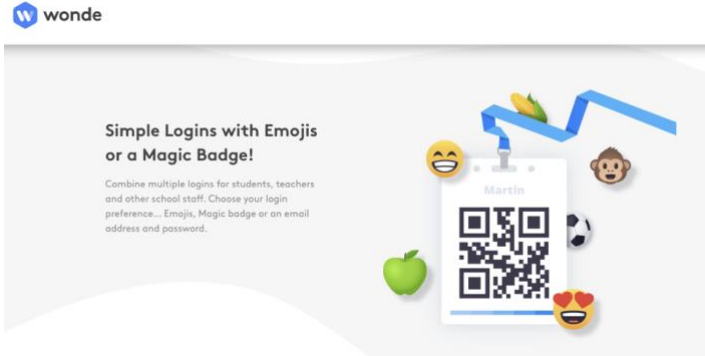# *Strategy for Primary Education – Model strategy of IT hardware for class-based learning*

Pre-requisites for effective running of multiple, wi-fi enabled student devices within primary school	
Internet connection	• Fast – with multiple devices and modern demands, speeds of below 50Mbps are only adequate for smaller schools. Larger schools require connections of over 100Mbps, if not significantly more, for the smooth future running of staff and pupil devices. • The bigger picture of this should be considered in order to make future-proofed decisions that are economic and allow for high speeds at reasonable cost. There is a strong argument for sourcing separate, commercial ISPs – and leaving services that bundle filtering and connection – in order to offer high speeds at an economic price point.
Filtering	• Must be adequate for children's daily use; blocking what needs to be blocked / not blocking content that is required. This will always require attention. • Teachers need to be able to request access to websites that are blocked – and app usage that is blocked - such issues need to be resolved within 24 hours, if not quicker. • A case for creating a MAT's own filtering system, along with its own multi-site connection, is both economic and allows for the responsiveness required.
Technical support	• Teachers need to be able to log requests time-efficiently and for those problems to be dealt with in a timely manner. • Deployment of apps and services needs to be timely and without issues. • A ticketed help-desk system is essential – free and budget-priced versions allows for everything a school may need. Contact us for latest.
Procurement of equipment	• Multiple resellers offer multi-purchase deals on equipment; plus limited-time purchase opportunities. Keeping ahead of such deals and being able to purchase at speed is a key benefit. Look to mass national procurement schemes such as Bridge the Divide from LGFL.

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Strategy	Unit specification	Why?	Lifespan	Deployment
Strategy #1 Chromebooks in trolley sets of 32+ Very much the majority device for children in schools, particularly Key Stage 2. Trolleys – research and buy sturdy, 32 bay units.	Chromebooks with education deployment licencing 12-14 inch screens is ideal Minimum 32Gb RAM; 32Gb storage. Price per unit can be below £200… spending below £300 for higher quality may well be worth it. Each unit needs a licence for education deployment – costs around £20 but possibly can be re-used on future Chromebook hardware.	Price per unit is very reasonable, though quality and usability of units needs to be tested before mass purchase of any particular model. Management of units is generally efficient, quick and versatile. Logging in process for children can be effective and efficient – make usernames and passwords lower case and simple. Teachers can interact with children's Google account by logging into their browser using a PC or Mac. See Wonde below also.	4 years + of good use; potentially a number of years longer. Note that Chromebooks have a limited lifetime of support from when each model is released. Much older models may sometimes be sold off cheaply, but this can be a false economy in the longer term.	Management of units through Google Admin is efficient and versatile – all completed through a web-based interface. Settings for Chromebook units should be tweaked so that they run optimally within school setting. That might be that units log out automatically when screen is closed.

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Strategy #2 Use of Wonde log-ins for pupil easy access and syncing of accounts. Recommendation for primary schools that are of a larger size. wonde Simple Logins with Emojis or a Magic Badge! Combine multiple logins for students, teachers and other school staff. Choose your login preference... Emojis, Magic badge or an email address and password.	Wonde data-syncing solution for pupils Children are given a 'magic badge' QR code or emoji password. Magic badges suitable for children from Reception up. Emoji passwords work fine for Yr4 up, possibly Yr3. All data is linked through from the school's MIS. Imperative that MIS is kept up-to-date and used without ambiguity. Price: has increased notably meaning that smaller schools may question viability.	Allows children of a primary age to access multiple services through one log-in badge or emoji password. Allows smoothness with admin tasks involving Google services – such as setting up Google Classrooms automatically.	Continuing product that is developing and becoming more powerful as it links in with further education products. **System needs a fast internet connection for logging in with 30 devices. Without that, it may well be worth holding back on.**	IT admin need to administrate this in conjunction with the requests of teachers. Giving key IT staff – such as ICT co-ordinators – access can be useful.

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| Strategy #3

iPads in sets of 8.
Portable box deployment for easy portability
USB hub for charging | Larger, education spec units give the best value.

Kept alongside a USB hub for charging and a plastic container for transportation.

This setup has advantages over locked cabinet options (cost, portability and ability to charge from various locations) though needs to be implemented thoughtfully – return of box to specific location / locking away at night possibly. | iPads provide fast, immediate access to online resources and apps

Effective for younger children accessing technology.
Apple apps for multimedia purposes are sgenerally very good, and especially reliable:

* Video - filming and editing
* Stop-frame animation
* Green screening
* Music and sound
* Google expeditions and augmented reality
* Data logging apps
* Seesaw

Also: key purpose for programmable hardware (Sphero robots etc.) | 4 years + of good use; potentially a number of years longer.

You will want to buy robust cases – not folio ones since the flap gets in the way, especially when younger children use them. | A box of 8 is an ideal number. Having 2 boxes of 8 would mean that iPads can be pooled together for 1 between 2 within a class.

Other configurations are also possible, as required and requested by staff. This setup works conveniently and effectively, and also allows Apple Classroom to be deployed as an effective tool for teachers to manage app usage. |

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| Strategy #4

Purchasing of additional curriculum enabling equipment for Computing. Shared purchasing for smaller schools.

 | Let's Go Code Activity Set – approx £25 per set

Sphero programmable robots (either Sphero mini or Sphero Ollie) – good value if purchased carefully. A box of 6 of these will provide a class with 6 groups to each work with their own programmable robot.

Microbits – box of 10 includes battery holder and batteries / USB cable.
Enough for 1 microbit between 2 children should be aimed for. | Giving children access to these hardware coding opportunities really opens up their minds to the possibilities of technology around them.

The products I have selected here are relatively cheap and provide easy use within classroom settings.

To be used in conjunction with plans and ideas provided by Computing curriculum guidance. | Equipment needs to be handled and stored carefully, even if this equipment is robust to some extent.

4+ years of good use with individual replacements possible if there are breakages. | Charging units for sphero robots (USB hubs, around £20 each) should be purchased as part of a box set. |