المرحلة الثانية

الفصل الدراسي الأول

مادة فسلجة نبات

Delivery Plan (Weekly Syllabus)	
Week	**Material Covered**
Week 1	**The plant cell, its components, functions, and characteristics.**
Week 2	**Types of solutions, their concentrations, solute and solvent, acids, Alkalines, and salts.**
Week 3	**Diffusion and osmotic**
Week 4	**Water potential, imbibition and permeability**
Week 5	**The importance of water – physical properties – ways of absorbing water**
Week 6	**Nutrient absorption**
Week 7	**The rise of plant succulents**
Week 8	**Transpiration – Estimating the coefficient and rate of transpiration – The mechanism of opening and closing stomata**
Week 9	**Transport by phloem – components of phloem tissue – the most important transported materials – theories of transport**
Week 10	**The process of photosynthesis, the source of the oxygen molecule – light reactions**
Week 11	**Dark reactions phase (methods of CO2 fixation) C3 plants and C4 plants and factors affecting the photosynthesis process.**
Week 12	**The process of respiration – importance – the first stage of respiration and the formation of pyruvic acid**
Week 13	**The Krebs cycle, the electron transport chain, and calculating the resulting energy**
Week 14	**Energy transfer in green leaves, stomata)**
Week 15	**Growth regulators – types – importance and applications**
Week 16	**Show scientific films**

فسلجة نبات عملي

Delivery Plan (Weekly Lab. Syllabus)	
week	**Material Covered**
Week 1	**Learn about Laboratory equipment and solutions preparation**
Week 2	**Microscopy and cell examination – using an optical microscope – types of microscopes**
Week 3	**Detection of some substances in the cell such as carbohydrates, proteins and oils – how to separate some parts of the cell such as the nucleus and mitochondria**
Week 4	**Experiments on applying the rules of diffusion, membrane permeability and imbibition**
Week 5	**Explaining osmosis, osmotic pressure, and plasma**
Week 6	**Experiments showing water transport in wood and root pressure**
Week 7	**Study of stomata and the process of transpiration**
Week 8	**Explain the process of phloem transport**
Week 9	**Study of the photosynthesis apparatus**
Week 10	**The relationship of vegetative growth to light and leaf area measurement**
Week 11	**Detecting the presence of starch resulting from the photosynthesis process in leaves**
Week 12	**Extraction and estimation of plant pigments**
Week 13	**Some experiments indicating the process of respiration in plants**
Week 14	**The most important applications of growth regulators in agriculture**
Week 15	**Practicing the process of plant tissue culture in vitro**
Week 16	**Exam**