Getting the most out of Sparx Maths

Lessons and Homework

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Suggested aims of today's session

1. Discuss what you and your department hope to achieve by using Sparx Maths
2. Investigate the ways in which Sparx can be used effectively, and identify areas of focus that could help you meet your aims
3. Start to plan the specifics of how you will use Sparx in your department and what you could focus on embedding first

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Getting the most out of Sparx maths

Learning together

The tools in Sparx are designed to reduce the time you spend on the administrative burden of planning and evaluating lesson, so you can **concentrate on teaching**

Over the last 8 years we have worked in partnership with our schools and users to investigate the **most effective uses** of the tools in Sparx, and have collated these to share with you here

Key benefits

Before a lesson

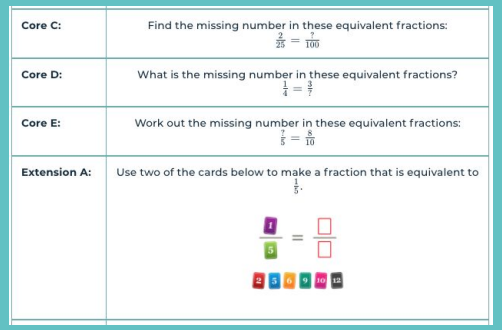
The highest-quality maths questions and content to ensure all students thrive

During a lesson

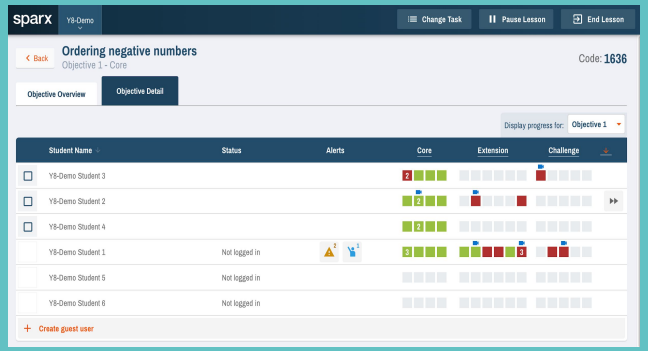
Powerful and actionable data insights to support teachers

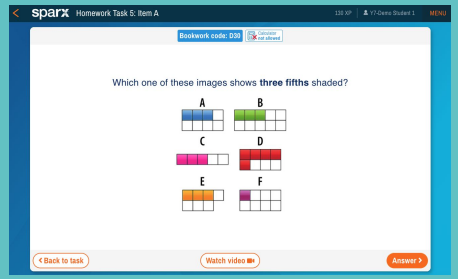
Homework

Personalised homework to reinforce understanding



Core C:	Find the missing number in these equivalent fractions: $\frac{2}{25} = \frac{7}{100}$
Core D:	What is the missing number in these equivalent fractions? $\frac{1}{4} = \frac{3}{7}$
Core E:	Work out the missing number in these equivalent fractions: $\frac{7}{5} = \frac{8}{10}$
Extension A:	Use two of the cards below to make a fraction that is equivalent to $\frac{1}{5}$.





Focus areas

Before a lesson

1. Choosing which objective/s to teach
2. Planning how to teach chosen objectives and to check understanding
3. Preparing teaching and learning activities

During a lesson

4. Managing devices
5. Teaching the whole class
6. Monitoring and supporting individual learning and differentiation
7. Promoting positive student video watch behaviour
8. Facilitate and monitor bookwork

Homework

9. Monitoring homework completion
10. Using homework to plan next steps

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Before a lesson

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1. Choosing which objective to teach

Activity: Look back at a recent objective you have taught using Sparx, and think about the following questions:

1. How did the class do in general on this objective?
2. Were there any students who did much better or worse than others in the class?
3. Is the next objective in your SoL appropriate for this class or would an easier or harder objective be more suitable?
4. Do you need to consider using more than one objective for differentiation purposes?

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Lesson History
See how students did in their last lesson

Upcoming Topics
View the objectives linked to upcoming topics and decide if the suggested, easier or harder objectives are most suitable for moving learning forwards

2. Planning how to teach chosen objectives and check understanding

Activity: look at the next objective/s you plan to teach using Sparx and answer the following questions:

1. What **methods and strategies** will the class need to know to learn these objectives?
2. How will I **explain** how to tackle the example questions to the class?
3. How will I check if **most of the class** understands how to answer the example questions?

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Lesson Outlines
View more information about the objectives in the chosen lesson, along with the methods that students will be expected to know to complete their work

View examples of the questions students will be given

3. Preparing teaching and learning activities

Activity: how could you use Sparx resources, and/or your own to prepare class teaching and learning activities?

Ideas to support your discussion

- Building essential maths skills
- Opportunities for participative learning
- Lessons in which students discover their mathematics
- Maths games

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Sparx Teaching Questions
For teaching the class or smaller groups

Sparx Recap starters
Questions from the last lesson taught

Sparx Plenaries
Questions that cover learning from the current lesson

During your lesson

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During your lesson

A typical maths lesson using Sparx

Step 1	Students get a device, login and start answering starter questions
Step 2	Teacher pauses students and teaches the first objective using chosen resources
Step 3	Students start objective 1 whilst teacher supports groups and individuals
Step 4	Teacher repeats step 2 and 3 for objective 2
Step 5	Teacher checks learning using questioning and/or plenary then ends the lesson

4. Managing Devices

Activity: make a plan for how you will organise the hand out and hand in of devices with your classes and share with students

Suggestions

- Number all devices
- Have device monitors or a student rota for handing devices out
- Position devices in an accessible location in the room
- During thresholding, if entry to room is staggered, allow students to get their own devices

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5. Teaching the whole class

Activity: think about a lesson you plan to teach soon using Sparx and answer the following questions:

1. Do you know what you are going to do to teach the objectives clearly?
2. Have you planned how you will check for understanding whilst avoiding 'what's in my head' type questions?
3. How will you know when it is time to set the class off on their independent tasks?
4. Could you evaluate how successful you were at using your whole class teaching time effectively?

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Teaching Questions

Use to support your delivery of whole class teaching and to model concepts, strategies and methods

6. Monitoring and supporting individual learning and differentiation

Activity: trial focusing on each of the following practices in one of your upcoming lessons using Sparx:

1. Look for students who are finding core questions too easy and move them onto extension/challenge questions
2. Identify, pause and teach small groups of students who are finding the same question/concept tricky
3. Identify students to praise and encourage from the lesson monitoring page to build confidence and resilience in their own ability

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Lesson Monitoring Screen
Use to check understanding, level of question and progress then target students who most need intervention

Pause button
Use to pause, individuals, groups and the class to carry out further teaching when needed

7. Promoting student video use behaviour

Activity: discuss what might be causing the follow video watch behaviours amongst your students and how you could respond:

1. Repeatedly getting questions wrong despite watching a video
2. Answering most/all questions correctly without needing to watch any videos
3. Always watching a video before attempting a question
4. Repeatedly getting a question incorrect but who haven't watched any videos
5. Answering questions correctly by following the videos step by step but struggling to grasp the whole concept

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Lesson Monitoring page
Monitor the blue video watch icons above each student's answers

Video summary
View details of individual video watch behaviour for more detail

8. Facilitate and monitor bookwork

Activity: plan a project for checking and improving bookwork in your classroom/department and consider the following:

- Page layout, including the recording of bookwork codes
- Showing workings
- Self marking of both correct and incorrect answers
- Self and peer marking of bookwork quality
- Identifying the answer entered into Sparx
- Monitoring and follow up of failed bookwork checks

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Boowork check alerts in lessons
Monitor the orange failed bookwork check icons during lessons on the lesson monitoring page

Good bookwork example
See the Sparx Knowledge Base for an example of good bookwork

Homework

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9. Monitoring homework completion

Activity: discuss how to monitor homework and how to motivate and encourage students to complete work on time

Consider:

- How to set high expectations for handing in compulsory homework and how you will ensure this is managed
- How to remind students when homework is due
- Setting up a homework club for students who need some additional help, especially with Target questions
- Linking homework hand in to the school rewards and detention policy
- How to ensure students understand the benefits of doing the Optional and Target questions

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Hand in page
See which students need reminding to finish before hand in day

Student Rewards
Monitor XP rates

Student Detentions
Record who has been set extensions and/or detentions

10. Using homework to plan next steps

Activity: plan how you could use the question level data on the Homework Insights page to address common misconceptions and decide what to teach next

Displayed data:

- The 3 questions that were most commonly answered incorrectly for the class
- The question that each individual student found the most challenging
- Questions that require additional marking (that couldn't be marked by Sparx)

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Insights

View the questions that individual students and the class found tricky each week

Export the three questions that students found the most challenging and use them in the next lesson