**AQA Biology- *SEP ONLY PRAC***

**Required Practical 8- Plant Response**

**Method**

1. Set up three petri dishes containing cotton wool soaked in equal amounts of water
2. Put 10 mustard seeds in a petri dish
3. Put petri dish in a warm place. They must not be disturbed or moved
4. Allow the mustard seeds to germinate

Each petri dish should have the same number of seedlings.

1. Move the petri dishes into position

* 1 should be placed on a windowsill
* 1 should be placed in partial light
* The third should be placed in darkness

1. Measure the height of each seedling. Do this every day for at least a week.

**Glossary**

Auxin

Phototropism

Gravitropism

Stimulus

**Task- *Use diagrams and words to show how auxins lead to elongation at the shoot, in response to light.***

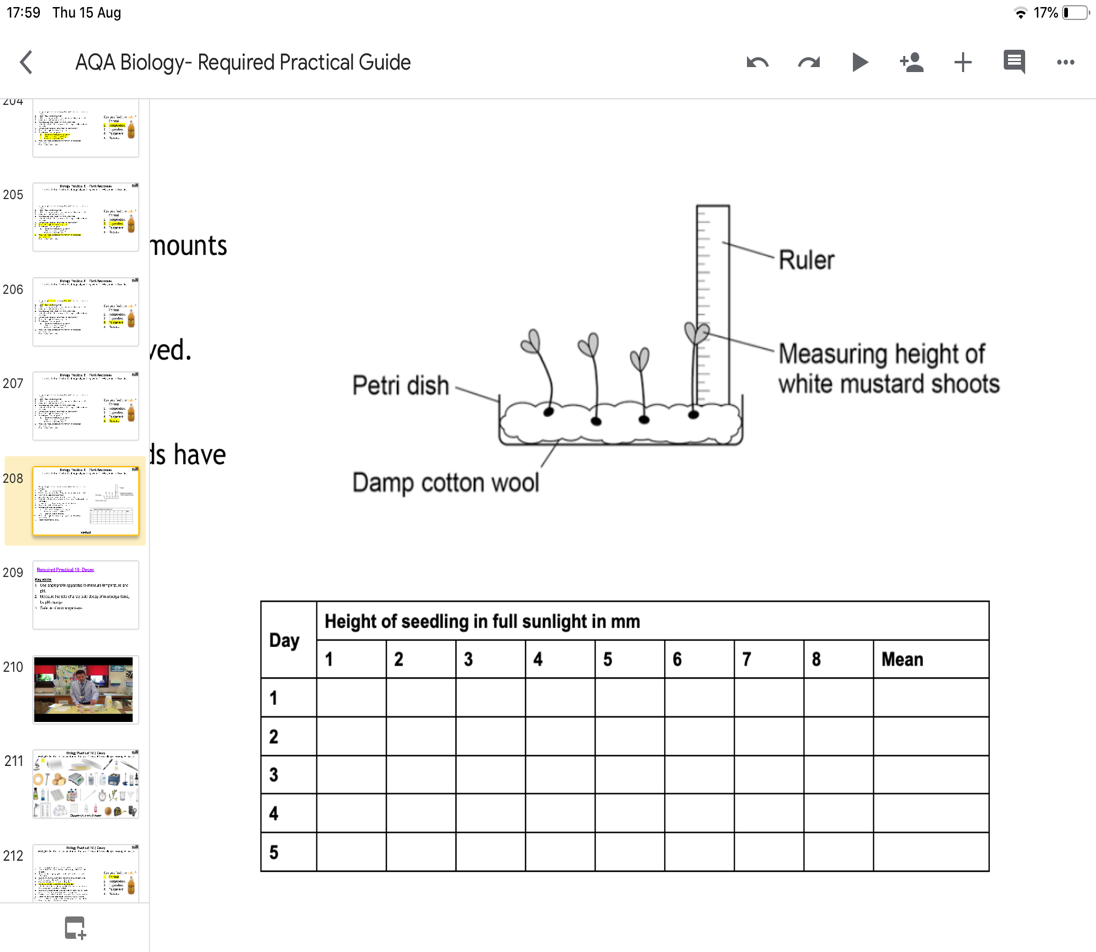
If a plant is lay on its side, why do the roots grow down and the stem grow up?

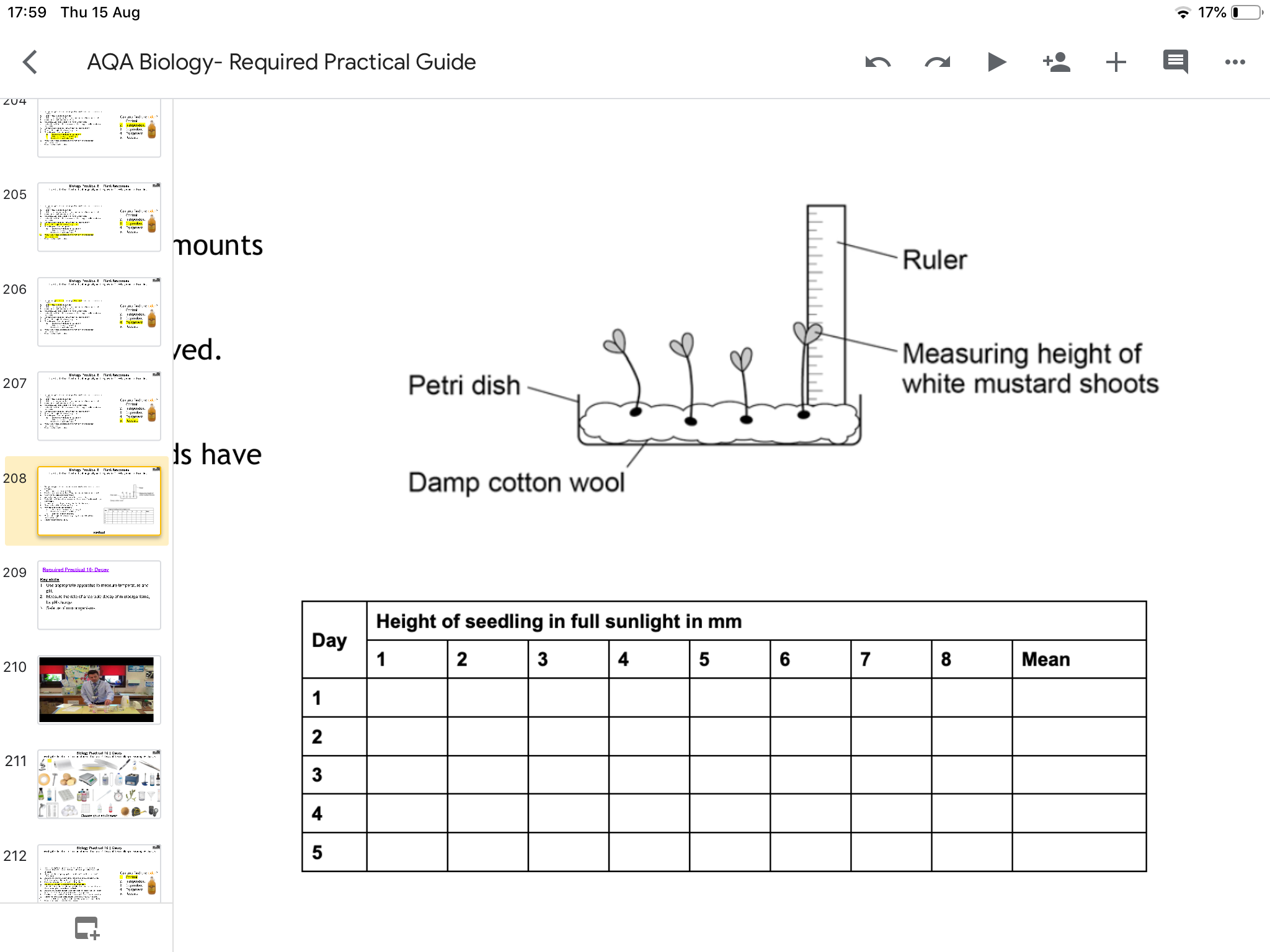
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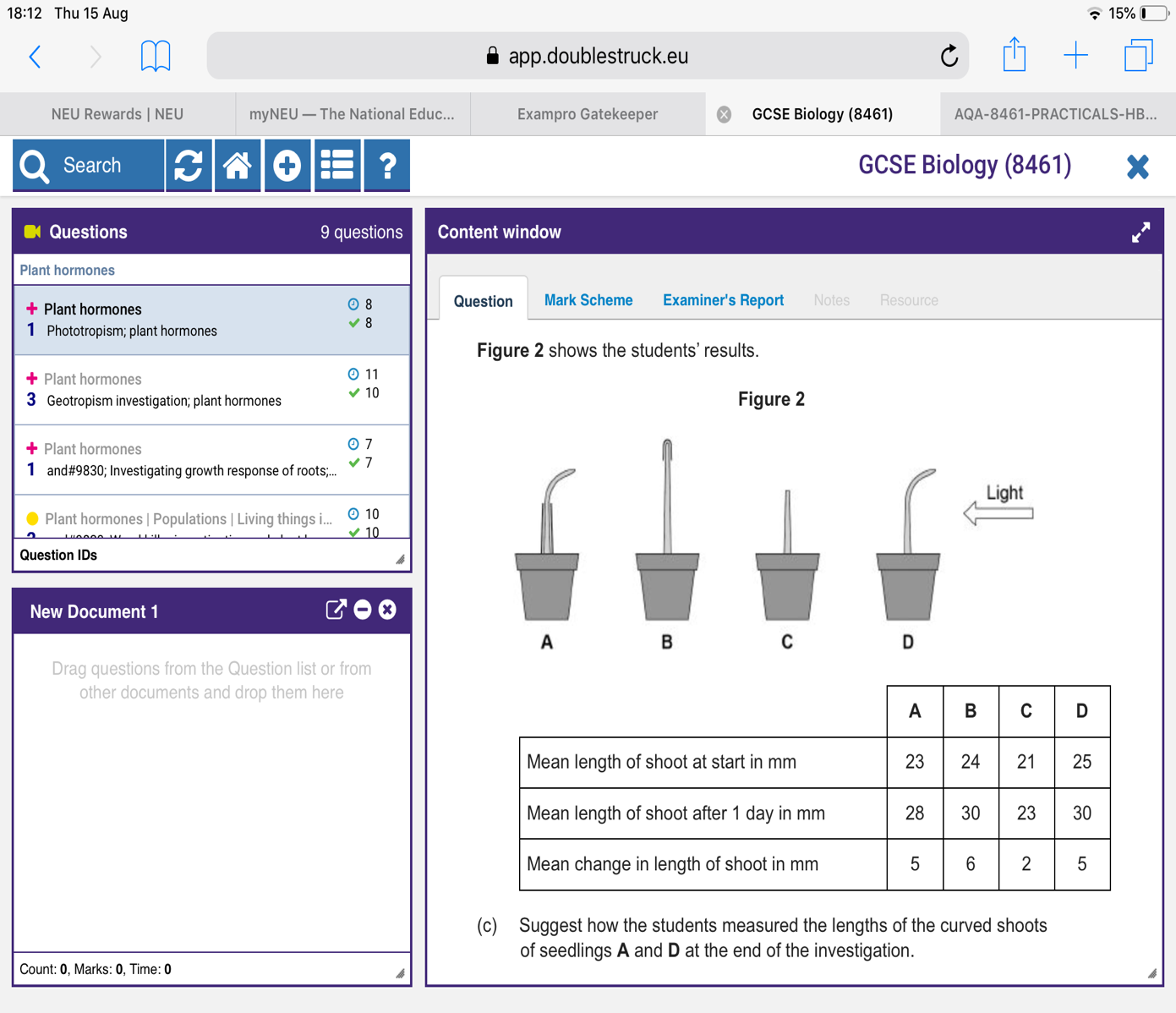
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***Aims***

* To investigate the effect of light or gravity on the growth of newly germinated seedlings.
* To use appropriate apparatus to measure length and time.
* To make safe and ethical use of plants to measure response to light or gravity.



**Results**

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**Exam Practice**

Some students investigated phototropism in plant seedlings.

They set up four groups of seedlings as follows:

•   **A − bottom of shoot covered in aluminium foil**

**•   B − tip covered in aluminium foil**

**•   C − tip removed**

**•   D − no changes.**

Suggest how the students measured the lengths of the curved shoots of seedlings A and D at the end of the investigation. (2 marks)

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The students concluded that the tip of the shoot is needed for the plant to respond to light.

Give evidence for this conclusion from Figure 2. (2 marks)

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