Name: Date: Block:

**Design Your Own Experiment: Answer Key**

Design an experiment for the given question. How can you test this question? What things will you need to carry out the experiment? Be sure to include all of your variables, as well as how to account for your controlled variables.

**Your Question:**

How much sunlight is needed for a plant to grow the best?

**Independent Variable – Amount of Sunlight (sunlight – 0.5 marks)**

**Dependent Variable – Height of the Plant (plant – 0.5 marks)**

**Controlled Variables – Pot Size, Soil type/amount, amount of water given each day, Type of plant, initial size of plant, time of day each plant was watered, temperature of water used**

**(only writing down the item you are controlling, not HOW you are controlling it will result in only part marks)**

**Step 1 – put 3 identical plants, all of the same initial height and type, into 3 identical pots.**

**Step 2 – Add 2 cups of the potters soil to each plant.**

**Step 3 – Put one plant in direct sunlight, one plant in partial sunlight and one plant in the shade.**

**Step 4 – Water each plant with 250mL of room temperature (20 degree) tap water at 8:00 AM**

**Step 5 – Repeat step 4 for seven consecutive days.**

**Step 6 – Measure the height of the plants from base of the stem to the top of the stem and record the results**

**(writing down that you added soil, but not HOW MUCH will result in only part marks)**

**Or**

**Measure the height of each plant, from base of stem to top of stem on day 1 and record the results**

**Measure height of each plant again after the experiment and record the results.**

**Subtract the starting height from the new height to calculate how much each plant has grown.**

* **This would be a better experiment, because you could start with plants of the same age, but they do not have to be of the same height.**
* **Even better, use 9 plants, and put 3 in each area. Use the average heights.**