N5 Biology CB1 Cell Structure Learning Outcome Checklist

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| **Lesson** | MC900432651[1] | by the end of each lesson you should know (including meanings of **key words**) |
| **Microscope & making a slide** |  | * a microscope is used to magnify an object so it *appears* larger than it is * more powerful lenses on a microscope let you see less of the whole object but in greater detail * position and function of the following parts of a microscope:   **eyepiece lens, focus wheel, stage, objective lens, handle, clips, mirror / light source**   * to calculate the **total power** of the microscope, **multiply** the **power of the eyepiece** lens by the **power of the objective lens**. * a **stain** is used to show the cell components more clearly and a **coverslip** is used to keep the specimen flat when preparing a slide |
| **Size & Scale** |  | * metres, centimetres are too big for measuring length of microscopic organisms and cells so we need to use smaller **scientific units** i.e **millimetres(mm)**, **micrometres (μm)**, nanometers. * **1000 μm= 1mm**. To convert μm to mm - multiply by 1000 to convert mm to μm- divide by 1000 |
| **Cell Ultrastructure and Functions** |  | * distinguish between the organelles in **plant**, **animal**, **fungal** and **bacterial** cells. * the appearance and function of each of the following cell organelles * **nucleus -**  contains the genetic information of the cell * **cell wall -** supports the cell * **mitochondria –** site of some chemical reactions or Respiration * **chloroplasts –** site of photosynthesis * **cell membrane –**controls what moves into / out of the cell * **cytoplasm –** site of many of the cell’s chemical reactions * **vacuole –**stores sugary solution called sap * **ribosome –** site of protein synthesis * **plasmids –** circular piece of DNA * State that plant cell walls are made of **cellulose**, but fungal and bacterial cell walls are made of **different materials**. |