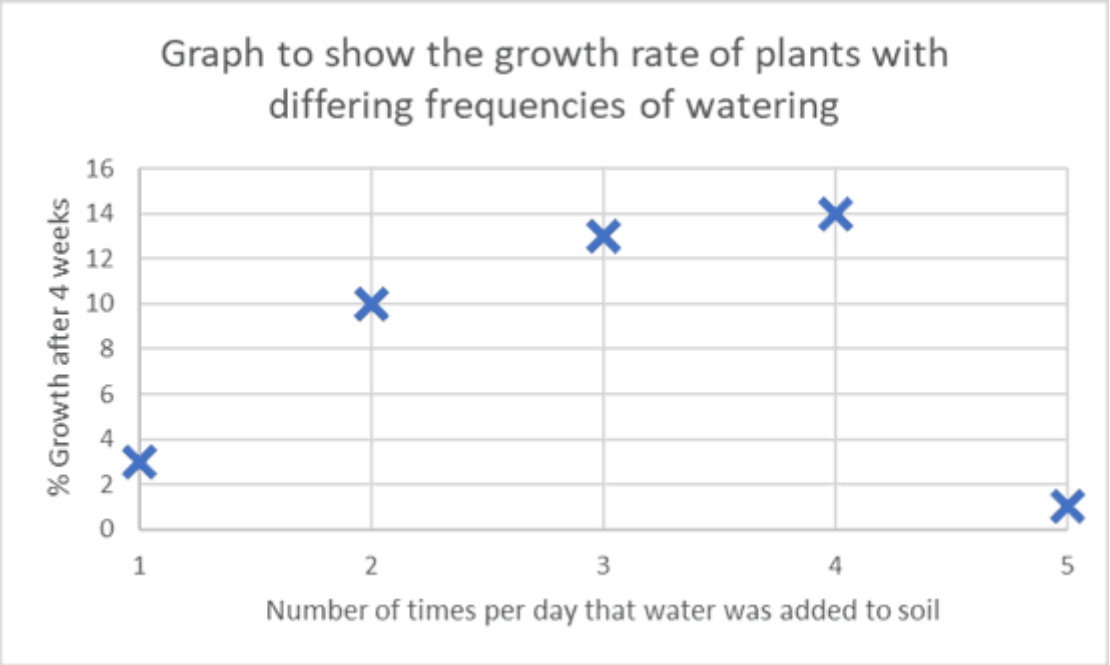
4.1.3.(2-3) Osmosis & Active Transport - Exam style question

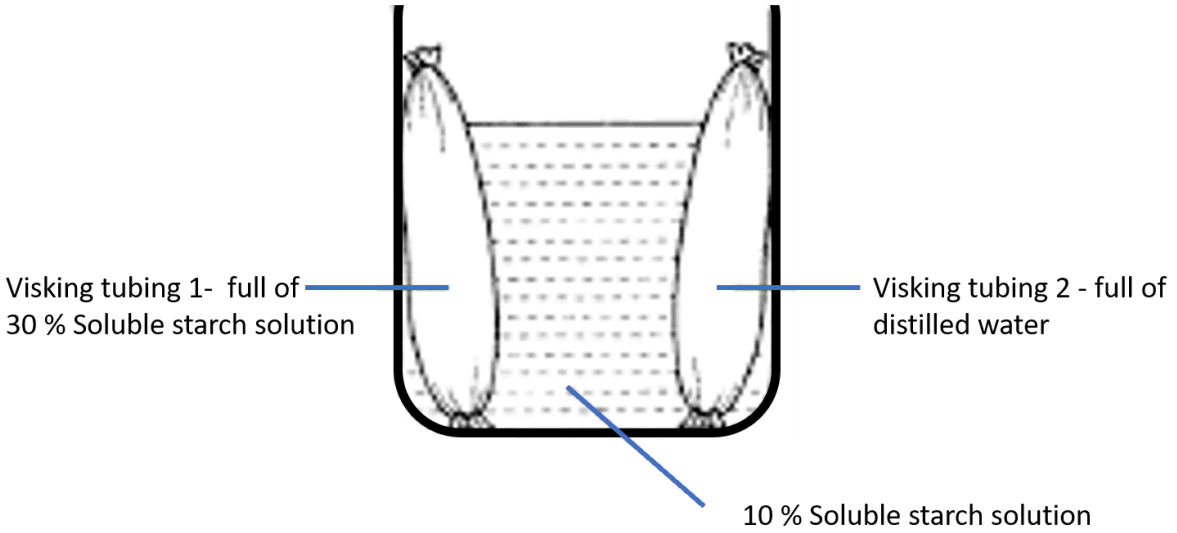
Q1) A student did an experiment to see the effect of watering on the growth rate of garden plants. All other variables were carefully controlled. The experiment was also carried out by other students and produced very similar results.



Suggest a reason for the results for the plant watered five times per day. (*4 marks*)

4.1.3.(2-3) Osmosis & Active Transport - Exam style question

Q2) Students set up an experiment to investigate osmosis. Into a beaker of 10% glucose solution they placed two equal sized bags of semi-permeable dialysis tubing (visking tubing) filled with different concentrations of glucose solution and tied at both ends . (*4 marks*)



a) Describe and explain the results they will collect after one hour. (4 marks)

b) Describe two examples in living things where osmosis is used. (2 marks)

4.1.3.(2-3) Osmosis & Active Transport - Exam style question

Check the grade descriptors (unofficial) for this area of the specification. They are only a rough guide and can be difficult to interpret, but knowledge is power! https://sites.google.com/view/learnfix-glossary/grade-descriptors

4.1 Cell Biology

8-9	6-7	4-5	2-3	1
Fully describe the structure of eukaryotes and prokaryotes and explain the function of their components	Describe in detail the structure of eukaryotes and prokaryotes and Briefly explain the function of their components	Describe the structure of eukaryotes and prokaryotes and identify their components	Basically describe the structure of eukaryotes and prokaryotes and state their components	State the difference between eukaryotes and prokaryotes
Fully describe the structure of generalised animal and plant cells and explain the function f their components	Describe in detail the structure of animal and plant cells and Briefly explain the function of their components	Describe the structure of generalised plant and animal cells and identify their components	Basically describe the structure of generalised plant and animal cells and state their components	Identify the basic structure of generalised plant and animal cells
Explain how animal and plant cells are specialised	Briefly explain how animal and plant cells are specialised	Describe the adaptations of specialised animal and plant cells	Basically describe the adaptations of specialised animal and plant cells	State examples of specialised cells
Fully describe the differences between light and electron microscopes	Describe in detail the differences between light and electron microscopes	Describe the differences between light and electron microscopes	Basically describe the differences between light and electron microscopes	Label a diagram of a light microscope
Explain how DNA is arranged in chromosomes and genes	Briefly explain how DNA is arranged in chromosomes and genes	Describe how DNA is arranged in chromosomes and genes and the structure of DNA	Basically describe the arrangement of DNA in chromosomes and genes and the structure of DNA as a double helix	State that the structure of DNA is a double helix
Fully describe the process of mitosis and explain its part in the cell cycle	Briefly explain the process of mitosis and its part in the cell cycle	Describe the process of mitosis and its part in the cell cycle	Basically describe the process of mitosis	State that mitosis produces identical body cells
Explain the potential uses of stem cells	Briefly explain the potential uses of stem cells	Describe the potential uses of stem cells	Basically describe the potential uses of stem cells	Uses of stem cells – Not examined at this level
Fully describe the process of diffusion and explain how factors limit it	Briefly explain the process of diffusion and describe how factors limit it	Describe the process of diffusion and describe how factors limit it	Basically describe the process of diffusion	Define the process of diffusion
Fully describe the process of osmosis and explain how factors limit it	Briefly explain the process of osmosis and describe how factors limit it	Describe the process of osmosis and describe how factors limit it	Basically describe the process of osmosis	The process of osmosis – Not examined at this level
Fully describe the process of active transport and explain how factors limit it	Briefly explain the process of active transport and describe how factors limit it	Describe the process of active transport and describe how factors limit it	Basically describe the process of active transport	The process of active transport – Not examined at this level