

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use Total Task 1



General Certificate of Education  
Advanced Level Examination  
June 2010

## Biology

## BIO6X/PM1

**Unit 6X A2 Externally Marked Practical Assignment  
Task Sheet 1**

**To be completed before Task Sheet 2.**

**For submission by 15 May 2010**

**For this paper you must have:**

- a ruler with millimetre measurements
- a calculator.

### Task 1

You will measure the size of lettuce seedlings.

### Materials

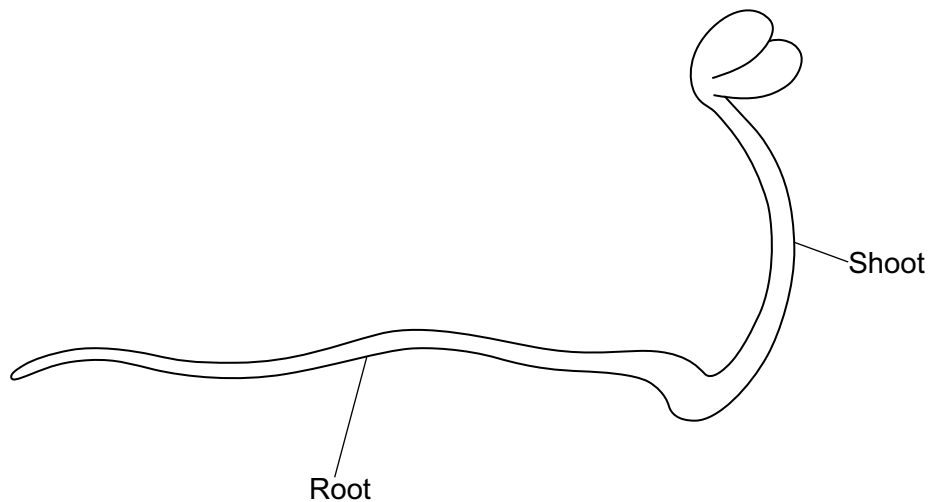
You are provided with the following

- lettuce seedlings that are three days old
- ruler with millimetre measurements
- pair of forceps
- method of generating random numbers

You may ask for any other apparatus you need.

### Outline method

**Read these instructions carefully before you start your investigation.**



Select and measure **one** aspect of size for 10 seedlings.

You should select seedlings to measure in a way that ensures your results are reliable and representative.

**Recording your results**

You should record your data in this table. Put an appropriate heading in the second column.

You will complete the third column later in Question 4.

<b>Seedling number</b>		<b>Running mean</b>
<b>1</b>		
<b>2</b>		
<b>3</b>		
<b>4</b>		
<b>5</b>		
<b>6</b>		
<b>7</b>		
<b>8</b>		
<b>9</b>		
<b>10</b>		

Turn over ►

**Questions on Task 1**

Answer **all** questions in the spaces provided.

**1** Which aspect of size did you choose to measure? Explain why.

.....  
.....  
*(1 mark)*

**2 (a)** Describe how you selected the seedlings you measured.

.....  
.....  
.....  
.....  
*(2 marks)*

**2 (b)** Explain the reason for selecting the seedlings in this way.

.....  
.....  
*(1 mark)*

**3** Give **one** problem that you encountered in obtaining accurate measurements. Explain how you overcame this problem.

.....  
.....  
.....  
.....  
*(2 marks)*

**4** The running mean is a mean which is recalculated each time you have taken a measurement.

**4 (a)** Use the values you have collected to calculate the running mean for your data. Record these data in the third column of the table on page 3. (1 mark)

**4 (b)** A representative sample is required. This can be achieved by determination of the running mean of a sample. Suggest how.

.....  
.....

(1 mark)

8
---

**END OF TASK 1**

**There are no questions printed on this page**

**DO NOT WRITE ON THIS PAGE  
ANSWER IN THE SPACES PROVIDED**

**There are no questions printed on this page**

**DO NOT WRITE ON THIS PAGE  
ANSWER IN THE SPACES PROVIDED**

**There are no questions printed on this page**

**DO NOT WRITE ON THIS PAGE  
ANSWER IN THE SPACES PROVIDED**