



# Challenge Handbook

This is a Handbook for the first round of Challenges, which includes the Junior, Intermediate and Senior Mathematical Challenges. If you need help with a Kangaroo or an Olympiad please see the Handbooks specified from your [Challenges Profile](#).

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## Challenge quick step guide

On this page you will find quick and simple steps to hosting the Challenge for your students.

If you are already confident with using your [Challenges Profile](#) then please feel free to use these as a quick reference before running the Challenge. If you need more in-depth instructions you can click the magnifying glass next to each step.

**Step 1** Choose a date for your Challenge, first round Challenges are run over a 2 day time period and your students can sit the Challenge anytime on those days - **Remember, you don't need to tell us what day you choose.**

If your students sit the Challenge online they will need access to computers, laptops or tablets and be invigilated as you would a normal exam. If your students sit the Challenge on paper you will receive your question papers through the post however you will need to download, and subsequently upload, your student's answer sheets. Further instructions for both of these options are below.

The 2021/2022 Challenge dates are as follow:

[Senior Mathematical Challenge \(SMC\)](#): - 10th - 11th November 2021

[Intermediate Mathematical Challenge \(IMC\)](#): - 2nd - 3rd February 2022

[Junior Mathematical Challenge \(JMC\)](#): - 27th - 28th April 2022



**Step 2** You have the option to use preparation materials with your students. There are online and downloadable practice papers for each Challenge that can be found on their relevant pages below:

[Senior Mathematical Challenge Practice Papers](#)

[Intermediate Mathematical Challenge Practice Papers](#)

[Junior Mathematical Challenge Practice Papers](#)

The online practice Challenges give immediate feedback and are a great way for your students to prepare. Students do not need to log in to access these, they only need to log in to start the actual Challenge.



**Step 3 If sitting online** Download the student usernames and passwords from the 'Students' menu option on your [Challenges Profile here](#). To filter your Challenge logins you can use the Username box, for example type 'jmc' for JMC logins and so on. You do not need to enter the student names here if you don't want to, this can be done by the students themselves before they start the Challenge.

**Step 3 If sitting on paper** you will have received the question papers via post, the only thing you need to download and print are the students' answer sheets. You can do this via the 'Paper answer sheets - download' option from your Challenges Profile. You have the option to pre-enter



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the student's names and you can download them all at once by selecting the top 'download' button, or individually by selecting the 'download' button next to the student's names.



**Step 4 If sitting online** download and distribute invigilator instructions and host the Challenge at your chosen time(s). Students will need to log in at [challenges.ukmt.org.uk](https://challenges.ukmt.org.uk) by entering their unique username and password. After logging in they will need to enter their name and click save. They will then need to select their year group and click START to begin. Each student will have 60 minutes to complete the Challenge (90 minutes for the SMC). Their answers are saved as they go along so if their time runs out, they will not lose their work up to that point!

**Step 4 If sitting on paper** download and distribute invigilator instructions and host the Challenge at your chosen time(s) as normal. Once your students have finished their Challenge you will need to upload their answer sheets to the Challenges Profile within 24 hours of the Challenge finishing. We will send you a reminder email before the upload deadline to make sure you don't forget.



**Step 5** Your results will normally be available around 2-3 weeks after the Challenge has closed, however there can be unforeseen delays, so please wait for us to contact you about your results. You can download your results via your Challenges Profile via the 'Results and certificates' menu option. This will be the same whether your students sat the Challenge online or on paper.



**Step 6** If you have any questions that this handbook does not answer please do not hesitate to [contact us](#).



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## Run-up to the Challenge

### Set your Challenge date

You can choose the dates and times, within the 2 day allotted window, that best suits you and your students. **You do not need to let us know or enter this information to the online system or confirm with us the date you choose.**

The 2021/2022 Challenge dates are as follow:

[Senior Mathematical Challenge \(SMC\)](#): - 10th - 11th November 2021

[Intermediate Mathematical Challenge \(IMC\)](#): - 2nd - 3rd February 2022

[Junior Mathematical Challenge \(JMC\)](#): - 27th - 28th April 2022

All students entered into the Challenge will ideally sit the Challenge at the same time or as close as possible to the same time. This will reduce the likelihood of students passing information to each other. Please ask your students not to share information about the Challenge online until after 8am on the morning after the second Challenge date.

If your students sit the paper on the first day please ensure you collect the question papers back in from students and only release them back to the students at the end of the second day. You may wish to arrange the Challenge on the second day, if you are able, so that students' enthusiasm to discuss the questions after the paper has been taken is not curbed.

### Practice Challenges

After choosing your Challenge date you might want to give students the chance to practice some past papers. This is the best way to make sure that students can prepare for the actual Challenge.

You have the option to use preparation materials with your students. There are online and downloadable practice papers for each Challenge that can be found on their relevant pages below:

[Senior Mathematical Challenge Practice Papers](#)

[Intermediate Mathematical Challenge Practice Papers](#)

[Junior Mathematical Challenge Practice Papers](#)

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The online practice Challenges give immediate feedback and are a great way for your students to prepare. Students do not need to log in to access these, they only need to log in to start the actual Challenge. You can browse the other past papers for the Challenges here also.

### Arrangements for students who are eligible for extra time

At the UKMT, we honour all access arrangements put in place by your school so, for example, if a student is entitled to 25% extra time in exams then this will be honoured for our Challenges also. For students taking the Challenge online you can allocate extra time but this will need to be done before they start the Challenge. You can do this by following these steps:

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- Once logged in, click on the Students menu option (shown in blue), type in the student's name or username using the filter boxes (shown in red), and select the correct student (shown in yellow).

- Once you have clicked on them you will see a screen like this. You now need to click 'edit' (shown in blue).

- You will now see a screen like this. Enter the number of minutes you would like to add (shown in red) and click save (shown in green).

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For blind or partially sighted students we can provide braille or large print papers on request. All online Challenges also have the option for the question to be read out loud by the device.

### Selecting the correct year groups (for online Challenges)

Please prepare your students for selecting the correct year group upon logging in. Not doing so will affect their certificates. For example, if they select Year 8 and they are the only one who does so, this will reward them with a 'Best in Year' certificate, or they could potentially lose out on a 'Best in Year' certificate or block someone else from receiving this.

Once they have selected a year group and completed the Challenge we cannot quickly amend this, it needs correcting by the Challenge Profile developers and can take some time, meaning a delay in you receiving and handing out correct certificates.

Below is an example of the year group choices for the JMC 2021.

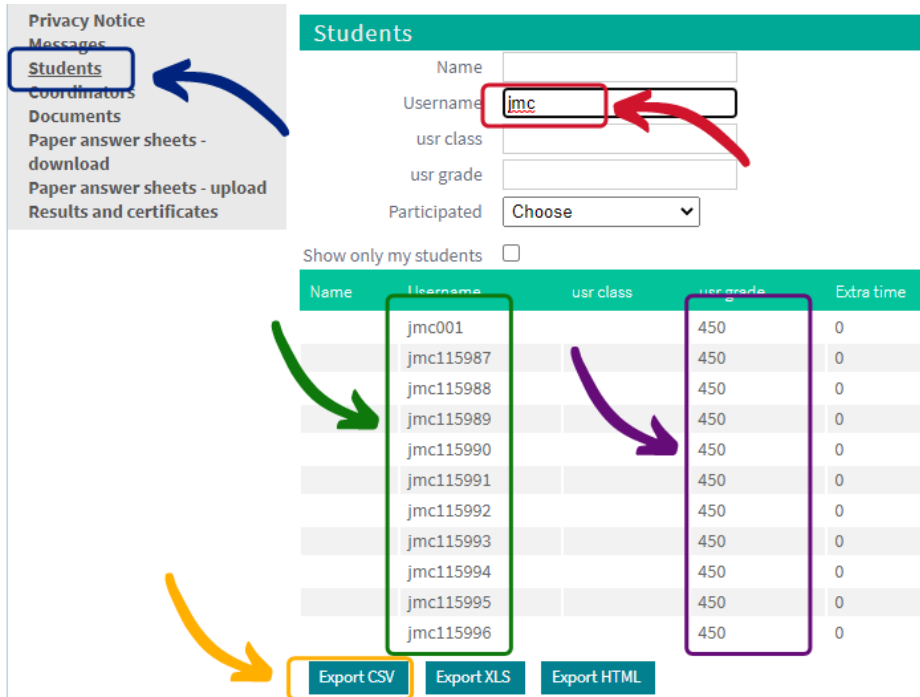
The screenshot shows a web interface with a dark blue header containing 'Welcome' and 'Challenges' (with 'Challenges' underlined in red). Below the header is a light blue sidebar with 'User score' and a main content area. The main content area is titled 'JMC 2021' and contains a bulleted list of year group options:

- England, Wales and Overseas Year 6 and below
- England, Wales and Overseas Year 7
- England, Wales and Overseas Year 8
- Scotland Year P7 and below
- Scotland Year S1
- Scotland Year S2
- Northern Ireland Year 7 and below
- Northern Ireland Year 8
- Northern Ireland Year 9

### Downloading and distributing your student logins (for online Challenges)

**Step 1** To download your student logins, log in to your [Challenges Profile](#) and click on the Students menu option (shown in blue). You may see previous online Challenges and/or Olympiad logins are still there, if this is the case you need to filter out your Challenge logins by using the filter boxes. For example, if you are hosting the SMC online type 'smco' or if you are hosting the JMC online type 'jmco' and so on (shown in red). Your students should then appear (shown in green).

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**Students**

Name

Username

usr class

usr grade

Participated

Show only my students

Name	Username	usr class	usr grade	Extra time
	jmc001		450	0
	jmc115987		450	0
	jmc115988		450	0
	jmc115989		450	0
	jmc115990		450	0
	jmc115991		450	0
	jmc115992		450	0
	jmc115993		450	0
	jmc115994		450	0
	jmc115995		450	0
	jmc115996		450	0

Export CSV Export XLS Export HTML

Before downloading your online logins you have the option to pre-populate your student's names. You do not need to do this, as your students can enter their name upon logging in, however the option for you to do it is there. We are in the process of building a feature to allow you to upload names en masse and will notify you when this is available.

You can then download this as a spreadsheet using the Export CSV or Export XLS buttons or use Export HTML to download a version that can be cut out and distributed (shown in yellow).

The spreadsheet will contain usernames and passwords. **Please make sure you expand the whole username column to see the whole username. Please ignore the columns labelled 'Class' and 'Grade', this is for internal use only (shown in purple).**

## Step 2

Send and hand out the usernames and passwords to your students. Here are 2 possible options for sending these out to your students:

1. Send each student an individual email containing their username and password or use a mail merge software to generate this for you.
2. Send the entire spreadsheet to all students and instruct them to search for their name and use their allocated login and password. This may be the fastest option as you will not need to separate anything out. However please note that it is possible for multiple students to use the same username and password and the student who logs in last will have their answers saved. So it is crucial for your results that the student uses their own username and password only.
3. Cut out each username and password from the HTML file and hand one to each student.

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## Entering student names (optional for paper Challenges)

Please note answer sheets will appear on your profile 3 weeks before the Challenge date.

Before downloading and printing these you have the option to pre-populate student names. We appreciate **entering large numbers of student names** is currently onerous. We are currently in the process of improving this feature so names and year groups can be uploaded en masse. If you choose not to pre-populate names, students can enter their names directly on to the answer sheet themselves for it to be read by machine during marking.

If you would like to enter names you can do this by going to the 'Paper answer sheets - download' tab from the menu (shown in blue). Filter using the 'Challenge' dropdown option to select the Challenge you are wanting to download the sheets for. You will then see a list of your student's answer sheets (shown in red).

To enter a name and year group click on a row, this will then show you the options for 'Group' and 'Name' of each one. Here you can enter the name and select a year group for each student and click **'Save'** before selecting the **'Next'** button to move onto the next student.

**Import files** (dropdown)

- Paper answer sheets - download** (highlighted with blue box and arrow)
- Paper answer sheets - upload
- Results and certificates
- Reports (dropdown)
- Statistics (dropdown)
- Orders
- not visible for coordinators

**Paper answer sheets - individual download**

ID:

Name:

Active: Yes (dropdown)

Group: (Anything) (dropdown)

Template: (Anything) (dropdown)

Uploaded: (Anything) (dropdown)

ID	Name	Group	Template	Download	Erase
1369			Junior Kangaroo 2021	Download	Erase
1370			Junior Kangaroo 2021	Download	Erase
1371			Junior Kangaroo 2021	Download	Erase
1372			Junior Kangaroo 2021	Download	Erase
1373			Junior Kangaroo 2021	Download	Erase
1374			Junior Kangaroo 2021	Download	Erase
1375			Junior Kangaroo 2021	Download	Erase
1376			Junior Kangaroo 2021	Download	Erase
1377			Junior Kangaroo 2021	Download	Erase
1378			Junior Kangaroo 2021	Download	Erase

1/2

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## Downloading answer sheets (for paper Challenges)

Please note that every student must have their own unique answer sheets. The QR codes can not be shared, so one sheet can not be photocopied and given to all students.

You can download per student by clicking the 'Download' option under 'individual download' or you can download them all in one go by clicking 'Download' after the Challenge name as shown below.

### Paper answer sheets - download

Press the 'Download' button below to download all your paper answer sheets in one PDF document.

Before downloading and printing these it is **essential** that you pre-populate the names and year groups. You can do this by clicking on a row, filling out the student's name and selecting their year group, you **must then click 'Save'** before pressing the 'Next' button to fill out the next student's details.

For full instructions on how to do this, including screenshots, please see the **Olympiad Handbook**.

We appreciate entering large numbers of student names is currently onerous, if you have entered more than 10 students to MOG, and would like us to upload the names and year groups for you, please send a spreadsheet to [challenges@ukmt.org.uk](mailto:challenges@ukmt.org.uk) with the student names and their year groups.

Name

MOG2021	Names	Download	15 Documents
---------	-------	----------	--------------

Junior Kangaroo 2021	Names	Download	16 Documents
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### Paper answer sheets - individual download

## Downloading the Invigilator Instructions

To download the **Invigilator Instructions** you will need to go to the 'Documents' menu option on your [Challenges Profile](#).

## Challenge Diagrams (online and paper Challenges)

We have produced this new resource for students sitting the Challenge, whether they are sitting it online or on paper.

These diagrams are featured already on the paper version, however these are slightly larger so your students may still benefit from having them.

You can download and print this document and provide it to your students just before they start the Challenge.

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## On your Challenge day

### Running the Challenge online

It's now time to start your students off with the Challenge. The Challenge should be sat under exam conditions whether being hosted online or on paper. We have provided some invigilator instructions for you, which can be found in the 'Documents' section of your Challenges Profile.

If students are self-isolating at home due to Covid-19 all online entries can be used at home using the same format as would have been used in school. We ask that students at home are still invigilated via online supervision from a teacher.

#### Step 1

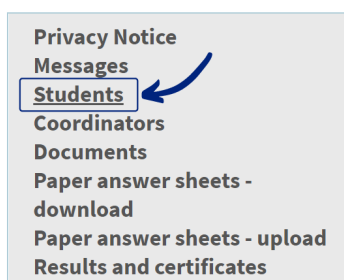
Make sure students are on a computer, laptop, tablet or phone and know their username and password. Let students know that they can attempt the questions in any order, and can always go back to change an answer. Their answers will be saved immediately. When they are done they can let the timer run to zero, close their browser, logout or select the 'I have finished' option beneath question 25. **Please note that if a student uses their full allotted time and the Challenge closes itself down, all answers will be automatically saved and not lost.**

#### Step 2

Ask the students to go to: [challenges.ukmt.org.uk](https://challenges.ukmt.org.uk) and begin by entering their username and password. Their password will start with a **capital P**. They will then need to enter their name, gender (optional) and for SMC answer eligibility questions for BMO1. They then need to click save and select their year group. Selecting their year group is really important as it will avoid complications with results and certificates. The students will then see a screen of instructions, please encourage them to read these thoroughly before pressing **START**.

Students can attempt the questions in any order and their answers will be saved immediately but they can go back right up to the end to change an answer. When they are done they can close their browser, logout or select the 'I have finished' option beneath question 25. No matter which of these they do (and even if the system logs them out automatically) all answers they have given to that point will be saved.

You will be able to see which students have logged in to take part in the Challenge by clicking on your 'Students' menu option (shown in blue). You can then filter by typing 'jmc' into the 'Username box (shown in red), which will show which students have or haven't participated. This will automatically update with the students name and show whether they have participated or not. If any students have spelt their name incorrectly you can click on the student and edit this on their behalf. To view just those who have participated you can use the 'Participated' drop down box.



**Students**

Name

Username

usr class

usr grade

Participated

Junior Kangaroo 2021	Junior Mathematical
Not participated	Not participated
Not participated	Not participated
Not participated	Not participated
Not participated	Not participated
Not participated	Not participated
Not participated	Not participated
Not participated	Not participated
Not participated	Not participated
Not participated	Not participated
Not participated	Not participated
Not participated	Not participated
Not participated	Not participated

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### Taking part yourself

You, as teachers, are able to take part in the online Challenge yourself. You will be able to log in using your normal Challenges Profile credentials and sit the Challenge and it does not matter which year group you select. This will not affect your school's results as your results will be listed as teachers.

[Please make sure you are logging in to the correct place here.](#)

### Running the Challenge on paper

It's now time to start your students off with the Challenge. Students will need the question papers you were sent through the post, a unique answer sheet and diagrams (optional) that you have downloaded from your Challenges Profile. They will need to enter their gender (optional) and for SMC answer eligibility questions for BMO1.

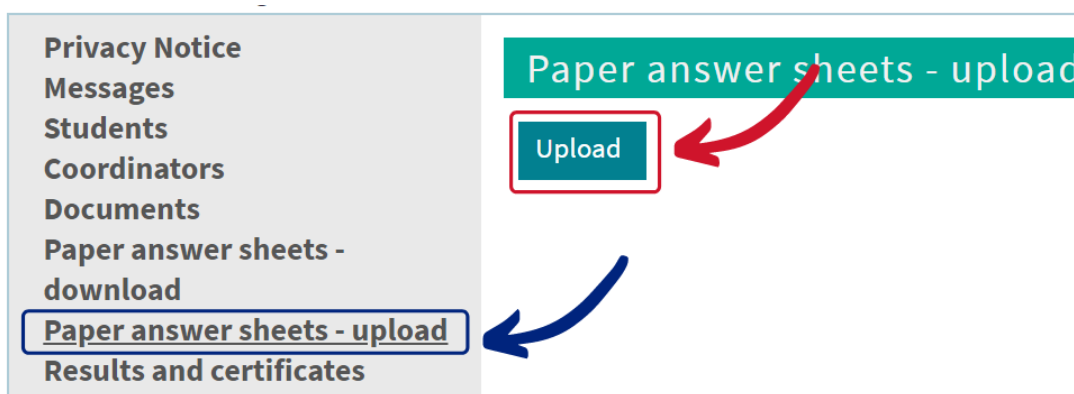
If students are self-isolating at home due to Covid 19 they will need to sit the Challenge online. Please [contact us](#) so we can convert their paper entry into an online one.

We have provided some invigilator instructions for you, which can be found in the 'Documents' section of your Challenges Profile.

### Uploading your answer sheets (for paper Challenges)

If your students sat the Challenge on paper you will need to upload their answer sheets on to your [Challenges Profile](#).

Firstly, you will need to scan the answer sheets to your computer. The scan needs to capture the corner markers and QR codes on each page. It does not matter what you call these files but it needs to be saved as a PDF. You then need to select the 'Paper answer sheets - upload' menu option on your Challenges Profile (shown in blue) and click the 'Upload' button (shown in red). Here you will see some brief instructions and a 'Browse' button that will allow you to upload the files from your computer.



**Your files must be uploaded as PDFs and cannot be larger than 10MB.**

You can upload all your files as one PDF and do not need to do one PDF per student. However if your files are over 10MB you can upload more than one.

If you have any problems with uploading please [contact us](#).



## **Trouble-Shooting (for online Challenges)**

Unfortunately there are always going to be occasions when things do not go as smoothly as they should. Here are a few ways to navigate some potential issues that may arise but please do [contact us](#) for any support you need.

### **Please make sure**

1. The student has javascript enabled.
2. The student is not blocked by any firewalls/filters from using the Challenges site.

### **Problems with a device or the internet**

Once a student presses start the timer will start and will not stop even if they are cut off. However there are possible solutions.

If the student has just started:

1. The student could switch to another device using their existing login.
2. If you have fewer participants than logins (perhaps someone is absent, or you had to round to 10 anyway) you can allow the process to start again by issuing an unused username and password, and if desired switch to a new device.

If the student has used more than 5 minutes and needs to pick up where they left off:

3. Please [contact us](#) to let us know which username(s) were cut off and how much time was remaining. We will then allocate these usernames more time.

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### **Problems with login credentials**

If a student's username and password does not work please contact us with the usernames that are experiencing problems and we can investigate this for you.

### **Anything else**

[Contact us.](#)

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## After your Challenge day

### Answers and extended solutions

Answers and extended solutions will be uploaded to the 'Documents' section on your [Challenges Profile](#) no more than 1 week after the Challenge has finished, we will be in touch with you to let you know when they are available.

If your students took part online you have the option to ask students to retain login details so that they will be able to log back in to compare their answers with the solutions, when they are available. The students will be able to see the question, the answer options with their answer highlighted, whether they answered correctly and a solution explanation underneath.

### Getting results & downloading certificates

Results and certificates should be available on your Challenges Profile within 2-3 weeks after the Challenge has closed, however there can be unforeseen delays, so please wait for us to contact you about your results.

You can download your results and certificates via your [Challenges Profile](#) via the 'Results and certificates' menu option (shown in blue). This will be the same whether your students sat the Challenge online or on paper. You will be able to see a list of results and certificates for various Challenges (example shown in red). You can click on these and they will automatically download to your computer.

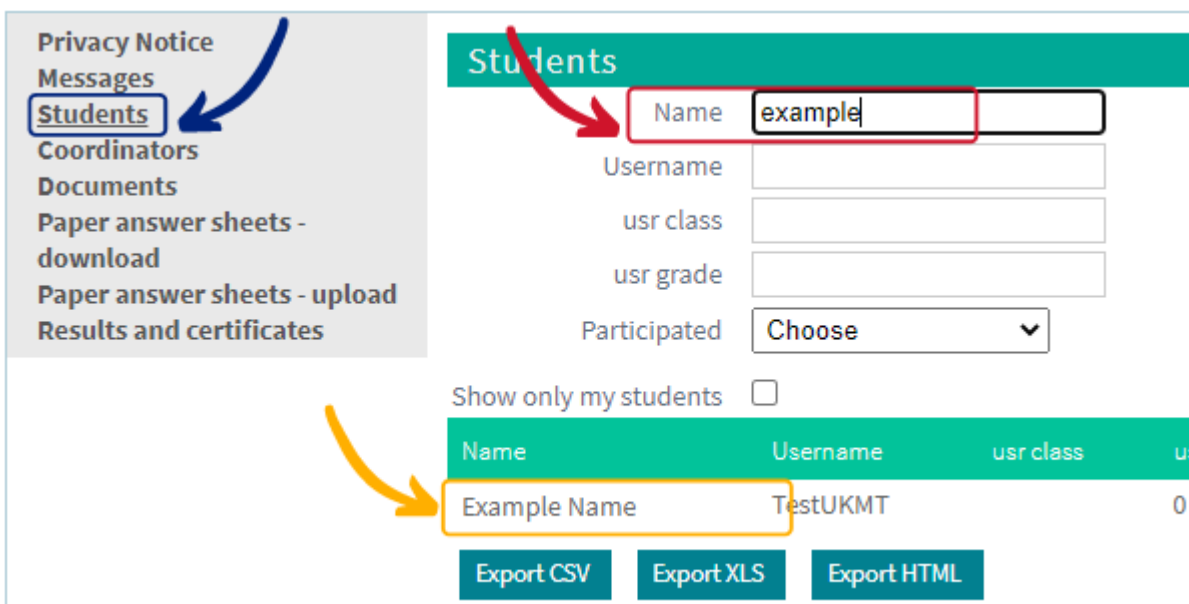
Filename
Students
UKMT Accounts.csv
UKMT Accounts.html
SMC 2020 Results
SMC 2020-Results.xlsx
England, Wales and Overseas Year 10 or below-Results.xlsx
SMC 2020 Certificates
UKMT Certificates.pdf
England, Wales and Overseas Year 10 or below-Certificates.pdf
England, Wales and Overseas Year 10 or below-Certificates.pdf

**Please note: Certificates are only available online - we won't be sending paper copies.**

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### Amending certificates

If for any reason a student's name is incorrectly spelt on a certificate you can amend this by clicking the 'Students' menu option (shown in blue). You can then search for the student by entering their name (shown in red) and clicking on the relevant student (shown in yellow).



The screenshot shows the 'Students' management interface. On the left is a navigation menu with 'Students' highlighted in blue. The main area has a search form with a 'Name' field containing 'example', and fields for 'Username', 'usr class', 'usr grade', and 'Participated'. Below the search form is a table with columns 'Name', 'Username', 'usr class', and 'us'. A student entry 'Example Name' is highlighted in yellow. At the bottom are buttons for 'Export CSV', 'Export XLS', and 'Export HTML'.

This will then give you the option to edit their information (shown in green). Please correct their name and press 'Save' (shown in purple). This will automatically update the student's information and certificate so you can then re-download their certificate and it will show the correct spelling.



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Edit student

Firstname	<input type="text" value="Example"/>
Lastname	<input type="text" value="Name"/>
Username	<input type="text" value="TestUKMT"/>
Password	<input type="password" value="\$2y\$10\$BY2aYqUM9dJU.Fx"/>
Email	<input type="text"/>
Gender	<input type="text" value="Unknown"/>
usr class	<input type="text"/>
Extra time	<input type="text" value="0"/>
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

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### Invitations to follow-on-rounds

We will contact you to let you know if you have any students that have qualified for a follow-on-round.

You can search for the online logins for these follow-on-rounds via the 'Students' menu option from your [Challenges Profile](#). For example, in the username box, type in 'jka' for the Junior Kangaroo or 'cay' for the Cayley Olympiad.

For more information about our follow-on-rounds, including instructions on how to host them, please consult the Kangaroo or Olympiad Handbooks.

### Contact Us

To get support, send an email to [challenges@ukmt.org.uk](mailto:challenges@ukmt.org.uk). The email address is monitored from 8.30am to 5pm during week-days. We will endeavour to respond to your email within 1 working day.

For any **emergencies** that need resolving within a 1 hour timescale you can contact us on **0113 365 1121** between 9am-5pm on Monday-Friday. This is to be used if you require any **urgent** help, if you have a problem or question that needs a response within 1 working day please email us on [challenges@ukmt.org.uk](mailto:challenges@ukmt.org.uk). This is so we can keep the phone lines open for teachers who do require urgent help. If the phone rings out and you cannot get through to us this is because we are already on other calls, please try again in 5 minutes.

If you have any other enquiries about something other than our Challenges please contact us at [enquiries@ukmt.org.uk](mailto:enquiries@ukmt.org.uk).

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