Microsoft

Teaching & Learning Edition

Suitable for Heads of Departments and Teaching Staff

A guide to deploying a sustainable 1:1 student device programme in schools.

Windows 11

Microsoft

Implementing a 1:1 device programme is becoming increasingly popular in schools. However, navigating the financial maze of implementing such a programme can feel overwhelming.

This guide is one of four designed to help you understand the options available and questions you should ask when designing your sustainable and equitable 1:1 programme.

The following editions are available:
- Leadership & Strategy
- Operations & Finance
- Teaching & Learning
- Technical & Deployment

Other editions can be requested from info@ta.education

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Teaching & Learning Edition

Introduction: Why 1:1?

Implementing 1:1 devices in the classroom is a step towards modernising education and aligning teaching methods with the technological advancements that shape our world. It's about creating an environment where technology enhances the learning experience and prepares students for the digital age.

The responsibility has grown for educators to empower students with future-ready skills and competencies to thrive in the fourth industrial age; this is more sustainable and achievable in a 1:1 device environment, where students have equitable access to technology, and you are not having to compete for a limited number of devices across the school.

A 1:1 device programme, when introduced effectively, can support the educational outcomes of students, reduce staff workload, increase productivity, support accessibility and social mobility, and, in some cases, reduce financial costs for the school.

1:1 devices can :

- Ensure equal access to resources for all students, bridging the digital divide and promoting equity in education.

- Allow for a more interactive and personalised learning experience.

- Facilitate better communication and collaboration between students and teachers.

- Enhance peer collaboration and prepare students for the future by developing essential digital literacy skills.

- Reduce planning work and assessment tasks for teaching staff.

- Improve visibility of learning data for school leaders.

- Support the integration of technology into the curriculum.

The Power of 1:1 in the Classroom

Introducing 1:1 devices into the classroom has the potential to be transformative and incredibly powerful. With the teacher at the helm of a digital classroom that runs within their physical classroom, students have an array of tools that help to create personalised approaches to learning, and teachers have greater opportunities to monitor progress and provide timely interventions.

Fundamentally, the device is part of the wider suite of tools that teachers and learners employ, offering opportunities to grow, expand and develop approaches to learning.

Misconceptions

While the implementation of 1:1 devices does reduce the need for physical paper, it does not eliminate it entirely. Traditional paper-based activities still have a place in the modern classroom, with digital solutions removing the need for endless cutting and sticking, and the digital and non-digital working to complement each other.

There is a misconception that all work happens on a device, leading to a loss of skills like handwriting. However, the use of 1:1 devices does not mean abandoning traditional skills. Instead, it's about striking a balance between digital and traditional methods, to provide a well-rounded education.

For many, it feels as though 1:1 devices are complicated to implement. While there is a learning curve involved, with proper training and support, teachers and students can quickly become comfortable and confident with utilising the devices. When done well, the benefits of personalised and interactive learning experiences, alongside the development of digital skills, outweigh the initial effort required.

Pedagogy-First Approach

In a flipped classroom, students use their device to access learning materials outside of lesson time and prepare in advance for interactive in-class activities. This allows students to work at their own pace and it also maximises class time for collaborative learning and teacher engagement.

With 1:1 devices, it is easier than ever to provide personalised and differentiated learning experiences and resources that cater to the unique learning styles and abilities of each student. Students can set up their device in the way that suits them, and it follows them everywhere.

Project-based learning is enhanced by providing students with the tools they need to research, collaborate, create, and present their projects.

By providing students with the tools and resources they need to explore topics of interest, track their own progress, and demonstrate their understanding, you can enable students to self-regulate and take responsibility and initiative for their own learning.

Utilising the Microsoft 365 suite, students can communicate, share resources, give feedback, and collaborate on tasks. Collaborative learning becomes second nature as students learn to work collectively to complete goals.

Curriculum Development

Before any student 1:1 devices arrive in your school, it is essential that the leadership team, working with the relevant curriculum leads, invest time in reviewing your existing curriculum to identify areas where the use of technology can be adopted to enhance the learning experience. Once this is documented, it should be shared with staff and training provided to ensure staff are confident that they can deliver the new pedagogical models.

Streamlining Planning and Workload

Technology offers a myriad of approaches to streamlining planning and workload, as well as making learning time more efficient.

Marking and assessment efficiency is enhanced with use of tools like Rubrics in Microsoft Teams and question feedback and self-marking quizzes in Microsoft Forms. You can provide quality feedback quickly and with ease, with a variety of feedback options, including audio and video. The tools allow for easy and discreet differentiation of resources for learners and AI-driven tools like the Learning Accelerators provide simple-to-use opportunities for tailored learning.

One of the most compelling aspects of implementing a digital classroom is that everything is all in one place. You can seamlessly share and work collaboratively on teaching resources, assessment materials, and assignment rubrics.

Tasks can be set digitally, completed, marked, returned, and logged in just a few clicks using the Assignments feature in Microsoft Teams. Insights in Microsoft Teams provides data points and trends, highlighting changes in behaviours and areas for support,, so that you can focus on intervention, rather than drowning in mountains of paperwork. Markbooks and records are updated automatically. Resources can be instantly distributed to students, staff, and parents – massively reducing the need for photocopying and the waste that is often associated with it.

Microsoft Copilot: Your AI Assistant

Microsoft Copilot is a tool that uses generative AI to serve as a helpful assistant to you in the classroom. Copilot can help you save time, differentiate instruction, and enhance student learning. With Copilot, you can easily create lesson plans, quizzes, rubrics, and other class resources for any level of learner.

Find out more

Classroom Strategies and Management

One of the key concerns you may have with introducing 1:1 devices in the classroom is behaviour management. This is particularly true when devices have not been a regular feature of the classroom.

Think of 1:1 devices as just another learning tool that needs to be used responsibly. Creating classroom rules around device use will help to ensure they do not interrupt your teaching and getting students involved in the creation of these rules will help with compliance. Having consistent routines in your classroom also supports positive use; for example, when and how to get out or put away the devices, closing the lid or turning the device away when not in use.

The school can employ the use of monitoring and management software, which would allow you to easily oversee and manage what students are doing on their devices during your lessons. These software options often have settings to freeze the screens of student devices and allow you to take control of your device.

Encouraging positive use will feed into your guidance and modelling of the wider issue(s) around responsible use of technology. We need to guide students on being 'good digital citizens'; this means treating others with respect online, being careful what you share and post, and understanding how to use technology in a safe and positive way.

Inevitably, there will be problems with children forgetting or breaking their devices or that they run out of charge. Making sure the school has a pool of spare devices and chargers managed by IT and a ticket system for the handling of software and hardware issues will help to alleviate these day-to-day problems.

Using Microsoft Tools for Teaching and Learning with 1:1

With Microsoft 365, you have access to a wealth of tools which can support and enhance teaching and learning in a 1:1 classroom.

Here are a few areas to explore:

Class Teams within Microsoft Teams

Your class team is your digital classroom environment, which brings together resources and content, posts and chat, apps, and meetings. You can use it to support organising learning through channels and tabs. Communicate ideas and facilitate discussions through the posts feed in a channel.

Teams also has a practical array of tools for engaging learners, including apps like Praise and Forms which can be embedded in posts.

Find out more about Microsoft Teams for education here.

Assignments

Within Teams is the Assignments feature which allows for creating, tracking, and reviewing work directly within Teams. Tasks can be added to Outlook calendars to support students with organising and self-regulating their learning. You can apply rubrics so that learners are clear on exactly what they need to do, how to do it, and when it needs to be done by.

Assignments is often seen as something to use for home learning; however, it can be very practical to use the Assignments feature for class tasks and learning too. Particularly with the range of different apps you can embed in an assignment, including OneNote Class Notebooks and the Learning Accelerators.

You can access the Insights and Grades features, to track progress and engagement of your learners and to get quick access to the feedback you have given.

OneNote Class Notebooks

OneNote Class Notebooks are incredibly practical in a 1:1 device environment. They provide a set up that is essentially a class digital ring binder, which includes a content library where you can store learning pages and resources. Each student has an individual notebook space to work in, meaning that all of their work is in one place and you can easily distribute work to students through either the OneNote Class Notebook toolbar and/or through Teams Assignments.

Since you are the owner of the notebook, you can see what each student is doing in real-time and provide live feedback and intervention. You also have a collaboration space, to facilitate groupwork and peer feedback.

Using OneNote allows you to bring a wide range of media types together, including digital inking, typed resources and work, images, audio, embedded video and embedded Microsoft Forms, alongside many other options. Students can photograph/scan work created using traditional methods, organising everything in one space. This means student notebooks can be more dynamic, with you and your learners bringing together different resources and outcomes in a unique and powerful way.

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Classwork

The Classwork feature helps to increase efficiency and create a workflow for learning modules. In Classwork you can draw together resources, tasks in Assignments, OneNote Class Notebook pages and Teams Channels so that students have everything streamlined in one place.

Learning Accelerators

The Learning Accelerators are a suite of tools designed to support foundation skills, social and emotional learning and future-ready skills. In a 1:1 device environment these can enhance the learning experience for students and give access to powerful opportunities to tailor learning to the individual needs of students, without increasing your workload.

Learn more about the Learning Accelerators here.

Reflect

Reflect is a well-being app that supports the social and emotional aspects of learning. It allows you to create impactful emotional and learning-focused check-ins. Responses come in the form of the 'Feelings Monster', a research-backed character for all ages which showcases 60 different emotions in an engaging and playful way, helping students to identify and name their emotions and supporting metacognition around their learning and progress. You can gain valuable insights into how your learners are feeling and where they feel they are excelling or struggling. Reflect feeds into Insights, giving you live data to identify areas that need attention and opening the doors to conversations with your learners.

Learn more about Reflect [here](#).

Forms/Quizzes

You can use Microsoft Forms to quickly assess student progress and get real-time feedback with quizzes and forms that you design and share with your class(es). You can use associated real-time analytics that provide summaries of responses as well as results for individual students, which is great for timely interventions and immediate question-level analysis to inform adapting learning and teaching. The data can be exported to Excel for more in-depth analysis too.

Forms and quizzes can be set as a tab in a class team, added to an assignment, embedded into a OneNote page or added to a post in Teams.

Equity and Accessibility

Technology can help create a level playing field in education. When every student has access to a device, it removes barriers to learning materials and supports students no matter their learning needs or backgrounds – with the potential to create a truly equitable learning environment.

Windows 11 Devices

Windows devices have a vast range of accessibility features, so devices can be customised to meet the needs of individual learners, including customising the look and feel of Windows, employing tools like Live Captions and utilising Voice Typing.

Learn more about accessibility with Windows devices [here](#).

Accessibility Tools

There is a wide range of Microsoft tools available which enhance accessibility in learning. For example, Immersive Reader and dictation tools aid reading and writing, while Live Captions, PowerPoint Live and transcripts assist the hearing-impaired or those with English as a second or additional language.

The Reflect app in Teams helps to gauge student emotions, emojis can be used to aid communication, and encouraging video/image responses to tasks can cater to visual, practical, and creative learners. Planning to use these features in our lessons can make learning more inclusive and personalised.

Learn more about Microsoft Accessibility tools for education [here](#).

Windows 11 Device Functions

Devices that are purchased as part of a 1:1 scheme should come with a range of functions that have practical uses in the classroom. For example, most student devices have a front and rear facing camera, which will allow students to record learning activities and photograph hand-written work and artwork to add to a Teams assignment or Class Notebook page. The built in microphone on a student device can be used in a range of ways, including: to record audio on a OneNote page, record video with sound, dictate in the Office apps and for tools like Reading Progress. When needed, the camera and microphone can support students in taking part in a lesson remotely via a Teams meeting, if they unable to attend school in-person.

Student 1:1 devices are often very flexible, with the ability to use them as a laptop or a tablet and include a touch screen with digital inking, giving students the tools they need to match the learning journey and outcomes. The stylus allows students to take notes and annotate directly on the screen in apps like Whiteboard and OneNote, as well as the other Office applications, supporting the cognitive processing, understanding of ideas, and memory-retention associated with handwriting.

The devices the school opts for should have a long battery life and be robust. Many student devices are designed to withstand day-to-day use by children, including being waterproof, having flick-proof keyboards, as well as being ruggedised and having reinforced screens. Using devices designed for students should reduce day-to-day disruption of learning, as devices will need to be repaired less.

Key Hardware Features

2 Cameras: A webcam enables students to collaborate remotely with others whilst the world-facing camera can allow students to capture images, such as diagrams from the class whiteboard, or to record videos, such as science experiments.

Audio: The ability for students to record and playback sound (consider headphones) can play a significant role in personalising the learning. It also enables the use of tools like Reading Progress.

Digital Inking: Using a digital pen creates new opportunities in all curriculum areas, not just Art. The ability to quickly annotate text or to create and manipulate diagrams at ease introduces new possibilities.

Preparing for 1:1

Moving to a 1:1 classroom environment can be daunting for many teachers. It is a massive shift in the way we facilitate teaching and learning and requires teachers to upskill in areas they may not have prior experience of, or transferable skills to employ. Challenges, like lack of time, can make the shift feel difficult to achieve.

If you find yourself feeling like you are not sure where to start with preparing for a 1:1 classroom, here are some practical tips:

- Get used to using your own device before trying to use it with students. This gives you the opportunity to gain confidence, learn, and innovate.

- Try using the device features and Microsoft 365 tools that are useful in your teaching context and consider how you could include those in your planning for the students to utilise.

- Start small! Try different activities that take 5-10 minutes of a lesson to develop confidence in teaching and also manage the learning with the devices.

- Explore the wealth of online training and support for educators, offered on Microsoft Learn here.

- Attend and participate in as much training as is available and take full advantage of any opportunities to familiarise yourself with the device and available software.

- Be resilient where possible. If something does not work the way you planned it, look at what went wrong and try to figure out why. This can be difficult in the face of many other time pressures; however, this will help with growth in the long run.

- Get involved with peer support, whether that be formal or informal and don't be afraid of sharing things your successes with others.

- Over time, the use of the devices will need to become a natural part of the toolkit you use when planning your curriculum. It is worth investing time in developing lessons where students can develop their future-ready skills and, where appropriate, have opportunities to make choices about how they can use digital tools to approach learning tasks.

Microsoft Educator Programmes

Microsoft offers an extensive range of online courses for educators through Microsoft Learn, a dedicated online training platform.

Within Microsoft Learn, there are dedicated learning pathways that lead to earning digital badges and certifications. The common pathway for an educator to follow is available here and includes:

Microsoft Educator

The first step on a journey of digital transformation. If an educator or school leader is new to Microsoft tools in teaching and learning, we have curated a learning path to help get you started.

Microsoft Advanced Educator

Once an educator or school leader earns the Educator badge and is ready to go deeper into Microsoft tools in teaching and learning, successful completion of two learning paths unlocks the Advanced Educator badge.

Note: This is an annual badge and with new criteria each year for educators and school leaders to renew their annual Microsoft Advanced Educator badge.

Microsoft Educator - Trainer

By becoming an ME Trainer, you're joining a community of people who are passionate about supporting other educators in developing how technology is used in the classroom and beyond. The programme provides access to instructor-led training materials, connection with trainers around the world through a Linked-In group, and the ability to earn badges to share your accomplishments.

Microsoft Innovative Educator - Expert

Microsoft Innovative Educator (MIE) Expert programme is a premier programme created to recognise global educator visionaries. MIE Experts are self-driven, passionate about integrating technology into teaching and learning, inspire students with creative thinking, and work in a truly collaborative spirit to share their learning with their colleagues and the world. In this programme, you have access to monthly connection calls with MIE Experts in your own country and the world, direct access to teams at Microsoft to support your work in education, the opportunity to test new tools and products being developed and to provide feedback, the opportunity to speak at online and face-to-face events to share your story, participation in our online event, Education Exchange | E2 and more.

Student Skills

Students will need a range of foundational skills to be able to get best use of their devices and this needs to be addressed in order to ensure that students are able to participate actively in lessons where digital activities take place. Many schools take the approach of building the teaching of these skills into relevant curriculum areas, such as computing or personal skills development.

Future-ready skills should be developed over time and across all areas of the curriculum to ensure that students have a rich diet of opportunities to build not only their functional digital skills but also their digital life skills. We need to plan learning sequences that include to building skills such as effective collaboration and communication using digital tools.

Setting Expectations with Staff & Students

Whatever device is chosen, it is essential that you set expectations with students and parents as to what the device is capable of. Providing training orientation sessions for students (plus possibly parents) is important.

For example, if you deploy an entry-level device to keep costs low, staff and students will need to understand that the activities facilitated on the device will be cloud-based and accessed through the browser, with limited functionality. They should not expect to install processor-dependent desktop applications.

Device management should also be covered in orientation sessions demonstrating best practices for battery management, how to reduce demand on the device memory (e.g., closing multiple browser tabs) and how to create shortcuts to common applications and web links.

Case Studies

Key Stage 2

The case study at St. John Fisher Primary School illustrates how a 1:1 programme can be successfully deployed in Key Stage Two. It shows how a programme can facilitate learning that responds with agility to the needs of students while realising efficiencies through reduced print costs and staff time saved in relation to preparing, distributing, and managing paper resources.

Watch the video here

Key Stage 3

The Queen Elizabeth's Secondary School case study highlights the potential of 1:1 devices to support independent learning. The initiative noted improved scope for students to work at their own pace and for teachers to set collaborative learning tasks completed at school or home. The case study emphasises the importance of senior leaders in coordinating a digital transformation, which will be effective when prioritised as a whole school programme.

Pre-deployment video

Post-deployment video (3 months)

A selection of video case studies can be found at TA Case Studies - TA Education

Frequently Asked Questions

Click on any question to view a 30-60 second video response or click to watch the full playlist.

Leadership & Strategy

Click here to watch full playlist

1. Why should a school consider a 1:1 device programme?

2. Where is the evidence of the impact of deploying 1:1 student devices?

3. What is an ideal timescale for introducing a 1:1 device programme and where do we start?

4. Should we run a pilot of 1:1 devices before launching a full programme?

5. How do we support staff in preparing for 1:1 student devices?

6. Is any funding available to help me create and implement a 1:1 strategy?

7. How do we address parental concerns, such as screen time and safeguarding?

8. Do 1:1 student device programmes work in a primary school setting?

9. How can we measure the return on investment (ROI) when introducing 1:1 devices?

Operations & Finance

Click here to watch full playlist

1. How can a school fund a sustainable 1:1 device programme?

2. When deploying a 1:1 device programme, how do we address the issue of parents unwilling or unable to make financial contributions?

3. What happens if you run a 1:1 device programme funded by parents and a child leaves the school, or a parent stops paying?

4. What financial savings can a school make when deploying a 1:1 device programme?

5. When deploying 1:1 student devices, how do we address faulty, damaged or stolen devices?

6. When running a 1:1 device programme, what happens to the device at the end of the agreement?

7. Do we need insurance when deploying 1:1 devices, and does that mean we need to purchase protective cases?

8. Why is the cost higher than the high street?

Click on any question to view a 30-60 second video response or click to watch the full playlist.

Teaching & Learning

Click here to watch full playlist

1. How do we minimise distractions and misuse of 1:1 student devices in the classroom?

2. How can providing 1:1 student devices support SEND students?

3. How can 1:1 student devices support SEL?

4. How can 1:1 devices reduce staff workload?

5. How can 1:1 devices support personalised learning?

6. What functionality should we consider when choosing student 1:1 devices?

7. What would happen if a student has forgotten their device, or if it is faulty?

8. Does the curriculum need to change if we introduce 1:1 student devices? If so, how?

Technical & Deployment

Click here to watch full playlist

1. Do we need any additional licenses to support a 1:1 device programme?

2. How do we check if our internet connectivity supports 1:1 devices?

3. How do we deploy and manage high volumes of devices?

4. How do we ensure the operating system and apps or extensions are kept updated?

5. How do we keep students (and staff) safe online in school and at home?

6. How do we manage faulty or damaged devices?

7. How do we manage loan or spare devices?

8. Can we enable multi-factor authentication for students using the 1:1 devices?

9. Can we provide simple sign on methods for students using Microsoft 365 accounts on Windows 11 devices?

Need Help?

This series of guidebooks was created by the team of digital educators (former teachers) at TA Education (Tablet Academy Ltd.)

You can request copies of the other guidebooks by using the contact details provided below.

If you would like to discuss a 1:1 programme for your school, TA Education provides free advice and support, including an independent procurement service to help you identify the right partners and suppliers for your programme.

Contact us at the earliest stage of your journey to benefit from our wealth of experience and independent advice.

Call: 01952 567450

Email: info@ta.education