, above the middle of the tray.
3. Drop the ball into the middle of the tray.
4. Use the 30 cm ruler to measure the diameter of the crater made by the ball. Record this value.
5. Use the 30 cm ruler to smooth over the sand.
6. Repeat steps 2–5 two more times to get three results in total.
7. Repeat steps 2–6 for drop heights of 40 cm, 60 cm, 80 cm and 100 cm.



SECTION AAnswer **all** questions.

1. (a) State a hypothesis for this experiment. [1]

.....

.....

- (b) Complete the risk assessment below for this experiment. [1]

HAZARD	RISK	CONTROL MEASURE

You may record raw results in the space below.



(c) Present your results in a table. Include all of your results.

[4]

Examiner
only

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