Cells and Reproduction

<table>
<tr><td colspan="2">1. Microscopes – Microscopes – variety of objects to observe

Option 2 – Teacher demo of light microscope. Pupils use digital microscopes and chromebooks</td></tr>
<tr><td>Teacher Notes</td><td>Technician Notes
Microscopes can be used within same year group bubble – or will need to be quarantined for 72 hours. If necessary, we could also use the KS4 microscopes. Microscopes being used within the same year group bubble must have their eyepieces cleaned using a non-alcohol sanitising wipe, before and after every use.
Items viewed will also need to be left for 72 hours unless required by the same bubble.</td></tr>
<tr><td colspan="2">2. Animals Cells – PVA glue, coloured paper, clear plastic to make animal cells</td></tr>
<tr><td>Teacher Notes</td><td>Technician Notes
Glue bottles will require cleaning after each use. Glue spreaders will need to be washed, soaked in Milton before dishwashing. Consider putting out small plastic trays for each pupil to put their ‘cell’ in to for drying.</td></tr>
<tr><td colspan="2">3. Plant Cells – Microscopes – onion, stain, glass slides.</td></tr>
<tr><td>Teacher Notes</td><td>Technician Notes
Microscopes as Lesson 1.
Iodine bottles can be used within the year group bubble or be quarantined for 72 hours.
Microscope slides should be washed in hot soapy water, soaked in Milton for 15mins before dishwashing.</td></tr>
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4. Specialised Cells
   Bioviewers and range of specialised cells

Teacher Notes	Technician Notes
	Bioviewers can be used within the year group bubble or left for 72 hours. Bioviewer slides - treat as bioviewers.

5. Movement of Substances –
   250 ml beakers, 100 cm^3 measuring cylinder, agar gel cubes with a coloured dye (neutral red or food colouring), tweezers, stopwatch, white tile

Teacher Notes	Technician Notes
Perhaps consider using skittles in petri dishes with water.	Each set of equipment will require 0.1 M Hcl – consider supplying in crystallising basin or beaker (labelled) ready for use. Use white paper squares in place of tiles. Timers can be used within the year group bubble or will require cleaning after use or to be left for 72 hours. Glassware or plastic jugs and petri dishes should be washed in hot soapy water, soaked in Milton for at least 15mins before dishwashing.

6. Unicellular vs. multicellular organisms
   No equipment needed

7. Revision

8. MTA

9. Adolescence – No Equipment

Not related to this lesson, but opportunity to set up germination experiment ready for lesson 14.
Plastic cups, cress seeds, measuring cylinders, cling film

Teacher Notes	Technician Notes
	Use small petri dishes and cotton wool pads. Provide sticky labels to name the dishes. Supply each group with enough cress seeds in small container and water in a tiny conical. Items used will need to be washed and soaked as above before dishwashing.

10. Reproductive Systems – Laminated sheets of male and female reproductive systems, white board pens, cloths

Teacher Notes	Technician Notes
It would be better to use photocopies here rather than the laminated sheets.	Laminated sheets can be used within year group bubble, cleaned after use, as will the pens - or left for 72 hours. Supply tissues rather than cloths.

11. Fertilisation and Implantation – No equipment

12. Development of a fetus – Baby in a bag Activity, colouring pencils

Other options –

Pregnancy and drugs keyword bingo

Laminated A4 cards which pupils need to put together like dominoes to match keywords with their meanings. There is only one set, so can't be used as a group activity.

Teacher Notes	Technician Notes
If used by pupils, the bingo cards can be used again within the year group bubble or quarantined for 72 hours. If demonstrated, then they will require cleaning or quarantining. Pupils should have their own colouring pencils and hopefully scissors.	As Teacher notes. If we must provide scissors they will need to be cleaned after use. Soak in Virkon not Milton.

13. Menstrual Cycle – No equipment needed

14. Flowers and Pollination
    Flowers to dissect, white tiles, tweezers

Teacher Notes	Technician Notes
	White paper or card should be supplied in place of the white tiles. Forceps will need to be washed, soaked in Virkon before dishwashing.

15. Fertilisation and Germination –
    Collect seeds germinated a few lessons prior.

Teacher Notes	Technician Notes
	Emptied petri dishes will require washing, soaking in Milton before dishwashing.

16. Seed Dispersal – Demo: Handful of sycamore seeds. Practical: scissors, metre ruler, stop clock, sycamore seed template, paper clips
Teacher demo. Sycamore seeds – Teacher drops a hand full of sycamore seeds to discuss how they dispersed
Class Practical. How does seed size affect dispersal? Pupils investigate how seed size affects dispersal distance by making and dropping seeds of different sizes

Teacher Notes	Technician Notes
Pupils should have their own scissors hopefully.	If scissors must be provided, they will require washing, soaking and dishwashing as above. Paperclips, metre rules and timers to be left for 72 hours unless required by the same year group bubble.

17. Revision – No equipment needed
18. Test – No equipment needed
19. Go through Test (PLC) - PLC printed on pink paper