Grade 11 Biology – Mid term test Revision list

You will need your textbook to complete the following work. If you do not have your textbook or the ebook version from the front of your textbook, then use the following link to help https://www.bbc.co.uk/bitesize/examspecs/zcq2j6f

You need to draw a poster, make a powerpoint or some other review materials on the following topics.

Topic	Textbook page number	Notes
Oxygen demand based on surface area and volume	P.71	Demand = surface area/volume
Circulatory systems of different animals	P.71-72	Difference between single and double circulatory systems. Difference between pulmonary and systemic circulations.
Anatomy of the heart.	P.73-74	Know the structures of the heart, what they do, and what makes them different from other structures. (Valves, atria, ventricles, septum, arteries, veins)
Coronary circulation and disease.	P.74-75	What is the function of the coronary arteries, what is coronary heart disease (CHD), and what factors increase chances of CHD
Heart rate	P.75-76	Normal rate. What happens to heart rate during exercise and why. Affect of adrenaline on heart rate. Know that the medulla (part of the brain) can change heart rate based on respiration needs in producing energy for the body.
Vessels: arteries, veins, and capillaries	P.76-77	Arteries carry blood away from heart. Veins carry blood to the heart and have valves. Capillaries link arteries to veins and is where nutrient exchange occurs. Also know why there is a difference in structure of these vessels (thickness).
Composition of blood	P.78	Understand that blood is the transport medium and be able to break it down into its components (plasma, RBC's, WBC's, and platelets)
Red blood cells	P.78-79	Structure (shape), function, no nucleus, and haemoglobin.

White blood cells	P.79	Functions: phagocytosis and antibody production to fight against disease. Understand the 4 different ways antibodies react with antigens to destroy the pathogen.
Transport in single and multicellular organisms.	Information provided in class	Single: passive transport, why? Multi: active transport, why?
Transport in plants and RBC's	P.154-156	Understand osmosis and why water moves into or out of cells. Be able to explain turgid, flaccid, plasmolyzed.
Transport in xylem and phloem	P.160	Be able to explain that transport in xylem is one-way (**transpiration**). Define lumen. Know what lignin is. Be able to explain that transport in phloem is both-ways (**translocation**). Know what sieve plates and companion cells are.
Factors affecting transpiration and transpiration rate.	P.162	Know the 4 factors affecting transpiration.