











# LOWER SECONDARY

**Respect   Excellence   International Mindedness**



**2023-2024**

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# HEAD OF SECONDARY'S WELCOME

A warm welcome to the International School of Central Switzerland!

ISCS is a British International school located in the heart of Switzerland in Cham in the beautiful Canton of Zug. Zug is a highly desirable area with an International influence that attracts families, professionals and big businesses. Our school is the only school to provide a British curriculum in our area via the World renowned Cambridge International accreditation, and as a result, is an attractive choice for our students.

The ISCS Secondary Team looks forward to supporting you with making your future goals happen!

We look forward to supporting you with the next stage of your educational journey!



**Mrs Rebecca Bradley**

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# ISCS SUBJECT PROVISION & OPTIONS

CORE (COMPULSORY)	ENRICHMENT (COMPULSORY)
SCIENCE	
ENGLISH	
ENGLISH LITERATURE	
GERMAN	PHYSICAL EDUCATION
COMPUTER SCIENCE	LEADERSHIP PROGRAMME
MATHEMATICS	PERSONAL DEVELOPMENT
GLOBAL PERSPECTIVES	
ART & DESIGN	
SPANISH/FRENCH	

## SCIENCE

**Lead Teachers: Ms Predouli, Dr Caracheo, Mr Evison**



### What will students learn?

Students will think scientifically and develop practical skills alongside knowledge and understanding, which is vital for explaining the world around us. Improving learners' awareness of science in the world around them develops their sense that 'science is for me', helping to connect themselves to the subject.

This approach provides them with the knowledge and skills they require to excel at science in later stages of education and to make informed choices, including considering sustainability issues and meeting the challenges facing our environment.

### How is the programme taught?

This curriculum covers six main areas called 'strands' that work together so that you can teach science holistically:

- Biology – living things and how they interact.
  - Chemistry – the study of matter.
  - Physics – the interaction of matter and energy.
  - Earth and Space – planet Earth, the wider Solar System and beyond.
  - Thinking and Working Scientifically – develops understanding and skills of scientific models and representations, scientific enquiry and practical work.
  - Science in Context – helps teachers demonstrate the relevance of science to learners and unique to our science curriculum.
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# ENGLISH

**Lead Teachers: Mr Turner**



## **What will students learn?**

Learners develop skills and understanding in four areas: reading, writing, speaking and listening. They will learn how to communicate effectively and respond to a range of information, media and texts to:

- become confident communicators, able to apply all four skills effectively in everyday situations
  - see themselves as readers, engaging with a range of texts for information and for pleasure, including texts from different times and cultures
  - see themselves as writers, using the written word clearly and creatively for a range of different audiences and purposes.
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# ENGLISH LITERATURE

**Lead Teachers: Mr Davies**



## **What will students learn?**

The syllabus enables learners to read, interpret and evaluate texts through the study of literature in English. Learners develop an understanding of literal meaning, relevant contexts and of the deeper themes or attitudes that may be expressed. Through their studies, they learn to recognise and appreciate the ways in which writers use English to achieve a range of effects, and will be able to present an informed, personal response to the material they have studied.

The syllabus also encourages the exploration of wider and universal issues, promoting learners' better understanding of themselves and of the world around them.

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## GLOBAL PERSPECTIVES

**Lead Teachers: Mr Ryan Hopton**



### **What will students learn?**

The programme develops the skills of research, analysis, evaluation, reflection, collaboration and communication. It strengthens the links across English as a first or second language, mathematics, science and ICT Starters.

Research says that the earlier students start to develop and practise their skills, the greater the impact on their learning. Making Cambridge Global Perspectives available to younger students will develop and embed cross-curricular skills at an earlier age, supporting them in their studies as they progress to Cambridge Upper Secondary and beyond.

### **How is the programme taught?**

Cambridge Lower Secondary is made up of a series of Challenges. There are six Challenges a year. Teachers can integrate the Challenges into their existing teaching or lessons, and do as many as they like. View sample Challenges for Stage 8 and Stage 9 below.

The programme is flexible so schools can choose how they organise teaching, either as one-hour blocks or as a full day, allowing teachers to focus on the Challenge from start to finish. Flexible delivery options is a key characteristic of the programme.

Each Challenge is six hours long, subdivided into a range of activities, and covers a range of skills. The skills are taught through a wide range of topics using a personal, local and global perspective. These topics are the same as the Cambridge IGCSE syllabus, allowing secondary schools to develop and embed cross-curricular skills at an earlier age. Teachers help students to look at a variety of global issues or topics that give a range of contexts.

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# COMPUTER SCIENCE

**Lead Teachers: Mr Alvarez**



## What will students learn?

Students develop the computational thinking skills and vocabulary they need to:

- extract key information from a set of instructions, break down problems into smaller parts and recognise patterns within sequences of instructions
- present sequences of instructions both verbally and visually, with increasing precision
- think logically to identify and solve errors in increasingly complex computing scenarios
- see themselves as computer scientists and understand how skills such as programming and logical thinking help in local and global industries
- understand the role that computers, other machines and data play in their lives.

## We have divided the curriculum into five strands:

- Computational Thinking supports learners to create and present solutions to problems using algorithms, logic and precision.
- Programming helps learners to understand the common constructs of programming languages and to appreciate the contribution that Computer Scientists make to our lives.
- Managing Data encourages learners to reflect on how computers store and analyse data on an ever-increasing scale.
- Networks and Digital Communication shows how computers and other machines communicate with each other across networks and how the networks are created through a combination of hardware and data transmission protocols.
- Computer Systems helps learners to understand that computers follow precise sets of instruction to process inputs that are given by humans, to make decisions and produce outputs.

## How is the programme taught?

You can teach Cambridge Lower Secondary Computing using a broad range of activities and contexts. We have included plenty of opportunities for learners to investigate and create programs using the constructs that they discover. We encourage you to revisit programming activities such as creating interfaces, quizzes and data input and output systems throughout each stage.

Activities that enable learners to create instructions away from the computer, such as those related to decision making, will help them to consider and discuss the key principles of logic and precision. These activities will also introduce them to widely used methods for presenting algorithms, such as flowcharts and pseudocode.

Opportunities to see and interact with real networked hardware and emerging technologies that control other machines, will help learners to understand the context of computing systems beyond those that they use in the classroom or at home. This will include the automated systems that are becoming increasingly important to regional and global economies.

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# MATHEMATICS

**Lead Teachers: Mr Eid, Ms. Pike**



## What will students learn?

Learners develop a holistic understanding of the subject, focussing on principles, patterns, systems, functions and relationships. They will become mathematically competent and fluent in computation, which they can apply to everyday situations.

'Thinking and working mathematically', a unique feature of our curriculum, encourages learners to talk with others, challenge ideas and to provide evidence that validates conjectures and solutions. When learners are thinking and working mathematically, they actively seek to make sense of ideas and build connections between different facts, procedures and concepts. This supports higher order thinking that helps them to view the world in a mathematical way.

## How is the programme taught?

We have divided this subject into three main areas called 'strands', which run through every lower secondary mathematics stage. Learners will develop skills in:

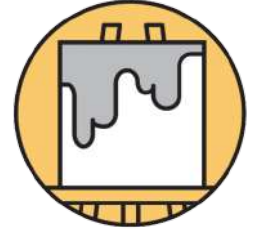
- Number
- Algebra, Geometry and Measure
- Statistics and Probability.

The strands work together to help students recognise connections of mathematical concepts as they engage in creative mathematical thinking to generate and improve numerical fluency.

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## ART & DESIGN

**Lead Teacher: Mr Santos**



### **What will students learn?**

Students develop creative skills that will help with many aspects of their future learning and development. They will:

- learn to see themselves as artists and become increasingly reflective and independent
- develop the skills needed to express creative ideas and to communicate visually
- understand their place and the place of others in a creative, innovative and interconnected world.

This course supports progression to many other creative subjects at [Cambridge Upper Secondary](#).

### **How is the programme taught?**

Cambridge Lower Secondary Art & Design is taught through a broad range of investigative, art-making and reflective activities. These include a number of study areas, for example painting, print making, model making or digital art, but you can also apply the curriculum content to your local context, using the resources that you have available.

### **How is Cambridge Lower Secondary Art & Design assessed?**

There are no Cambridge Lower Secondary Progression Tests or Checkpoint for this subject.

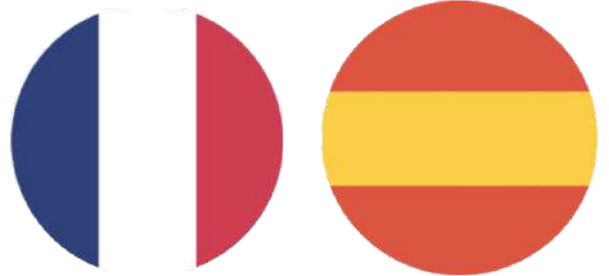
The emphasis of this course is for teachers to give learners formative feedback on the skills they want students to develop. This can be through discussion, observation and lesson outputs where teachers discuss with students 'what went well' and how they can improve further, so that students can reflect on and improve their performance.

To support assessment in the classroom, we have produced some guidance that is available on the Cambridge Lower Secondary support site.

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# SPANISH/ FRENCH

**Lead Teachers: Mrs Bradley, Mr Turner, Mrs Orford**



## **What will students learn?**

This curriculum develops learners' curiosity about other languages and cultures, and how these shape our perceptions of the world. They will see themselves as successful language learners, be able to communicate effectively and become confident in and enjoy reading a range of texts as their skills develop.

## **How is the programme taught?**

This framework supports an integrated approach to planning and teaching to develop effective communication skills in the language. The five strands, and their respective learning objectives, work together to support the development of knowledge, skills and understanding in:

- Reading
  - Writing
  - Use of the language
  - Listening
  - Speaking.
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# GERMAN

**Lead Teachers: Ms. Orford, Ms. Lepore, Mr. Nayman**



## **What will students learn?**

Learners develop skills and understanding in four areas: reading, writing, speaking and listening. They will learn how to communicate effectively and respond to a range of information, media and texts to:

- become confident communicators, able to apply all four skills effectively in everyday situations
  - see themselves as readers, engaging with a range of texts for information and for pleasure, including texts from different times and cultures
  - see themselves as writers, using the written word clearly and creatively for a range of different audiences and purposes.
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## PHYSICAL EDUCATION

**Lead Teachers: Mr Perliyev**



### **What will students learn?**

This subject is about learning to move and moving to learn. Learners develop skills through a wide variety of age-appropriate physical activities, including games, team sports, gymnastics and dance. As individuals and team members, they will:

- increase confidence, moving with increasing control, fluency and variety
- improve their understanding of concepts, rules, tactics, strategies and compositional ideas
- participate in respectful and responsible ways, engaging appropriately and safely
- improve knowledge and understanding of how physical education can contribute to a healthy and active lifestyle
- develop transferable skills promoting physical, cognitive and social development and become independent, critical and reflective movers and thinkers.

Students develop creative skills that will help with many aspects of their future learning and development. The course supports progression to the next stage of the Cambridge Pathway.

### **How is the programme taught?**

This subject is taught through a broad range of tasks, challenges and physical activities. It includes cooperative, competitive, athletic, adventurous and health-based contexts that are appropriate for each learning stage. Learners will move for as much of each lesson as possible, with activities designed promote learners' confidence, self-esteem, cognitive abilities and social skills. The programme is designed to complement, rather than replace, coaching in individual sports or physical activities.

### **How is Cambridge Lower Secondary Physical Education assessed?**

There is no Cambridge Lower Secondary Progression Test or Checkpoint for this subject.

The emphasis of this course is for teachers to give learners formative feedback on the skills they want students to develop. This can be through discussion, observation and lesson outputs where teachers discuss with students 'what went well' and how they can improve further, so that students can reflect on, and improve, their performance.

To support assessment in the classroom, we have produced some guidance that is available on the Cambridge Lower Secondary support site.

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