

Sparx Classroom

Best Practice

Contents

Contents	1
Partnership Agreement	2
Full Best Practice Guidance	3
Before a lesson	3
Choosing which objective/s to teach	3
Planning how to teach your chosen objectives and to check understanding	4
Preparing teaching and learning activities	4
During a lesson	5
Managing devices (Practical not technical)	5
Teaching the whole class	5
Monitoring and supporting individual learning and differentiation	5
Promoting student video use behaviour that builds confidence and resilience	6
Facilitate and monitor bookwork	6
Assess for learning at the end of the lesson	7
Homework	7
Monitoring homework completion	7
Using homework to plan next steps in learning	8

Partnership Agreement

Sparx	Teacher
Before lesson	
<p>Creates the highest-quality maths questions and content to ensure all students thrive</p> <p>We have spent 8 years authoring the highest quality maths questions and content so that students of all current attainment levels can thrive and be successful in maths.</p> <p>Our content is always planned, authored and tested by a group of content experts made up of teachers, mathematicians, data-scientists and quality controllers. We also constantly revise and improve upon our content based on our own data insights and schools' feedback until we are certain that it is of exceptional quality.</p> <p>We also provide teachers with the differentiated question set the students will face in the lesson, along with the key teaching questions that the teacher should model in the lesson.</p>	<p>Plans impactful and effective lessons</p> <p>With the time saved from having to resource hunt or author your own questions, you can spend extra time thinking through the things that matter most - pedagogy:</p> <p>Choose which objectives to teach from our pre-authored set that match your students needs and build on prior learning</p> <p>How are you going to introduce the lesson objectives and ensure that new learning builds upon something the students should know?</p> <p>How are you going to precisely and clearly model the objectives Sparx provides you so that all students understand the key concepts?</p> <p>How precisely do you expect your students' books to look after your explanation?</p> <p>How will you check for understanding after your explanation to make sure students are ready for the Sparx independent practice questions?</p> <p>What is your back-up method to re-explain a question/concept if students struggle to get it?</p>
During lesson	
<p>Provides powerful and actionable data insights</p> <p>Our lesson monitoring page shows you what's happening in your Sparx Maths lesson, as it happens.</p> <p>We provide the teacher with unparalleled insights that would not be otherwise possible via a live question-by-question breakdown and clear indication of progress through the lesson</p> <p>Teachers can decide who is not on task and needs a nudge, who is stuck and needs some more one-to-one time, who is working hard and needs positive praise and who needs some extra challenge.</p> <p>In short, our live data insights allow the teacher to ensure all students are successful, that no one is left behind and that the teacher is using their precious time in lessons to the greatest possible effect.</p>	<p>Is responsive during each lesson</p> <p>Your brain, presence and skills are crucial to ensure that students learn. Since you can now spend your time before the lesson planning how you will conduct the lesson you can execute that plan by:</p> <p>Providing exceptional explanations and modelling.</p> <p>Checking for understanding after each explanation so you know students understand what you've just explained and are ready for their independent practice on Sparx.</p> <p>Re-teaching the concepts to smaller sub-groups who may need extra support, whilst other students get on with their independent practice on Sparx;</p> <p>Circulating the room to check that students are always writing down meaningful workings in line with the teacher's modelled example</p> <p>Reviewing and using those detailed insights from the Sparx Lesson Monitoring page to praise students working hard, to nudge students who are off task, and to visit students who you think need a bit more of your time.</p>

Homework	
Creates personalised homework	Monitors homework completion
<p>Using all the data generated from the lesson and prior homeworks, we build personalised homework for each of your pupils that lasts around an hour long and is perfectly tailored to their individual needs.</p> <p>As such, we ensure that students are consolidating topics they needed to work on more from classes whilst carrying out vital spaced retrieval practice across previously taught topics to ensure that learning is being strengthened and remembered.</p> <p>We also create optional homework for students who want to go above and beyond so that there is no limit to what they can learn.</p> <p>Of course, we automatically mark all of this homework and report it back to the teacher and school. In short, we create the most tailored and useful homework possible to ensure students thrive and, at the same time, we ensure this is all done with no unnecessary workload for teachers.</p>	<p>Each student has a responsibility to ensure that they complete at least an hour's worth of personalised homework each week. It is the school's and maths department's responsibility to ensure 100% of students complete their weekly homework and this is achieved by a mixture of:</p> <ul style="list-style-type: none"> Giving students midweek reminders when homework is not yet started/finished; Ensuring there is adequate provision of technological support in school for students with limited internet access to complete their homework; Carrying out detentions for students who do not complete their compulsory weekly homework; Praising and celebrating students who complete their compulsory homework; Rewarding and noticing students who go the extra-mile and do their non-compulsory homework - this is ultimately what we'd like all students to aim for.
SPARX Limited	Maths Department at [school name]

Full Best Practice Guidance

Before a lesson		
Sparx	Teacher	In Practice
Choosing which objective/s to teach		
<p>Collect information from lessons and homework about how well students have performed against each objective and topic</p>	<p>Use the information collected by Sparx to decide which objective/s are the most appropriate to teach next, and to whom</p>	<p>First, determine what students do and don't know by:</p> <ul style="list-style-type: none"> - Looking at the View summary of previous lessons on the same topic to see how well students did - You could try checking the Insights page to look at previous homework to see if there are any objectives that need to be retaught <p>Find the right objectives for the class by:</p> <ul style="list-style-type: none"> - Deciding if it is necessary to continue to teach an objective based on your analysis of the last lesson/s. For example, if many students got the same individual question wrong it may not be worth going over this again, but if many students got a range of questions in an objective wrong

		<p>then this may indicate the need to re-visit</p> <ul style="list-style-type: none"> - Reviewing possible Objective/Lesson choices for the topic to be taught and decide the one/s that will be the most appropriate level for the class at this time. <p>Consider Length and pace</p> <p>Balance your pace through the Scheme of Learning and optimisation of working time when picking your objectives</p>
--	--	--

Planning how to teach your chosen objectives and to check understanding

Provide differentiated lesson content and teaching questions that were developed in collaboration with our partner schools over many years	Use the time saved in preparing quality content to plan how to teach each objective and how to check student understanding	<p>Plan how to teach the objective by:</p> <ul style="list-style-type: none"> - Using the Lesson Outline and Teaching Questions to review the example questions that students will be given in Sparx and to plan how you will teach these to the class. For example you could have a go at answering these questions yourself first so you understand how they are solved - Using the Lesson Outline to check what methods, strategies and vocabulary are going to be used in the lesson and to plan if you will ask students to write down any key words, topic overviews and descriptions in their books at the start of the lesson - Decide if any other methods could or should also be introduced and how <p>Plan how to check understanding by:</p> <ul style="list-style-type: none"> - Deciding how you will check students' understanding of the whole concept being taught, for example, get students to use mini whiteboards to show they can solve a whole problem on their own. - Using a method of AFL that will assess the whole class' understanding, and avoid checking only the understanding of individuals that might not be representative of the whole group. This could be done by using the Sparx Plenary
--	--	---

Preparing teaching and learning activities

Provide teaching questions, recap starters and lesson plenaries resources for teachers to use to support lessons if they choose	Decide which resources you will use to support your teaching of the objectives and the checking of student understanding	<p>Provided Sparx resources:</p> <ul style="list-style-type: none"> - Sparx Teaching Questions - Sparx Recap Starters - Sparx Plenaries <p>Other resources you may choose to consider:</p> <ul style="list-style-type: none"> - Exam past papers - Peer work and discussion - Kinesthetic and exploratory tasks
---	--	---

During a lesson

Sparx	Teacher	In Practice
Managing devices (Practical not technical)		
Share suggestions from other schools using Sparx about how to manage devices	Create and use a clear process for giving out and handing in devices at the start and end of lessons, meaning that lessons start smoothly and that students settle to their work quickly	<p>Suggested practices for managing devices:</p> <ul style="list-style-type: none"> - Number all devices and allocate each student a number to use in every lesson - Have 'device monitors' or a student rota for handing out and gathering in devices, or allow students to get their own device if entry to the classroom is staggered - Position devices in an accessible location in the classroom to avoid congestion - Allow all students to get their own device as soon as they walk into the room - Ensure all devices are regularly plugged in so they don't run out of battery
Teaching the whole class		
Provide resources to help you plan how you will teach the class in more detail	Use the time in front of the class to teach objectives clearly and effectively , and to check understanding so your teaching time is used efficiently	<p>Teach the concept</p> <ul style="list-style-type: none"> - Use the Teaching Questions or your own introductory materials to teach the objective clearly <p>Check understanding</p> <ul style="list-style-type: none"> - Use your planned method of checking understanding to ensure the class have grasped the concepts and are ready to start answering questions <p>Set the task</p> <ul style="list-style-type: none"> - Once you are sure the class have understood the objective, set them onto the Sparx questions (or your own work if this is an offline topic)
Monitoring and supporting individual learning and differentiation		
Automatically mark questions and provide students with instant feedback Display live information to teachers about students' answer history and habits	Use the Sparx tools to proactively monitor the lesson as it happens, act quickly and efficiently to identify and address common misconceptions , and to identify if further teaching is needed for individuals, groups and the	<p>As students work (on Sparx questions)...</p> <p>Use the Lesson Monitoring screen to:</p> <ul style="list-style-type: none"> - Check every student's understanding of the questions - Make sure the level* of question is appropriate for each student - See whole class progress through the questions - Target students who need your intervention - Identify common misconceptions from student answers - Give students feedback as to their progress <p>Use the Pause class and individual student option to:</p> <ul style="list-style-type: none"> - Only pause students who need extra teaching time when possible to avoid unnecessary dead time for the rest of the class

	whole class, keeping learning moving forward at an appropriate pace	<p>* To learn the objective, students should all be able to answer the core questions correctly, and many of them should be moving on to the extension and challenge questions. These later questions contain more of the exam style questions that students will face in their GCSEs.</p> <p>It is however important that focus is placed on learning rather than a quick pace through the content.</p>
--	--	--

Promoting student video use behaviour that builds confidence and resilience

Display live information during a lesson about how each student is interacting with the Sparx support videos	<p>Use the information given to keep the momentum of the lesson going by:</p> <ul style="list-style-type: none"> - deciding who needs your intervention - who can be encouraged to watch a video before getting help, and - who is using videos effectively 	<p>Use the Lesson Monitoring and Video Watch behaviour to look out for the following things:</p> <ul style="list-style-type: none"> - Students who have got a question wrong repeatedly and have watched the video - do they need your help? These students should be your first focus - Students who are answering questions and never needing to use the videos - is the work too easy for them? - Students who are not attempting a question at all before they watch a video, suggesting that they are not confident enough to try the question first or that they have developed habitual video watching behaviours. They might lack understanding, confidence or are afraid of making a mistake. - Students who have got a question wrong repeatedly but haven't watched the video - do they need to be reminded to use the videos? - Students who use videos to answer questions step by step but don't understand the concept, suggesting that further instruction may be required from the teacher
---	---	---

Facilitate and monitor bookwork

Recognises that technology and handwritten bookwork are important partners for: <ul style="list-style-type: none"> - learning mathematical methods and procedures - helping students to articulate their thoughts - preparing students for exams - gathering feedback for 	Ensure students write down their workings, in their books and support them in completing their Sparx bookwork checks correctly	<p>Set clear bookwork expectations when students first start using Sparx by ensuring they:</p> <ul style="list-style-type: none"> - Use a page layout that helps them to record the bookwork code for each question (use our good Bookwork example if required) - Write their workings where appropriate, in their books - Mark their work after entering their answers into Sparx using the school's marking policy - Clearly identify the answer that was entered into Sparx, for example by circling or underlining it <p>Monitor bookwork by:</p> <ul style="list-style-type: none"> - Use the Lesson Monitoring screen to see which students are regularly getting their bookwork checks incorrect - Regularly check bookwork to make sure students are following the set expectations. (Some schools do this using a peer marking strategy with a scoring system* to check the expected components of good bookwork)
--	--	---

teachers To this end we automatically get students to complete Bookwork checks, helping to make sure they are writing down their workings		*Example scoring system. Give a point for each of: date, title, margins, showing working and indicating final solution clearly.
--	--	---

Assess for learning at the end of the lesson

Provide lesson plenaries that consist of a range of questions on the topics covered during the lesson, without any accompanying student support videos	Choose a method of checking students' understanding of the topics covered during the lesson	<p>Use the Sparx plenary to:</p> <ul style="list-style-type: none"> - Check that students have understood the lesson objectives and are confident that they can now tackle the topics covered in the lesson without needing to use the Sparx supporting videos or to get help from the teacher - To inform future planning, e.g by looking at the plenary insights in the Lesson Summary to see whether students need further practice or would benefit from revisiting the objectives covered in a future lesson
--	---	--

Homework

Sparx	Teacher	In Practice
Monitoring homework completion		
Provide an hour of weekly personalised homework for each student that is linked to individual attainment, and that supports and extends learning at an appropriate level.	Rigorously ensure that students complete their compulsory homework on time and follow up with them if they don't. Encourage students to complete Optional and Target homework	<p>Set high expectations for handing in compulsory homework on time:</p> <ul style="list-style-type: none"> - Advertise hand out and hand in days clearly in the department to help remind students when homework should be completed - Have a maths lesson the day before hand in so students can be reminded to finish their work on time - Run a regular homework club for students to do their homework if they need some additional help - Link homework hand in to the school detention policy and robustly follow up any uncompleted work <p>Support the completion of Optional and Target homework by:</p> <ul style="list-style-type: none"> - Ensuring that students understand the benefits of doing the Optional and Target questions and how it will consolidate and enrich their learning

		<ul style="list-style-type: none"> - Offer to support students who want to complete target homework - Linking the completion of extra homework to the school rewards policy
Using homework to plan next steps in learning		
<p>Automatically add taught topics to homework each week, send weekly emails to class teachers with a summary of the upcoming homework contents, and share information about how each student and class has done after hand in, including highlighting the most common mistakes so you can check for misconceptions</p>	<p>Monitor what goes into homework each week and add or remove topics where necessary.</p> <p>Address highlighted homework misconceptions in class if appropriate and use the data gathered to plan the next steps in learning.</p>	<p>Monitor and adjust the Homework planner each week to ensure the homework covers the topics required:</p> <ul style="list-style-type: none"> - Use the Homework planner to manually* add and remove topics to the homework for the coming weeks depending on what has been taught and understood in lessons that week <p>Use the Insights page to:</p> <ul style="list-style-type: none"> - Decide if any of the highlighted common misconceptions need to be addressed with the class - if only a few students found a question difficult consider whether it is an efficient use of teaching time to address it with the whole class or whether it is worth speaking to a smaller group of students - Review the answers students gave and identify if any of the topics should be addressed in class again. <p>*Any topics that have a Taught icon next to them in the lesson list will be added to homework automatically</p>