

A circular inset image in the top left corner shows four students in a dark room, illuminated by the light from a screen they are all looking at. They appear to be engaged in a collaborative activity, possibly a physics experiment or simulation. One student in the center-right is wearing a white t-shirt with a classical painting print.

**Prof. Lisa Jardine-Wright**  
Joint Director of STEM SMART  
Director of Isaac Physics

*Teaching Professor in Physics  
Fellow of Churchill College*



9:15 - 9:30

Get Ready



# Welcome to STEM SMART 2025!

Please read/work through these 3 steps now

1

- Go to [isaacphysics.org](https://isaacphysics.org) and login
- **If you are doing computer science:** go to [adacomputerscience.org](https://adacomputerscience.org) and login.
- You MUST use the **same email address to login** EVERY time.

2

Make sure you have with you **now**

- Notebook or paper
- Pens, pencils, ruler
- Scientific calculator
- A drink?

3

Please read this pdf “STEM SMART single or double maths?”

[tinyurl.com/smартmathschoice](https://tinyurl.com/smартmathschoice)



9:30 - 9:50

Welcome and Introductions



# Housekeeping

## CODE OF CONDUCT

**The code of conduct that you have signed requires you to NEVER share personal information with other students or staff online.**

- Do **NOT** share any personal contact information on Zoom or Moodle or through any other means.
- Staff and students are obliged to report this if they see that it has happened.

## CHAT FUNCTION

**You MAY be asked to post ANSWERS to questions that we ask you.**

- The chat function will only be open when you have been asked to post an answer to a question.
- Do **NOT** post questions in the chat.
- Do **NOT** post messages to other students in the chat.

## ASKING A QUESTION

**We will be using SLIDO for this.**

- You will have a chance to ask questions BUT **most of your questions will be answered during this morning if you listen carefully.**
- **Write down any questions** that you have and tick them off when you have heard the answer.



# Welcome: Meet the team

Physics



Nicki



Robin



Lewis

Biology



Ingrid



Andrea

Chemistry

Maths



Matthew



Jonathan



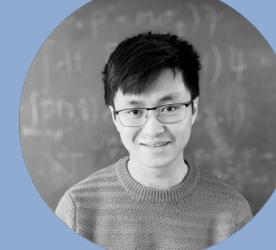
Julia



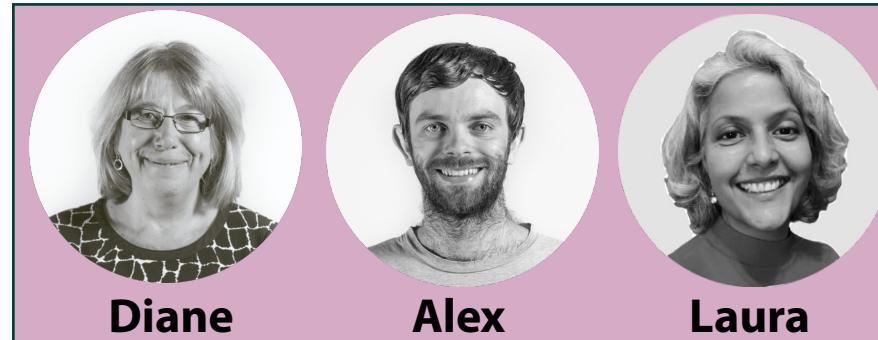
Anton



Lisa



Kimlam

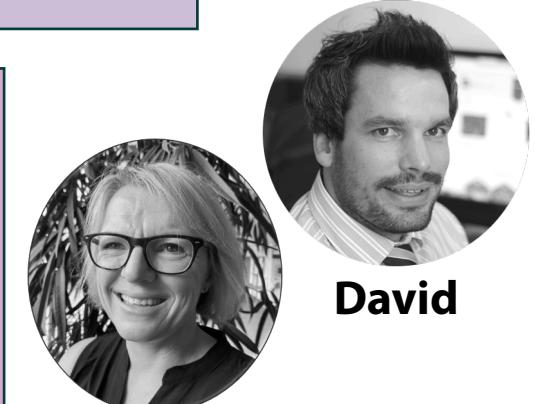


Diane

Alex

Laura

Computer Science



Liz



David

# Aims

## RAISE ATTAINMENT

Raise A-level attainment and improve problem solving skills.

## BUILD CONFIDENCE

Students who follow the programme, engaging regularly and frequently, will demonstrate a commitment to succeed, build confidence in managing their work, rest and play and have belief in their own ability.

## STRENGTHEN APPLICATIONS

Continued engagement with the programme over 17-months will demonstrate a commitment to succeed which is viewed positively by employers and universities.

Regular and frequent practice in maths and science will improve admissions test scores and interview performance.



# What can STEM SMART do for you?



A 2022 STEM SMARTie receiving their exam results in August 2023 and securing their university place to study Computer Science at Cambridge.

## OUR DATA SHOWS THAT:

Students who **attempt more questions** and **attend more tutorials** on STEM SMART achieve:

- **Better examination grades**
- More likely to accept their **first-choice university place**

"STEM SMART has been very helpful for me. The tutorials have given me a more in-depth understanding of certain topics, and have revisited areas that I had gaps in.... I love maths, I love problem solving, but you still need to be disciplined to get the work done. I'd definitely recommend STEM SMART to others - it pushes you to revise, because it's a target you want to reach each week, that's separate from your college work."



# What can STEM SMART do for you?

## WHAT SHOULD YOU AIM TO DO?

- ✓ Follow a **maximum of 3** subject streams:
  - If you are doing **2 or 3 STEM SMART subjects at school**, you should **follow all of these subjects on STEM SMART**.
  - If you are doing **4 or more STEM SMART subjects at school**, you **should follow 3 subjects on STEM SMART**.  
**Either single or double maths and 2 science subjects** that you find **most challenging at school**.
- ✓ This is **your programme**, and it is for you to decide how much extra work is sensible to do given your other commitments BUT it is better to do 3 subjects on STEM SMART and do more attempts and attend more tutorials than to do 4 subjects and not attempt very much in any of the 4.
- ✓ Certificates are awarded in **December** according to **question attempts and attendance at tutorials and mentor sessions** from **January 2025** to end **November 2025**:
  - **Gold = 70% or more**, **Silver = 55% - 69%**, **Bronze = 40% - 54%**
  - Participation = 10% - 39%



# How does it work? Academic Plan

## WEEKLY ASSIGNMENTS

**2-3 hours per week**



**1 hour** per subject per week  
For each subject studied at school (up to max 3).

## WEEKLY TUTORIALS

**1-2 hours per week**



**1 hour** maths  
**½ hour** biology, chemistry, computer science & physics.

## MENTORING

**1 hour** per fortnight



**Phase 1 only**



## STEM SMART 2025 Phase 1

Course Settings Participants Grades Reports More

## What is STEM SMART?

**SMART** stands for **S**ubject **M**astery and **A**ttainment **R**aising **T**uition. This course aims to support your maths and science study as you learn and prepare for your examinations, and provide advice and tuition for application to university courses.

The course is structured in 3 phases:

- Jan - July 2025: Consolidating Knowledge and Building Problem-Solving Skills
- Sep - Dec 2025: Preparing for Application to Competitive Universities (optional 4 day residential in Cambridge, 18 - 21 August 2025)
- Jan - May 2026: Securing Strong Examination Performance and Achievement



Each Saturday, (before the Monday start of each week), a new tile will be revealed below - click on the tile to work through the activities for the week.

Note: We understand that all students will need to miss tutorials from time to time. All tutorials are recorded, and you can find links to the recordings at the end of each past week's page here (see below). If you are going to miss a set of tutorials, however, we advise you to email us at [stemsmart@isaacphysics.org](mailto:stemsmart@isaacphysics.org), giving the reason, so that we are aware and can take this into account when we consider student engagement with the programme.

Important Announcements

From your tutors

Mentor Forum

Available until 22 June 2025, 12:40 AM

Getting Started

Launch: Sat 11 Jan

Phase 1: Weekly Plan

Week 1: 13th Jan

# 9:30 – 9:50am: Welcome Using Moodle

- We will be showing screenshots of Moodle today – do **not** login today.
- It is essential that you login to Moodle each week of the programme.**

[tinyurl.com/25smartmoodle](https://tinyurl.com/25smartmoodle)

- When you login to Moodle using this link, you will see this page.
- You can review all the information **after today** by clicking on

**Launch: Sat 11 Jan**



## Timetable

Time	Activity / Action	Information & Links Use these links to jump to the relevant part of this page
9:15-9:30	<b>Get ready</b> <ul style="list-style-type: none"><li>Join Zoom call and check technology is working.</li><li>Logon to Isaac Physics</li><li>Logon to Ada Computer Science (if doing computer science)</li></ul>	Jump to <a href="#">Get Ready</a> links and information
9:30-9:50	<b>Welcome &amp; Introductions</b>	Jump to <a href="#">Welcome &amp; Introductions</a> links and information
9:50-10:00	<b>Goals &amp; Core Values</b>	Jump to <a href="#">Goals &amp; Core Values</a> links and information
10:00-10:45	<b>Week 1: Mathematics</b> Single Maths / Double Maths Assignment	Jump to <a href="#">Week 1: Mathematics</a> links and information
<b>10:45-11:00</b>	<b>BREAK</b>	
11:00-11:30	<b>Week 1: Physics &amp; Chemistry</b>	Jump to <a href="#">Physics &amp; Chemistry session</a> links and information
11:30-12:00	<b>Week 1: Biology &amp; Computer Science</b>	Jump to <a href="#">Biology &amp; Computer Science session</a> links and information
12:00-12:15	<b>Get set for STEM SMART:</b> <ul style="list-style-type: none"><li>Planning your space</li><li>Planning your time</li></ul>	Jump to <a href="#">Get set for STEM SMART</a> links and information
12:15-13:00	<b>Meet your mentors + Q&amp;A</b>	Jump to our <a href="#">meet your mentors</a> section to find out how to meet your group.
13:00	<b>END</b>	When you have finished your meeting with your mentor you are free to go.

# 9:30 – 9:50am: Welcome Using Moodle

- Time for welcome and introductions



## Welcome & Introductions (9:30 - 9:50am)

In this section of the programme we will introduce you to the team that will be working with you on the STEM SMART programme. We will also spend a time getting to know the **web platforms** (Moodle, Isaac Physics and Ada Computer Science) that you will be using for remote learning on STEM SMART.

### Using Moodle

It is **most important** that each week you login to Moodle to see your weekly work.

Each week, the weekly page on Moodle will provide:

- hints and tips on managing your time, your workload and how to solve science and maths problems,
- support materials for each of your subjects such as
  - topic summary sheets
  - 1-2 min intro videos to help you get started or revise topics
- forums to contact your tutors and mentors to ask questions in preparation for the tutorials each week

### Isaac Physics & Ada Computer Science:

Isaac Physics and Ada Computer Science will email you with your weekly assignments but please login to Moodle and don't just rely on these automated emails to do your weekly work as you will miss out on a huge amount of help and support.

Isaac Physics has a number of features such as maths and chemistry equation editors, a graph sketcher and it asks that students think about their use of **significant figures**.

Have a go at entering some equations and graphs now.

1. Questions that ask for maths equations
2. Have a go at sketching a straight line graph
3. Try balancing some chemistry equations

Chemistry and maths equation editor video demonstration:



Ada Computer Science has a Boolean expression editor. You will be given instructions for using this when the relevant assignment is set.

# 9:30 – 9:50am: Welcome & Introductions

- Read through this section on the screen here.

- This information will always be on Moodle for you to refer to.

- Attempt tasks 1, 2 and 3.

1. [tinyurl.com/ipmathseqns](http://tinyurl.com/ipmathseqns)
2. [tinyurl.com/ipgraph](http://tinyurl.com/ipgraph)
3. [tinyurl.com/ipchemeqns](http://tinyurl.com/ipchemeqns)

- On Moodle you can click "**Mark as done**" to keep track of what you have completed.



9:50 -10:00

Goals and Core Values



## Timetable

Time	Activity / Action	Information & Links Use these links to jump to the relevant part of this page
9:15-9:30	<b>Get ready</b> <ul style="list-style-type: none"><li>Join Zoom call and check technology is working.</li><li>Logon to Isaac Physics</li><li>Logon to Ada Computer Science (if doing computer science)</li></ul>	Jump to <a href="#">Get Ready</a> links and information
9:30-9:50	<b>Welcome &amp; Introductions</b>	Jump to <a href="#">Welcome &amp; Introductions</a> links and information
9:50-10:00	<b>Goals &amp; Core Values</b>	Jump to <a href="#">Goals &amp; Core Values</a> links and information
10:00-10:45	<b>Week 1: Mathematics</b> Single Maths / Double Maths Assignment	Jump to <a href="#">Week 1: Mathematics</a> links and information
<b>10:45-11:00</b>	<b>BREAK</b>	
11:00-11:30	<b>Week 1: Physics &amp; Chemistry</b>	Jump to <a href="#">Physics &amp; Chemistry session</a> links and information
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12:00-12:15	<b>Get set for STEM SMART:</b> <ul style="list-style-type: none"><li>Planning your space</li><li>Planning your time</li></ul>	Jump to <a href="#">Get set for STEM SMART</a> links and information
12:15-13:00	<b>Meet your mentors + Q&amp;A</b>	Jump to our <a href="#">meet your mentors</a> section to find out how to meet your group.
13:00	<b>END</b>	When you have finished your meeting with your mentor you are free to go.

# 9:50 – 10am: Goals & Core Values

- Reflecting on why we want to learn and what our goals are.



# What do you value?

# What do you want to achieve?

# Why is learning important to you?

What is important to you in Life?

Why might you try harder or try again?

What motivates you to learn?

How do you feel when you can't do something?

Why might you take on a challenge?

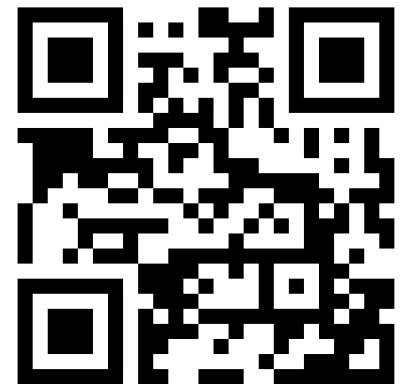


Acceptance	Accountability	Achievement	Adaptivity	Adventure	Advocacy
Ambition	Appreciation	Assertiveness	Attractiveness	Authenticity	Autonomy
Balance	Being the best	Belonging	Benevolence	Beauty	Boldness
Brilliance	Calmness	Carefulness	Caring	Challenge	Charity
Cheerfulness	Cleverness	Collaboration	Community	Communication	Commitment
Compassion	Competence	Competitiveness	Consistency	Contribution	Cooperation
Creativity	Credibility	Curiosity	Daring	Decisiveness	Dedication
Dependability	Determination	Diligence	Discipline	Diversity	Efficiency
Elegance	Empathy	Encouragement	Engagement	Enjoyment	Enthusiasm
Equality	Ethics	Excellence	Exploration	Expressiveness	Fairness
Faith	Fame	Family	Financial security	Flexibility	Freedom
Friendships	Fun	Generosity	Grace	Growth	Happiness
Hard work	Health	Honesty	Humility	Humour	Impact
Improvement	Inclusiveness	Independence	Individuality	Innovation	Inspiration
Integrity	Intelligence	Intuition	Joy	Kindness	Knowledge
Leadership	Learning	Legacy	Life-long learning	Love	Loyalty
Making a difference	Mastery	Mindfulness	Motivation	Optimism	Open-mindedness
Order	Originality	Passion	Peace	Perfection	Performance
Perseverance	Personal development	Preparedness	Playfulness	Pleasure	Popularity
Quality	Power	Relationships	Proactive	Problem solving	Professionalism
Punctuality	Recognition	Results-oriented	Risk taking	Resilience	Resourcefulness
Responsibility	Responsiveness	Service	Simplicity	Safety	Security
Self-control	Selflessness	Teamwork	Thoroughness	Spirituality	Stability
Success	Thankfulness	Understanding	Uniqueness	Thoughtfulness	Timeliness
Traditionalism	Trustworthiness	Wealth	Wellbeing	Usefulness	Versatility
Vision	Warmth			Wisdom	Zeal

# Which of these is your strongest core value?

- This reflection toolkit will help you throughout your studies.

[tinyurl.com/ipreflect](http://tinyurl.com/ipreflect)



# Your STEM SMART journey begins NOW!

## In each of the following sections we will....

1. Join the subject group on Isaac
2. Register for appropriate tutorial on Zoom
3. Get started on your work for week 1 (which starts on Monday)
4. Understand how your tutorials will work and how they will be structured.
5. We will go through this all step by step and give you the necessary links one by one  
**BUT...**
6. We will also provide a quick start guide as a reference (includes links and FAQs)



[tinyurl.com/quickstartsmart](https://tinyurl.com/quickstartsmart)



# Week 1: Mathematics

10 – 10:45am



## Timetable

Time	Activity / Action	Information & Links Use these links to jump to the relevant part of this page
9:15-9:30	<b>Get ready</b> <ul style="list-style-type: none"><li>Join Zoom call and check technology is working.</li><li>Logon to Isaac Physics</li><li>Logon to Ada Computer Science (if doing computer science)</li></ul>	Jump to <a href="#">Get Ready</a> links and information
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10:00-10:45	<b>Week 1: Mathematics</b> Single Maths / Double Maths Assignment	Jump to <a href="#">Week 1: Mathematics</a> links and information
<b>10:45-11:00</b>	<b>BREAK</b>	
11:00-11:30	<b>Week 1: Physics &amp; Chemistry</b>	Jump to <a href="#">Physics &amp; Chemistry session</a> links and information
11:30-12:00	<b>Week 1: Biology &amp; Computer Science</b>	Jump to <a href="#">Biology &amp; Computer Science session</a> links and information
12:00-12:15	<b>Get set for STEM SMART:</b> <ul style="list-style-type: none"><li>Planning your space</li><li>Planning your time</li></ul>	Jump to <a href="#">Get set for STEM SMART</a> links and information
12:15-13:00	<b>Meet your mentors + Q&amp;A</b>	Jump to our <a href="#">meet your mentors</a> section to find out how to meet your group.
13:00	<b>END</b>	When you have finished your meeting with your mentor you are free to go.

# 10 – 10:45am: Week 1: Mathematics

- Our first subject session to get us started on the work for this week.



# Week 1 Mathematics: Aims of this session

1. Join the relevant Isaac Physics **maths group**
2. Register for appropriate tutorials on Zoom
3. Get started on your maths work for week 1  
(which starts on Monday)
4. Understand how your tutorials will work and  
how they will be structured.
5. At 10:25 – use the zoom poll to tell us which  
question you would most like to discuss.
6. At 10:30 - we will go through main points of  
top 2 most voted for questions.

## X X<sub>n</sub> Maths Session (10:00 - 10:45am)

We will show you some of the questions on the first week's maths assignments (boards). Make sure you have a piece of paper and a pen ready to try these out with our guidance.

The aim is to build your skills and confidence by doing the questions. Do as many as you can in the time - each question is an achievement in itself. Some questions are a challenge, and our aim is to develop your ability and approach so that you can face these questions with confidence. The development will take time - so be patient with yourself, and use the tutorials to help you get 'unstuck'.

Now is also a good opportunity to make sure you:

1. join the Isaac Physics group.
  - [click to join the SINGLE maths group](#)
  - [click to join the DOUBLE maths group](#)

2. register with Zoom for your weekly maths tutorials (you only need to register once - the link will then be the same every week). You will only need to attend **ONE** tutorial per week and that should be the same time and day each week.

Please click on one tutorial time to register for the weekly online tutorials on Zoom.

X Single Maths

6:15 - 7:15pm Tuesdays

(start 14th Jan)

7 - 8pm Thursdays

(start 16th Jan)

X<sub>n</sub> Double Maths

7 - 8pm Thursdays

(start 16th Jan)

5:30 - 6:30pm Fridays

(start 17th Jan)

### Get started on Week 1 Maths

Click on the purple "buttons" below to get started on your first week assignments.

[Single Maths Week 1 - Algebra & Indices](#)

[Double Maths Week 1 - Algebra, Indices & Straight Lines](#)

[\(pdf of the Single Maths assignment\)](#)

[\(pdf of the Double Maths assignment\)](#)

# Week 1 Mathematics: Aims of this session

## 1. Join the relevant Isaac Physics **maths group**.

### ➤ Which stream should you choose?

If you are studying:

- A-level Maths

Choose this stream:

**Single Maths**

- A-level Maths & Further Maths (series or parallel)

**Double Maths**

- A-level Maths & AS Further Maths
- SQ Adv Higher Maths
- IB HL Maths
- Further maths not offered, but wanted to study

You have a choice

### X X<sub>n</sub> Maths Session (10:00 - 10:45am)

We will show you some of the questions on the first week's maths assignments (boards). Make sure you have a piece of paper and a pen ready to try these out with our guidance.

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Now is also a good opportunity to make sure you:

1. join the Isaac Physics group.
  - click to join the SINGLE maths group
  - click to join the DOUBLE maths group

**Single Maths** – all content is relevant, but doesn't cover everything in your course.

**Double Maths** – covers more than your course, useful if you want to study more maths.



# Week 1 Mathematics: Aims of this session

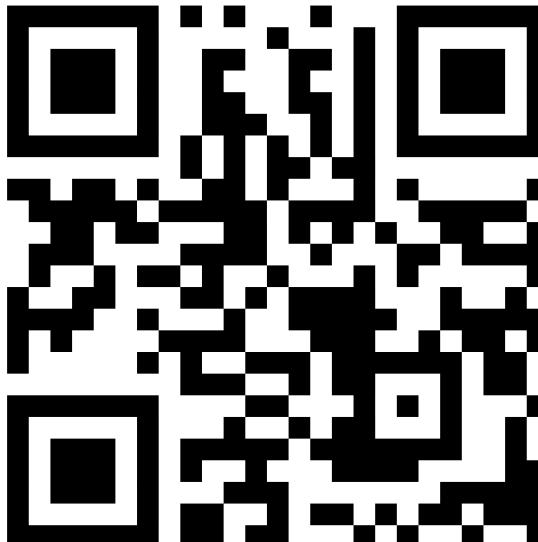
1. Join the relevant Isaac Physics **maths group**.

➤ **Which stream should you choose?**

Join **Single Maths** group on Isaac:  
[tinyurl.com/singlémaths](https://tinyurl.com/singlémaths)



Join **Double Maths** group on Isaac:  
[tinyurl.com/doublemaths](https://tinyurl.com/doublemaths)



## X X<sub>n</sub> Maths Session (10:00 - 10:45am)

We will show you some of the questions on the first week's maths assignments (boards). Make sure you have a piece of paper and a pen ready to try these out with our guidance.

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1. join the Isaac Physics group.
  - click to join the SINGLE maths group
  - click to join the DOUBLE maths group



# Week 1 Mathematics: Aims of this session

1. Join the relevant Isaac Physics **maths group**
2. Register for appropriate tutorials on Zoom

## X X<sub>n</sub> Maths Session (10:00 - 10:45am)

We will show you some of the questions on the first week's maths assignments (boards). Make sure you have a piece of paper and a pen ready to try these out with our guidance.

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6:15 - 7:15pm Tuesdays

(start 14th Jan)

7 - 8pm Thursdays

(start 16th Jan)

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(start 17th Jan)



# Week 1 Mathematics:

## Aims of this session

1. Join the relevant Isaac Physics **maths group**
2. Register for appropriate tutorials on Zoom

Single Maths		Double Maths	
6:15 – 7:15pm Tues	<a href="https://tinyurl.com/sm615tues">tinyurl.com/sm615tues</a> 	7 - 8pm Thurs	<a href="https://tinyurl.com/dm700thurs">tinyurl.com/dm700thurs</a> 
7 - 8pm Thurs	<a href="https://tinyurl.com/sm700thurs">tinyurl.com/sm700thurs</a> 	5:30 - 6:30pm Fri	<a href="https://tinyurl.com/dm530Fri">tinyurl.com/dm530Fri</a> 



# Week 1 Mathematics: Aims of this session

1. Join the relevant Isaac Physics **maths group**
2. Register for appropriate tutorials on Zoom
3. Get started on your maths work for week 1  
(which starts on Monday)

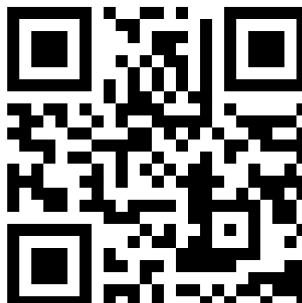
Week 1 **SINGLE MATHS:**

[tinyurl.com/week1sm](https://tinyurl.com/week1sm)



Week 1 **DOUBLE MATHS:**

[tinyurl.com/week1dm](https://tinyurl.com/week1dm)



## X X<sub>n</sub> Maths Session (10:00 - 10:45am)

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Now is also a good opportunity to make sure you:

1. join the Isaac Physics group.

- [click to join the SINGLE maths group](#)
- [click to join the DOUBLE maths group](#)

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X Single Maths

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X<sub>n</sub> Double Maths

7 - 8pm Thursdays

(start 16th Jan)

5:30 - 6:30pm Fridays

(start 17th Jan)

### Get started on Week 1 Maths

Click on the purple "buttons" below to get started on your first week assignments.

**Single Maths Week 1 - Algebra & Indices**

**Double Maths Week 1 - Algebra, Indices & Straight Lines**

(pdf of the Single Maths assignment)

(pdf of the Double Maths assignment)

# Week 1 Mathematics: Aims of this session

1. Join the relevant Isaac Physics **maths group**
2. Register for appropriate tutorials on Zoom
3. Get started on your maths work for week 1  
(which starts on Monday)
  - Please try these 3 questions which are **common to SINGLE and DOUBLE maths.**
4. At 10:25 – **use the zoom poll** to tell us which question you would most like to discuss.
5. At 10:30 - we will go through main points of top 2 most voted for questions.

**Writing and Using Algebra 14**

GCSE A Level

Essential GCSE Maths 12.14

Maths > Algebra > Manipulation

C C C P P P >

**Common Factors 8**

GCSE A Level

Essential GCSE Maths 15.8

Maths > Algebra > Manipulation

P P P P P P >

**Simplifying Indices**

GCSE A Level

Pre-Uni Maths for Sciences A2.6

Maths > Algebra > Manipulation

C C C P P P >



# In tutorials: You should aim to...

1. Write down key points that you have learned **after the tutorial – do not** aim to copy down everything that is written or everything that is said.
2. Tutorials will be webinars, like the current Zoom call, therefore **we ask that you use**
  - i. **Q&A function** to **ASK** questions
  - ii. **Chat** to **ANSWER** questions that your tutors will ask you
3. Listen carefully and follow any instructions that you are given
4. Have a go at answering questions
5. During the week after the tutorial, attempt any assignment questions that you hadn't tried or completed before the tutorial.



# Break time

10:45 – 11am



# Week 1: Physics / Chemistry

11:00 – 11:30am



## Timetable

Time	Activity / Action	Information & Links Use these links to jump to the relevant part of this page
9:15-9:30	<b>Get ready</b> <ul style="list-style-type: none"><li>Join Zoom call and check technology is working.</li><li>Logon to Isaac Physics</li><li>Logon to Ada Computer Science (if doing computer science)</li></ul>	Jump to <a href="#">Get Ready</a> links and information
9:30-9:50	<b>Welcome &amp; Introductions</b>	Jump to <a href="#">Welcome &amp; Introductions</a> links and information
9:50-10:00	<b>Goals &amp; Core Values</b>	Jump to <a href="#">Goals &amp; Core Values</a> links and information
10:00-10:45	<b>Week 1: Mathematics</b> Single Maths / Double Maths Assignment	Jump to <a href="#">Week 1: Mathematics</a> links and information
<b>10:45-11:00</b>	<b>BREAK</b>	
11:00-11:30	<b>Week 1: Physics &amp; Chemistry</b>	Jump to <a href="#">Physics &amp; Chemistry session</a> links and information
11:30-12:00	<b>Week 1: Biology &amp; Computer Science</b>	Jump to <a href="#">Biology &amp; Computer Science session</a> links and information
12:00-12:15	<b>Get set for STEM SMART:</b> <ul style="list-style-type: none"><li>Planning your space</li><li>Planning your time</li></ul>	Jump to <a href="#">Get set for STEM SMART</a> links and information
12:15-13:00	<b>Meet your mentors + Q&amp;A</b>	Jump to our <a href="#">meet your mentors</a> section to find out how to meet your group.
13:00	<b>END</b>	When you have finished your meeting with your mentor you are free to go.

# 11 – 11:30am: Week 1: Physics / Chemistry

- **Physics and Chemistry subject** session to get us started on the work for this week.



# Week 1 Physics/Chemistry: Aims of this session

1. Join the relevant Isaac Physics groups
2. Register for appropriate tutorials on Zoom
3. Get started on your **physics** and/or **chemistry** work for week 1 (which starts on Monday)
4. At 11:10 we will discuss the chemistry question
5. At 11:20 we will discuss the physics question

## Physics & Chemistry (11:00 - 11:30am)

We will show you some of the questions on the first week's physics and chemistry assignments. Make sure you have a piece of paper and a pen ready to try these out with our guidance.

We will also explain how to get the most out of a tutorial. Don't try to remember (or note) everything but you should practice making notes of key points that you need to remember - if you take away one or two key points or approaches, you have learned well.

- If you are studying **both physics and chemistry** then start with the first question on the physics assignment and then move on to the first question on the chemistry assignment.
- If you are studying **either physics or chemistry** then just focus on the one relevant assignment
- If you are studying **neither physics nor chemistry** then you can make a [start on the biology or computer science assignments](#) in the next session.

Now is also a good opportunity to make sure you:

1. Join the Isaac Physics groups
  - [Click to join the chemistry group](#)
  - [Click to join the physics group](#)

2. Register with Zoom for your weekly physics and/or chemistry tutorials. You will only need to attend **one** tutorial per subject per week.

Please click on one tutorial time to register for the weekly online tutorials on Zoom



5:30 - 6pm Tuesdays

(start 14th Jan)



6:30 - 7pm Mondays

(start 13th Jan)

7 - 7:30pm Wednesdays

(start 15th Jan)

5:30 - 6pm Wednesdays

(start 15th Jan)

## Get started on Week 1 Physics & Chemistry

Click on the purple "buttons" below to get started on your first week assignments.

[Chemistry Week 1 - Atomic Structure](#)

[Physics Week 1 - Charge Flow](#)

(pdf of the Chemistry assignment)

(pdf of the Physics assignment)

# Week 1 Physics/Chemistry: Aims of this session

## 1. Join the relevant Isaac Physics groups.

Join **Chemistry** group on Isaac:

[tinyurl.com/smart25chem](https://tinyurl.com/smart25chem)



Join **Physics** group on Isaac:  
[tinyurl.com/smart25phys](https://tinyurl.com/smart25phys)



## Physics & Chemistry (11:00 - 11:30am)

We will show you some of the questions on the first week's physics and chemistry assignments. Make sure you have a piece of paper and a pen ready to try these out with our guidance.

We will also explain how to get the most out of a tutorial. Don't try to remember (or note) everything but you should practice making notes of key points that you need to remember - if you take away one or two key points or approaches, you have learned well.

- If you are studying **both physics and chemistry** then start with the first question on the physics assignment and then move on to the first question on the chemistry assignment.
- If you are studying **either physics or chemistry** then just focus on the one relevant assignment
- If you are studying **neither physics nor chemistry** then you can make a [start on the biology or computer science assignments](#) in the next session.

Now is also a good opportunity to make sure you:

### 1. Join the Isaac Physics groups

- Click to join the chemistry group
- Click to join the physics group



# Week 1 Physics/Chemistry: Aims of this session

1. Join the relevant Isaac Physics groups
2. Register for appropriate tutorials on Zoom

## Physics & Chemistry (11:00 - 11:30am)

We will show you some of the questions on the first week's physics and chemistry assignments. Make sure you have a piece of paper and a pen ready to try these out with our guidance.

We will also explain how to get the most out of a tutorial. Don't try to remember (or note) everything but you should practice making notes of key points that you need to remember - if you take away one or two key points or approaches, you have learned well.

- If you are studying **both physics and chemistry** then start with the first question on the physics assignment and then move on to the first question on the chemistry assignment.
- If you are studying **either physics or chemistry** then just focus on the one relevant assignment
- If you are studying **neither physics nor chemistry** then you can make a [start on the biology or computer science assignments](#) in the next session.

Now is also a good opportunity to make sure you:

1. Join the Isaac Physics groups
  - [Click to join the chemistry group](#)
  - [Click to join the physics group](#)

2. Register with Zoom for your weekly physics and/or chemistry tutorials. You will only need to attend **one tutorial per subject per week**.

Please click on one tutorial time to register for the weekly online tutorials on Zoom



5:30 - 6pm Tuesdays

(start 14th Jan)

7 - 7:30pm Wednesdays

(start 15th Jan)



6:30 - 7pm Mondays

(start 13th Jan)

5:30 - 6pm Wednesdays

(start 15th Jan)



# Week 1 Physics/Chemistry: Aims of this session

1. Join the relevant Isaac Physics groups
2. Register for appropriate tutorials on Zoom

Chemistry		Physics	
6:30 – 7pm Mon	<a href="https://tinyurl.com/ch630mon">tinyurl.com/ch630mon</a> 	5:30 – 6pm Tues	<a href="https://tinyurl.com/ph530tues">tinyurl.com/ph530tues</a> 
5:30 – 6pm Weds	<a href="https://tinyurl.com/ch530weds">tinyurl.com/ch530weds</a> 	7 – 7:30pm Weds	<a href="https://tinyurl.com/ph700weds">tinyurl.com/ph700weds</a> 



# Week 1 Physics/Chemistry: Aims of this session

1. Join the relevant Isaac Physics groups
2. Register for appropriate tutorials on Zoom
3. Get started on your physics and/or chemistry work for week 1 (which starts on Monday)

Week 1 **CHEMISTRY**:  
[tinyurl.com/week1ch](https://tinyurl.com/week1ch)



Week 1 **PHYSICS**:  
[tinyurl.com/week1ph](https://tinyurl.com/week1ph)



## Physics & Chemistry (11:00 - 11:30am)

We will show you some of the questions on the first week's physics and chemistry assignments. Make sure you have a piece of paper and a pen ready to try these out with our guidance.

We will also explain how to get the most out of a tutorial. Don't try to remember (or note) everything but you should practice making notes of key points that you need to remember - if you take away one or two key points or approaches, you have learned well.

- If you are studying **both physics and chemistry** then start with the first question on the physics assignment and then move on to the first question on the chemistry assignment.
- If you are studying **either physics or chemistry** then just focus on the one relevant assignment
- If you are studying **neither physics nor chemistry** then you can make a [start on the biology or computer science assignments](#) in the next session.

Now is also a good opportunity to make sure you:

1. **Join the Isaac Physics groups**
  - [Click to join the chemistry group](#)
  - [Click to join the physics group](#)
2. **Register with Zoom** for your weekly physics and/or chemistry tutorials. You will only need to attend **one tutorial per subject** per week.

Please click on one tutorial time to register for the weekly online tutorials on Zoom



5:30 - 6pm Tuesdays

(start 14th Jan)

7 - 7:30pm Wednesdays

(start 15th Jan)



6:30 - 7pm Mondays

(start 13th Jan)

5:30 - 6pm Wednesdays

(start 15th Jan)

### Get started on Week 1 Physics & Chemistry

Click on the purple "buttons" below to get started on your first week assignments.

[Chemistry Week 1 - Atomic Structure](#)

[Physics Week 1 - Charge Flow](#)

(pdf of the Chemistry assignment)

(pdf of the Physics assignment)

# Week 1 Physics/Chemistry: Aims of this session

1. Join the relevant Isaac Physics groups
2. Register for appropriate tutorials on Zoom
3. Get started on your **physics and/or chemistry** work for week 1 (which starts on Monday)
  - If you are doing **both** physics and chemistry on STEM SMART then **start with the first question on chemistry** then do the first question on physics.
  - If you are doing **neither physics nor chemistry**, then **return to your maths** assignment for week 1

## Chemistry Question 1

Isotopes 2

Essential Pre-Uni Chemistry D4.2

Chemistry > Foundations > Atomic Structure

GCSE A Level

P P P P P P >

## Physics Question 1

Charge and Current 1

Essential GCSE Physics 22.1

Physics > Electricity > Charge & Current

GCSE A Level

C C C P P P >



# Week 1 Physics/Chemistry: Aims of this session

1. Join the relevant Isaac Physics groups
2. Register for appropriate tutorials on Zoom
3. Get started on your **physics and/or chemistry** work for week 1 (which starts on Monday)
4. At 11:10 we will discuss the chemistry question
5. At 11:20 we will discuss the physics question

## Chemistry Question 1

**Isotopes 2**

Essential Pre-Uni Chemistry D4.2  
Chemistry > Foundations > Atomic Structure

GCSE      A Level

P P P      P P P >

## Physics Question 1

**Charge and Current 1**

Essential GCSE Physics 22.1  
Physics > Electricity > Charge & Current

GCSE      A Level

C C C      P P P >



# Week 1: Biology / Computer Science

11:30am -12:00pm



## Timetable

Time	Activity / Action	Information & Links Use these links to jump to the relevant part of this page
9:15-9:30	<b>Get ready</b> <ul style="list-style-type: none"><li>Join Zoom call and check technology is working.</li><li>Logon to Isaac Physics</li><li>Logon to Ada Computer Science (if doing computer science)</li></ul>	Jump to <a href="#">Get Ready</a> links and information
9:30-9:50	<b>Welcome &amp; Introductions</b>	Jump to <a href="#">Welcome &amp; Introductions</a> links and information
9:50-10:00	<b>Goals &amp; Core Values</b>	Jump to <a href="#">Goals &amp; Core Values</a> links and information
10:00-10:45	<b>Week 1: Mathematics</b> Single Maths / Double Maths Assignment	Jump to <a href="#">Week 1: Mathematics</a> links and information
<b>10:45-11:00</b>	<b>BREAK</b>	
11:00-11:30	<b>Week 1: Physics &amp; Chemistry</b>	Jump to <a href="#">Physics &amp; Chemistry session</a> links and information
11:30-12:00	<b>Week 1: Biology &amp; Computer Science</b>	Jump to <a href="#">Biology &amp; Computer Science session</a> links and information
12:00-12:15	<b>Get set for STEM SMART:</b> <ul style="list-style-type: none"><li>Planning your space</li><li>Planning your time</li></ul>	Jump to <a href="#">Get set for STEM SMART</a> links and information
12:15-13:00	<b>Meet your mentors + Q&amp;A</b>	Jump to our <a href="#">meet your mentors</a> section to find out how to meet your group.
13:00	<b>END</b>	When you have finished your meeting with your mentor you are free to go.

# 11:30am – 12pm: Week 1: Biology/Computer Science

- Biology and Computer Science** subject session to get us started on the work for this week.



# Week 1 Biology/Computer Science: Aims of this session

1. Join the relevant Isaac / Ada groups
2. Register for appropriate tutorials on Zoom
3. Get started on your **biology** and/or **computer science** work for week 1 (which starts on Monday)
4. At 11:40 we will discuss the biology question
5. At 11:50 we will discuss the computer science question



Biology &



Computer Science (11:30am - 12:00pm)

We will show you some of the questions on the first week's biology and computer science assignments. Make sure you have a piece of paper and a pen ready to try these out with our guidance.

We will also explain how to get the most out of a tutorial. Don't try to remember (or note) everything but you should practice making notes of key points that you need to remember - if you take away one or two key points or approaches, you have learned well.

- If you are studying **both biology and computer science** then start with the first question on the biology assignment and then move on to the first question on the computer science assignment.
- If you are studying **either biology or computer science** then just focus on the one relevant assignment.
- If you are studying **neither biology nor computer science** then you can continue to work through the maths assignment or the physics or chemistry assignments that we looked at in previous sessions.

Now is also a good opportunity to make sure you:

## 1. Join the Isaac Physics and Ada Computer Science groups

- [Click to join the biology group](#)
- [Click to join the computer science group](#)

## 2. Register with Zoom for your weekly biology and/or computer science tutorials. You will only need to attend **one tutorial per subject** per week.

Please click on one tutorial time to register for the weekly online tutorials on Zoom



7:30 - 8pm Tuesdays

(start 14th Jan)

5:30-6pm Thursdays

(start 16th Jan)



Computer Science

5:30 - 6pm Mondays

(start 13th Jan)

6:15-6:45pm Wednesdays

(start 15th Jan)

## Get started on Week 1 Biology & Computer Science

Click on the purple "buttons" below to get started on your first week assignments.

[Biology Week 1 - Cell Structure 1](#)

[Computer Science 1 - Computer Systems Architecture](#)

[\(pdf of the Biology assignment\)](#)

[\(pdf of the Computer Science assignment\)](#)

# Week 1 Biology/Computer Science: Aims of this session

## 1. Join the relevant Isaac / Ada groups

Join **Biology** group on Isaac:

[tinyurl.com/smart25bio](https://tinyurl.com/smart25bio)



Join **Computer Science**  
group on Ada:  
[tinyurl.com/smart25cs](https://tinyurl.com/smart25cs)



Biology &



Computer Science (11:30am - 12:00pm)

We will show you some of the questions on the first week's biology and computer science assignments. Make sure you have a piece of paper and a pen ready to try these out with our guidance.

We will also explain how to get the most out of a tutorial. Don't try to remember (or note) everything but you should practice making notes of key points that you need to remember - if you take away one or two key points or approaches, you have learned well.

- If you are studying **both biology and computer science** then start with the first question on the biology assignment and then move on to the first question on the computer science assignment.
- If you are studying **either biology or computer science** then just focus on the one relevant assignment.
- If you are studying **neither biology nor computer science** then you can continue to work through the maths assignment or the physics or chemistry assignments that we looked at in previous sessions.

Now is also a good opportunity to make sure you:

### 1. Join the Isaac Physics and Ada Computer Science groups

- Click to join the biology group
- Click to join the computer science group



# Week 1 Biology/Computer Science: Aims of this session

1. Join the relevant Isaac Ada groups
2. Register for appropriate tutorials on Zoom



Biology &



Computer Science (11:30am - 12:00pm)

We will show you some of the questions on the first week's biology and computer science assignments. Make sure you have a piece of paper and a pen ready to try these out with our guidance.

We will also explain how to get the most out of a tutorial. Don't try to remember (or note) everything but you should practice making notes of key points that you need to remember - if you take away one or two key points or approaches, you have learned well.

- If you are studying **both biology and computer science** then start with the first question on the biology assignment and then move on to the first question on the computer science assignment.
- If you are studying **either biology or computer science** then just focus on the one relevant assignment.
- If you are studying **neither biology nor computer science** then you can continue to work through the maths assignment or the physics or chemistry assignments that we looked at in previous sessions.

Now is also a good opportunity to make sure you:

**1. Join the Isaac Physics and Ada Computer Science groups**

- [Click to join the biology group](#)
- [Click to join the computer science group](#)

**2. Register with Zoom** for your weekly biology and/or computer science tutorials. You will only need to attend **one tutorial per subject** per week.

Please click on one tutorial time to register for the weekly online tutorials on Zoom



7:30 - 8pm Tuesdays

(start 14th Jan)

5:30-6pm Thursdays

(start 16th Jan)



Computer Science

5:30 - 6pm Mondays

(start 13th Jan)

6:15-6:45pm Wednesdays

(start 15th Jan)



# Week 1 Biology/Computer Science:

## Aims of this session

1. Join the relevant Isaac / Ada groups
2. Register for appropriate tutorials on Zoom

Biology		Computer Science	
7:30 – 8pm Tues	<a href="https://tinyurl.com/bi730tues">tinyurl.com/bi730tues</a> 	5:30 – 6pm Mon	<a href="https://tinyurl.com/cs530mon">tinyurl.com/cs530mon</a> 
5:30 – 6pm Thurs	<a href="https://tinyurl.com/bi530thurs">tinyurl.com/bi530thurs</a> 	6:15 – 6:45pm Weds	<a href="https://tinyurl.com/cs615weds">tinyurl.com/cs615weds</a> 

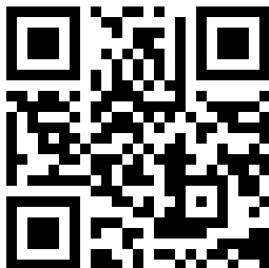


# Week 1 Biology/Computer Science: Aims of this session

1. Join the relevant Isaac / Ada groups
2. Register for appropriate tutorials on Zoom
3. Get started on your **biology** and/or **computer science** work for week 1 (which starts on Monday)

Week 1 **BIOLOGY**:

[tinyurl.com/week1bi](https://tinyurl.com/week1bi)



Week 1 **COMPUTER SCIENCE**:

[tinyurl.com/week1cs25](https://tinyurl.com/week1cs25)



## **Biology &** **Computer Science (11:30am - 12:00pm)**

We will show you some of the questions on the first week's biology and computer science assignments. Make sure you have a piece of paper and a pen ready to try these out with our guidance.

We will also explain how to get the most out of a tutorial. Don't try to remember (or note) everything but you should practice making notes of key points that you need to remember - if you take away one or two key points or approaches, you have learned well.

- If you are studying **both biology and computer science** then start with the first question on the biology assignment and then move on to the first question on the computer science assignment.
- If you are studying **either biology or computer science** then just focus on the one relevant assignment.
- If you are studying **neither biology nor computer science** then you can continue to work through the maths assignment or the physics or chemistry assignments that we looked at in previous sessions.

Now is also a good opportunity to make sure you:

1. **Join the Isaac Physics and Ada Computer Science groups**
  - [Click to join the biology group](#)
  - [Click to join the computer science group](#)
2. **Register with Zoom** for your weekly biology and/or computer science tutorials. You will only need to attend **one tutorial per subject** per week.

Please click on one tutorial time to register for the weekly online tutorials on Zoom



7:30 - 8pm Tuesdays

(start 14th Jan)

5:30-6pm Thursdays

(start 16th Jan)



5:30 - 6pm Mondays

(start 13th Jan)

6:15-6:45pm Wednesdays

(start 15th Jan)

### **Get started on Week 1 Biology & Computer Science**

Click on the purple "buttons" below to get started on your first week assignments.

**Biology Week 1 - Cell Structure 1**

(pdf of the Biology assignment)

**Computer Science 1 - Computer Systems Architecture**

(pdf of the Computer Science assignment)

# Week 1 Biology/Computer Science: Aims of this session

1. Join the relevant Isaac / Ada groups
2. Register for appropriate tutorials on Zoom
3. Get started on your **biology and/or computer science** work for week 1 (which starts on Monday)
  - If you are doing **both** biology and computer science on STEM SMART then **start with the first question on biology** then do the first question on computer science.
  - If you are doing **neither biology nor computer science**, then **return to your maths/physics/chemistry assignment** for week 1

## Biology Question 1

 Types of Cells  
Biology > Cell Biology > Cell Structure

A Level  >

## Computer Science Question 1

 Bus types: 1  
Not started  
Computing systems > Systems architecture

Practice 1  >



# Week 1 Biology/Computer Science:

## Aims of this session

1. Join the relevant Isaac / Ada groups
2. Register for appropriate tutorials on Zoom
3. Get started on your **biology** and/or **computer science** work for week 1 (which starts on Monday)
4. At 11:40 we will discuss the biology question
5. At 11:50 we will discuss the computer science question

### Biology Question 1

 Types of Cells  
Biology > Cell Biology > Cell Structure

A Level  >

### Computer Science Question 1

 Bus types: 1  
Not started  
Computing systems > Systems architecture

Practice 1  >



# Get set for STEM SMART

12:00 -12:15pm



## Timetable

Time	Activity / Action	Information & Links Use these links to jump to the relevant part of this page
9:15-9:30	<b>Get ready</b> <ul style="list-style-type: none"><li>Join Zoom call and check technology is working.</li><li>Logon to Isaac Physics</li><li>Logon to Ada Computer Science (if doing computer science)</li></ul>	Jump to <a href="#">Get Ready</a> links and information
9:30-9:50	<b>Welcome &amp; Introductions</b>	Jump to <a href="#">Welcome &amp; Introductions</a> links and information
9:50-10:00	<b>Goals &amp; Core Values</b>	Jump to <a href="#">Goals &amp; Core Values</a> links and information
10:00-10:45	<b>Week 1: Mathematics</b> Single Maths / Double Maths Assignment	Jump to <a href="#">Week 1: Mathematics</a> links and information
<b>10:45-11:00</b>	<b>BREAK</b>	
11:00-11:30	<b>Week 1: Physics &amp; Chemistry</b>	Jump to <a href="#">Physics &amp; Chemistry session</a> links and information
11:30-12:00	<b>Week 1: Biology &amp; Computer Science</b>	Jump to <a href="#">Biology &amp; Computer Science session</a> links and information
12:00-12:15	<b>Get set for STEM SMART:</b> <ul style="list-style-type: none"><li>Planning your space</li><li>Planning your time</li></ul>	Jump to <a href="#">Get set for STEM SMART</a> links and information
12:15-13:00	<b>Meet your mentors + Q&amp;A</b>	Jump to our <a href="#">meet your mentors</a> section to find out how to meet your group.
13:00	<b>END</b>	When you have finished your meeting with your mentor you are free to go.

# 12 – 12:15: Get set for STEM SMART

- **How to plan your time and ensure that you don't miss sessions.**



# Get set for STEM SMART: Aims

1. Give you some advice on how best to set yourself up to succeed on the programme.
2. Introduce how to use an electronic calendar to keep on track with your work and **not** miss tutorials or mentoring sessions.



# Get set for STEM SMART: Life skills - get organised

The screenshot shows a user interface for the STEMSMART platform. At the top, there is a navigation bar with links for Home, Dashboard, My courses, and More. Below this, a video player displays a thumbnail for a video titled "Get set for STEM SMART (12:00 - 12:15pm)". The video thumbnail features the STEMSMART logo and a play button. A large green button below the video player says "Get organised!". To the right of the video player, there is a search icon, a bell icon, and a purple circular badge with a white letter "U". At the bottom of the screen, a green button with white text reads "Take a few minutes now to enter your tutorial times in your calendar or diary." A pink arrow points from the top of this button towards the "Get organised!" button. A green arrow points from the bottom of the "Get organised!" button towards the bottom text.

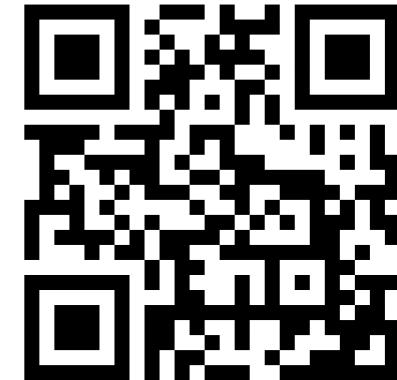
Get set for STEM SMART (12:00 - 12:15pm)

Get organised!

It is important to organise your space and give yourself the best environment for learning but it is also very important to organise your time. We do recommend using an online calendar such as [Google calendar](#) or a calendar on your phone to help you to remember when your tutorials are so that you don't miss out on our free help and support!

Take a few minutes now to enter your tutorial times in your calendar or diary.

1. Watch the 2-minute video.  
[youtu.be/9SuJYE-0KSI](https://youtu.be/9SuJYE-0KSI)



1. Make sure you have all of your tutorial times in a diary or online calendar.



The screenshot shows the Google Calendar interface. At the top, there's a navigation bar with 'Today' (buttoned), arrows for 'January 2025', a search icon, a help icon, a settings gear, and a dropdown for 'Week'. Below this is a weekly grid for the week of January 12-18, 2025. On the left, there's a sidebar with a 'Create' button, a monthly calendar for January 2025, a 'Meet with...' section, a 'Search for people' button, 'Time Insights' (12 - 18 JAN 2025, 12 hrs in meetings), and 'My calendars' and 'Other calendars' sections.

**Google Calendar Screenshot:**

- Sunday:** STEM SM (9 AM - 10 AM)
- Monday:** Isaac Week (11am - 12pm), Weekly mtg (11:30 AM - 12 PM), Move (12 PM - 12:30 PM), CS Discuss (12:30 PM - 1:30 PM)
- Tuesday:** Isaac Week (11am - 12pm), Isaac Week (11am - 12pm), Isaac Week (11am - 12pm)
- Wednesday:** Cambridge Online Education Committee (2 - 5pm), Microsoft
- Thursday:** Double Mat (5:30 - 6:30 PM)
- Friday:** Single Mat (7 - 8pm)
- Saturday:** Teaching Committee (10am - 12pm), Kapitza Seminar

# Get set for STEM SMART: Using an online Calendar

1. Most smart phones have a calendar app – we encourage you to use this and to set reminders.
2. An example online calendar is [Google Calendar](https://calendar.google.com)  
[calendar.google.com](https://calendar.google.com)
3. Your mentors will be able to help you with how to use this
  - ✓ it can be set to message you with reminders for your tutorials and mentoring sessions so that you don't miss them.

# Round-up & Meet your mentors

12:15 -12:45pm



## STEM SMART 2025 Phase 1

Course Settings Participants Grades Reports More

### What is STEM SMART?

**SMART** stands for **S**ubject **M**astery and **A**ttainment **R**aising **T**uition. This course aims to support your maths and science study as you learn and prepare for your examinations, and provide advice and tuition for application to university courses.

The course is structured in 3 phases:

- **Jan - July 2025:** Consolidating Knowledge and Building Problem-Solving Skills
- **Sep - Dec 2025:** Preparing for Application to Competitive Universities (optional 4 day residential in Cambridge, 18 - 21 August 2025)
- **Jan - May 2026:** Securing Strong Examination Performance and Achievement



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**Important Announcements**

**From your tutors**

**Mentor Forum**

Available until 22 June 2025, 12:40 AM

**Getting Started**



**Launch: Sat 11 Jan**



**Phase 1: Weekly Plan**



**Week 1: 13th Jan**



# Round-up

1. We have created this quick start guide summary. Please open this link and bookmark it in your browser . [tinyurl.com/quickstartsmart](https://tinyurl.com/quickstartsmart)



## STEM SMART 2025 Phase 1

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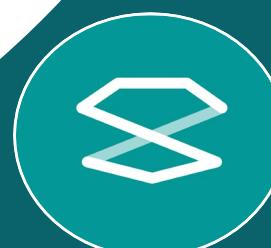
**Getting Started** **Launch: Sat 11 Jan** **Phase 1: Weekly Plan**

**Week 1: 13th Jan**

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3. **Each week** you login to Moodle and work through the page for the week.
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## STEM SMART 2025 Phase 1

Course Settings Participants Grades Reports More

Phase 1: Weekly Plan

### Week 1: 13th Jan

The next 5 weeks are the first part of Phase 1 of the STEM SMART programme. The table below provides a summary of the content for the week, with links to the beginning of each individual activity.

You may find it helpful to use the small square checkboxes at the side of activities to mark what you have and haven't done - some of these will tick automatically as soon as your activity is submitted.

Start Date	Tip of the Week	Single Maths	Double Maths	Physics	Chemistry	Biology	Computer Science	Tutorials	Mentoring
Week 1: 13th Jan	<a href="#">How to get started on a question</a>	<a href="#">Algebra &amp; indices</a>	<a href="#">Algebra, indices &amp; straight lines</a>	<a href="#">Charge flow</a>	<a href="#">Atomic structure</a>	<a href="#">Cell structure 1</a>	<a href="#">Computer systems architecture</a>	<a href="#">Subject tutorials</a>	<a href="#">Getting to know you</a>



Opening self-evaluation week 1

### Single Maths: Algebra & Indices

We use algebra as a fundamental tool to represent mathematical models and solve problems. This week we will revise ideas of powers and indices from GCSE and apply them to A-level situations. We will also look at how to form, rearrange and manipulate algebraic expressions and equations.

This week's assignment

[STEM SMART Single Maths 1 - Algebra & Indices](#)

(pdf of the assignment)

If you have specific queries as you study this material and answer the questions, please keep a note of these questions in a notebook and bring them to the online tutorial.

# E.g. Week 1 (and every week afterwards)

1. Login to Moodle
2. Use the links at the top to jump to the section you wish to work on.
3. In each subject section, click on the purple button / link to go to the assignment (list of questions) on Isaac Physics or Ada Computer Science.
4. Have a go at the questions, writing down your method, solution and any questions for your tutor, in your notebook.

## STEM SMART 2025 Phase 1

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Getting Started

Launch: Sat 11 Jan

Phase 1: Weekly Plan

Week 1: 13th Jan

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4. Get started on your week 1 work, **making sure that you:**
  - Keep a notebook / file of solutions for each subject. **You must get into the habit of writing down your answers.**
  - Enter your answers into Isaac Physics and Ada Computer Science as you go along
  - Post messages to your tutors using the text box in Moodle, explaining what you would like to discuss or which questions you want to go through
5. Tutorials start **FROM MONDAY (2 days time)**



# Recognising students' efforts: Additional opportunities

- **Key point:** This is **YOUR** programme – you should do as much as you feel comfortable and able to do.
  - The programme is about **how much you try** not about getting everything correct.
  - Be kind to yourself
  - Any concerns at any point email **[stemsmart@isaacphysics.org](mailto:stemsmart@isaacphysics.org)**
- Students who are **most engaged in Phase 1 (between January and July)** will be **offered** additional opportunities.
  - A residential in Cambridge from 18<sup>th</sup> – 21<sup>st</sup> August 2025 (this date is fixed and will not be changed)
  - Small group supervisions in phase 2 with Cambridge researchers.
- **How do we measure engagement?**
  - Proportion of questions they have **attempted** (in their assignments).
  - Proportion of tutorials they have attended.
  - Proportion of mentor sessions and optional STEM SMART lectures attended.



# Meet your mentors

1. Meet your mentors – Cambridge students who will meet with you once every two weeks to discuss general topics about life at university.

- ~ 20 – 25 other STEM SMART students in your group
- Mentors **will not answer** questions about your **subject assignments** – if you are stuck on a question then you should take this to your subject tutorial.

2. Mentors will confirm when and how you will meet using the mentor forum on Moodle.

- You will have your first meeting in a moment.

## STEM SMART 2024 Phase 1

Course Participants Grades Question bank Competencies

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# Meet your mentors

## 1. The mentor forum

- Only mentors can post discussion topics
- You can only see other students' replies or comments when you have posted something yourself.
- Only your group (mentors and students) will see your reply.
- You will only see the discussions within your own group – no other group's discussions.

 STEM SMART  
An Initiative from the University of Cambridge

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Course Participants Grades Question bank Competencies

## STEM SMART 2024 Phase 1

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Important Announcements

From your tutors

Mentor Forum

Getting Started

Launch: Sat 6 Jan

Phase 1: Weekly Plan

Week 1: 8th Jan

# Meet your mentors: Session topics

## 1. Launch today

- Meeting each other and your mentors, introducing yourselves and learning about how the sessions will work.

2. Managing your time and dealing with stress.

3. Getting stuck and how to get unstuck

4. Study skills: making useful notes

5. Careers: What options are there?

6. Don't give up: Extrinsic versus intrinsic reward

7. Don't compare!

8. Active processing and effective revision



# Thank you → Mentor Meet

Thank you for attention and hard work today.

We all look forward to working with you  
throughout STEM SMART.

