

Cells to Systems (BBL6) – Revision Checklist

I can...	Lesson	Revised
State that cells are the basic building blocks of all living organisms	BBL6 LE1	
Describe the structure of animal cells	BBL6 LE1	
Describe the structure of plant cells	BBL6 LE1	
Describe the structure of bacterial cells (prokaryotes)	BBL6 LE1	
Compare eukaryotic and prokaryotic cells	BBL6 LE1	
Explain how sub-cellular structures are adapted to their function	BBL6 LE1	
Recall typical sizes of cells and sub-cellular structures	BBL6 LE2	
Convert units (mm, $\mu\text{m}$ , nm)	BBL6 LE2/3	
Use standard form	BBL6 LE2/3	
Make order of magnitude comparisons	BBL6 LE2/3	
Use estimations to judge relative size/area	BBL6 LE2/3	
Calculate magnification using the correct equation	BBL6 LE2/3	
Rearrange the magnification formula	BBL6 LE2/3	
Name the main parts of a light microscope	BBL6 LE3	
Describe how to prepare a slide of plant or animal cells	BBL6 LE3	
Describe how to view a slide under a microscope	BBL6 LE3	
Describe how to measure the size of a cell under a microscope	BBL6 LE3	
Compare light microscopes and electron microscopes	BBL6 LE2	
Explain the difference in magnification and resolution	BBL6 LE2	
Explain how electron microscopy improved understanding of cell structure	BBL6 LE2	
Define cell differentiation	BBL6 LE4	
Explain why cell differentiation is important	BBL6 LE4	
Compare the purpose of cell differentiation in animals and plants	BBL6 LE4	
Explain how specialised cells are adapted to their function	BBL6 LE4	
Describe the organisation of organisms in terms of cells, tissues and organs	BBL6 LE4	
Define a stem cell	BBL6 LE5	
State where stem cells may be found in animals and plants	BBL6 LE5	
Explain that embryonic stem cells can form most cell types	BBL6 LE5	
Explain that adult stem cells can form many cell types (e.g. blood cells)	BBL6 LE5	
Explain that plant meristems can produce any plant cell type	BBL6 LE5	
Describe therapeutic cloning	BBL6 LE5	
Explain why cloned embryonic stem cells may not be rejected	BBL6 LE5	
Describe potential uses of stem cells (e.g. diabetes, paralysis)	BBL6 LE5	
Describe risks (viral infection) and ethical/religious concerns	BBL6 LE5	
Describe ethical and religion concerns of stem cell use	BBL6 LE5	
Explain how plant stem cells can be used	BBL6 LE5	
Describe the heart as a pump in a double circulatory system	BBL6 LE8	
Describe the flow of blood between the heart, lungs and body	BBL6 LE8	
Identify and describe the function of the heart's blood vessels	BBL6 LE8	
Explain how the natural pacemaker controls heart rate	BBL6 LE8	
Describe the role of artificial pacemakers	BBL6 LE8	
Perform simple rate calculations for blood flow	BBL6 LE6	
Compare arteries, veins and capillaries	BBL6 LE7	
Explain how wall thickness, lumen size and valves relates to function	BBL6 LE7	
State that blood is a tissue	BBL6 LE6	
Identify and describe the function of the components of blood	BBL6 LE6	
Recognise blood cells from diagrams/photos	BBL6 LE6	
Explain the adaptations of red and white blood cells	BBL6 LE6	
Identify the different parts of the human respiratory system	BBL6 LE6	

Explain how alveoli are adapted for gas exchange.	BBL6 LE6	
Describe coronary heart disease	BBL6 LE11	
Explain how fatty deposits narrow coronary arteries	BBL6 LE11	
Explain how stents work	BBL6 LE11	
Explain how statins reduce cholesterol	BBL6 LE11	
Describe problems with faulty heart valves	BBL6 LE11	
Compare biological and mechanical valves	BBL6 LE11	
Describe heart and heart-lung transplants	BBL6 LE11	
Evaluate treatments of cardiovascular diseases	BBL6 LE11	
Define health	BBL6 LE9	
Distinguish between communicable and non-communicable diseases	BBL6 LE9	
Explain how diseases can interact	BBL6 LE9	
Describe links between immune defects and infection	BBL6 LE9	
Describe links between viruses and cancer	BBL6 LE9	
Describe links between infection and allergies	BBL6 LE9	
Describe links between physical illness and mental health	BBL6 LE9	
Interpret/draw frequency tables, bar charts, histograms and scatter graphs	BBL6 LE9	
Identify correlations	BBL6 LE9	
Convert between numerical and graphical data	BBL6 LE9	
Discuss human and financial costs of disease	BBL6 LE9	
Define a risk factor	BBL6 LE10	
Explain difference between correlation and cause	BBL6 LE10	
Explain how lifestyle affects disease; diet, smoking, alcohol use, exercise	BBL6 LE10	
Explain that many diseases are caused by multiple interacting factors	BBL6 LE10	