Online Enrichment courses for Primary School Students aged 6-12 years
Dear Parent, October 2020

We are disappointed not to be seeing students face to face this term but unfortunately circumstances have dictated that we will have to run the majority of our classes online for the Winter Term. Fear not though as we have lots of amazing teachers who have been working very hard to produce some online courses for high ability students. Many of these teachers are former CTYI students and all of them want to produce work that will be enjoyable to all talented students.

We hope to be able to run classes again as normal come November and we will email all students’ parents with more details of this once we get confirmation from the universities that it is safe to do so.

Every student who attends this online programme has curiosity to find out more information. This can be achieved through reading or doing and making things themselves and we believe that these courses will allow us to capture some of this and let the students thrive in an environment where knowledge is valued and opinions are welcomed.

We encourage you to join us for online CTYI this year and help these students fulfil their potential

Dr. Colm O’Reilly
CTYI Director
Course Structure
The Winter term will run online, every Saturday over the course of 5 weeks; 
**November 14th - December 12th.** Students may choose either morning or afternoon classes, or both.

Courses in Winter run in course pairs. Students choose from the list of course pairings below and study each subject for 1 hour each day.

*E.g. Medicine & Neuroscience - 1 hour of Medicine, 15 minute break, 1 hour Neuroscience.*

Course eligibility is based on the class your child is currently in. The cost of one 2 hour course pair will be **€150** for the 5 weeks (plus an Eventbrite booking fee). To participate you will need a computer/tablet with a webcam and functioning sound system and a good quality wifi connection. CTYI takes Child Protection very seriously, and as such, each zoom class will have settings which ensure that people who are not students cannot join the class. Prior to the classes starting we will send out a document on how to use zoom for the classes, which we would ask you to review. Parents may be asked in advance to organise some materials for their child. These items will normally be things that can be found around the home. All class details will be sent to parents closer to the time of the classes.

Application Process
• If you are interested in applying for one of these courses, please follow the link provided below each timetable, which will take you to our Eventbrite listing.
• As our team are all working remotely at the moment, we will not be processing application forms and payments as usual.
• To apply you need simply enter your details & your child’s details and pay with credit/debit card for your chosen course through Eventbrite.
• Please note, as staff are still mainly working remotely, you will be required to fill out a section on the application form regarding whether your child has any special educational needs as the application site is not connected to our database which usually would show this information. Only the staff of CTY will be able to access this information and it will not be shared anywhere else.
• Course places are limited & are on a ‘first come, first served basis’ so please apply as soon as possible to avoid disappointment.
• Tickets on Eventbrite will close as soon as a course is full.
• The email address you use for eventbrite will be the email address that will be used to communicate class details such as the Zoom link which allows you to enter the class.

**6-7s Course Fee**
**€75***

**8-12s Course Fee**
**€150***

*For course application queries, please contact<br>ctyi@dcu.ie*
Refund Policy
No Refund will be made to any student who is assigned one of their course choices but decides not to participate. Students who start a course but do not complete it are not eligible for a refund. No refunds or credit notes will be given to anyone who makes a mistake on Eventbrite by signing up twice, choosing the wrong course or incorrectly signing up for a class that is not in the age range for your child. Fees are non-transferable. CTYI reserves the right to cancel or alter any course if, due to unforeseen circumstances the course cannot be run economically or efficiently.

Discipline
In order for classes to run as smooth as possible and to make sure every student has a good time, we have created some rules and guidelines for all students when taking part in the online classes:
• No bullying or teasing any other student. We all came to learn.
• No talking over the teacher or messing while the class is in progress. If you want to ask a question you can raise your hand or use the chat provided.
• No taking photos or videos in class unless you get permission from the teacher.
• Please arrive for class on time. If you log into the class late this can cause disruptions to the class.
• No spamming the chat with anything that is not related to what is being discussed in class.
• Students may not contact a staff member on any social network unless the account is a registered CTYI one.
• Students may not share Zoom class codes or activity codes with any other person.

Important to Note
Students who violate programme rules are subject to the disciplinary actions outlined above. No refunds will be made to students dismissed from the programme. Details on CTYI Data Protection and Equality policies can be found on our website www.dcu.ie/ctyi/CTYI-Policies
Classes for 6-7 year olds

Courses will be online, they will be taking place for one hour each Saturday over the course of 5 Saturdays, November 14th - December 12th.

Students choose from the list of courses and study that subject for 1 hour each Saturday. There is two time slots in the morning and two in the afternoon, so students can sign up for either one, two, three or four classes per Saturday. Class sizes are small with a max of 15 students per class. To participate you will need a computer/tablet with a webcam and functioning sound system and a working wifi connection.

The cost of one course will be €75 (plus an Eventbrite booking fee).

Morning Classes

10:00 - 11:00 Storytelling

11:30 - 12:30 Science

Afternoon Classes

1:30 - 2:30 Puzzles & Games

3:00 - 4:00 Detective Skills

Detective Skills
This course will introduce students to the skills used by real-life detectives to figure out unsolved cases. Presented with exciting cases to solve each day, they will learn how to develop their own powers of observation and analysis. The course will include forensic science techniques too. So whether it’s a missing lunchbox or something more sinister, Detective Skills will show students how to analyse, enquire, search and scrutinise like a real detective.

Puzzles & Games
With plenty of puzzles to solve and codes to break, students will develop their skills in logic and reasoning over the course. This will be a fun course for any student who enjoys asking why and how!

Storytelling
Everyone has a story to tell. We will explore storytelling in all its forms: written, oral, visual, and performative. You can dream up fairy tales, develop dramatic monologues, and design comic strips. Whether you enjoy comedic rambles, epic journeys, or truelife tales, this course will give you the tools to tell them well. Come and share the stories that lie inside of you. Please note that writing skills are not essential; just a good memory and a big imagination.

Science
Science is the basis for much or our knowledge about, well, everything. What things are made of, what happens when you mix things together, and why things fall when you drop them, it’s all to do with science!

Alternatively, you can copy and paste this link into your browser:

https://www.eventbrite.ie/e/ctyi-2020-winter-online-classes-for-primary-school-students-aged-6-7-tickets-126078545323

Click Here To Apply!
Morning Classes for 8 - 12 year olds
10:15 - 12:30

- Fantastic Beasts and How to Write Them & Poetry and Performance
- Gizmos & Gadgets & Forensic Science
- Inside the Frame & Graphic Design
- Mathematical Magic & Codes and Ciphers
- Medical Mysteries & Game Design
- Miraculous Microbes & Fantastic Physics
- Model UN & Horrid Histories (USA)
- Superhero Science & Nanoscience
- Volcanoes, Earthquakes and Tsunamis & Carnivorous Plants and Stinking Flowers

Afternoon Classes for 8 - 12 year olds
1:45 - 4:00

- Animal Behaviour & Marine Biology
- Astronomy & Environmental Science
- Cutting Edge Science & Genes and T-Cells
- Debating 101 & Crime and Punishment
- Exploring Engineering & Rocket Science
- Game Design & Discoveries and Inventions
- Japanese Language and Culture & Myths and Legends
- Neuroscience & Medicine
- Sports Science & Adventures in Chemistry
- Write, Act, Perform & Hogwarts; A History

Click Here To Apply!

Alternatively, you can copy and paste this link into your browser;

https://www.eventbrite.ie/e/ctyi-2020-winter-online-classes-for-primary-school-students-tickets-125506237535
Adventures in Chemistry
Learning chemistry, you will learn about the elements that compose the world around us. Of course the exciting part of chemistry is learning how these elements interact with each other to create exciting results! Through practical laboratory sessions, students on this course will get to grips with the experimentation and all that goes with it. From basic atomic and molecular structures, to chemical bonding, to reaction speeds, students will be introduced to the fascinating topics that compose this wonderful subject.

Animal Behaviour
Are you fascinated by the weird and wonderful behaviour of animals? Do you have a pet whose actions both puzzle and amaze you? Do you aspire to work with animals in the future? In this exciting course, you will gain a greater understanding of a wide range of wild and domesticated species, from ants to apes, horses to hummingbirds, and dogs to dolphins. We will delve into animal minds, looking at perception, memory, and self-awareness. And we will further explore how animals interact with each other, studying communication, cooperation, dominance, and parental care. Whether you are a pet carer, an animal lover, or an aspiring vet, zoologist, psychologist, zookeeper, farmer, carer or trainer, then this is the course for you!

Astronomy
This course will explore the universe, starting from our nearest neighbours in the Solar System, moving through our galaxy the Milky Way and beyond, to the furthest reaches of the universe via intergalactic space, black holes and quasars. Some of the questions which we hope to pose and answer include - is there life on other planets? How does a rocket work? What can we see for ourselves through a telescope?

Carnivorous Plants & Stinking Flowers
What do the Venus flytrap, the Pitcher plant and the Cape Sundew have in common? They’re plants that eat animals. This new botany course will provide a marvelous insight into the fantastic flora found around the world. Far from potted plants, students will learn about the ways savage plants trap and dine on hapless animals and insects. Studying the most unusual-looking and foul-smelling plants on the planet, student can expect to encounter those that look like aliens and attack neighboring roots. From the rotting flesh smell of Rafflesia to the rat eating Nepenthes attenboroughii, these aren’t your garden variety daffodil.

Codes & Ciphers
This exciting and hands-on course will aim to develop problem solving and critical thinking skills in a fun and creative environment. We will learn of the evolution of codes and ciphers from Caesarean times to its modern day uses. Students will be challenged to encrypt and decrypt messages as well as cracking unknown codes.

Crime & Punishment
What makes someone commit a crime? Is nature or nurture more important? Does sending people to prison work? If these are questions you would like answered, Crime & Punishment could be for you! We will look at the causes of crime and how it is dealt with, and who gets involved when people break the law. We will talk about alternatives to traditional courts and prisons, and explore why we need to have laws in the first place. We will also look at how other countries deal with criminals and the class will get a chance to design their ideal legal/criminal justice system towards the end of the course!
Cutting Edge Science
This exciting course explores the amazing world of futuristic science and biotechnology. Ever wondered what it would be like to be cloned? How to use stem cells to grow a new arm? How is food genetically modified and does it taste different? How we can use DNA to treat diseases? Ever thought about how infectious diseases are spread or how many different types of bacteria are on your shoe? If you are interested in finding out the answers to these questions this course will cover all these topics and many more.

Debating 101
This fun and interactive course is for anyone who is interested in developing skills of critical thinking, argumentation and public speaking. In this course we will cover the basics of how to craft a convincing argument, how to deliver it persuasively and of course how to defend it! Each week will focus on a different skill and involve lots of group discussion and debating on topics ranging from lowering the voting age, the ethics of zoos, to books vs films, and many more.

Discoveries & Inventions
Do you love to create, investigate and problem-solve? Do you enjoy tinkering, building, dismantling and designing? Are you inspired by the innovators and inventors of the past and present? In this fun and fascinating course, we will travel from the ancient to the modern world, exploring the amazing breakthroughs in science and technology that have changed our lives for ever. Drawing on a wide variety of STEM subjects, we will learn about the human body, medicine, space travel, machines, computers, and much, much more. Expect to be continuously challenged to work on your own discoveries and inventions, with guidance on the processes of idea generation, product design, experimentation, problem solving, and prototyping. If you have a theory to prove or an idea you want to turn into a reality, then this is the course for you!

Environmental Science
As Wendell Berry said, “The Earth is the one thing we all have in common.” The old model of human civilisation built on the back of widespread natural destruction is no longer sustainable, and in this course you will be looking at the cutting edge solutions to some of our greatest challenges- climate change, mass air pollution and continuing population growth. Humanity’s survival demands new ways of generating power, new ways of organising how and where we live and even new ways of producing food to meet rising demand.

Exploring Engineering
This course aims to introduce students to some of the core principles underlying the study of engineering. Engineers are important in many things that shape the world around us such as computer chips, rocket science and advanced technology. There will be a practical element to this course, with students constructing their own bridges and looking at engineering in everyday life.

Fantastic Beasts and how to Write Them
Can you really create a chimera? Could you train a dragon, a unicorn, or even a Minotaur? How might you defeat the Undead? How could you capture a shapeshifter? How do you spot a cryptid? And how might you communicate with an alien? In this fun and creative course, students will look at various fantastic creatures and marvellous monsters found in myth, legend, folklore, as well as their modern incarnations in popular culture and even some alignments with actual science. We will travel land, sea, and air, and possibly to other planets, gaining the skills to create our own fantastic beasts and spin equally fantastic tales to accompany them.

Fantastic Physics
Discover the amazing world of physics in this fun course. The most fundamental science, physics is responsible for much of how the world around you works. Sound, light, motion, electricity, astronomy, and even how your microwave works are all physics! This course will help students to get to grips with some of the central principles through familiar examples. It will encourage students to ‘think scientifically’ providing some opportunities to learn through practical and applied activities.
**Forensic Science**

Students will get the chance to solve a forensics mystery, learn about fingerprinting, investigate crime scenes and examine blood spattering patterns. They'll also get the chance to learn about ballistics, analyse tyre tracks left at the scene and examine suspects handwriting – not for the faint hearted!!

**Game Design**

Learn about the different components involved in making a game. Introduce yourself to the main concepts involved in game design: chance, player agency, narrative, objectives, goals, mechanics and rules. Explore the history of board games and their cultural and symbolic importance. Maybe you can even use your newfound knowledge to create a selection of boards games using different resources, themes and game mechanics!

**Genes and T-Cells**

Understanding genetics is the basis of many fields under the umbrella of human biology and medicine. None more so than that of immunology, the study of the human immune system and its role in keeping you healthy. The key information carrier in the human body is the gene, code detailing all the proteins and compounds needed to keep you alive. If we zoom out from the genetic level we can find cells such as the T-Cell, the key player in cell driven immunity. This course brings you from the ground up in the field and immunology, from gene to t-cell and beyond.

**Gizmos & Gadgets**

Is it a gizmo or a gadget? What's the difference? Does it really matter? We don’t think so, but what we do think is more important is knowing how they work and are made. We also think it’s super important that today’s students, tomorrow’s inventors, get the chance to start putting their ideas together in creative and fun ways! This course is for those budding inventors, the ones that want to take apart the TV remote to see what’s inside, the ones who take apart and put their toys back together just for the joy of discovering their inner workings. Whether they’re a budding engineer, scientist, IT pro or technologist superhero this is the place to explore all those wonderful gadgets and gizmos!

**Graphic Design**

Do you create your own posters? Or dream of seeing your advertisement in a magazine? Then this course is for you! All around us in the world today graphic designers have created advertisements, logos, posters etc. through the use of words and pictures to spread messages to us. Through looking at its origins and seeing how it is changed over the years this exciting course will give students the opportunity to use both traditional and technological means in the highly interactive process of generating their very own graphic design!

**Hogwarts: A History**

Calling all Muggles! Did you know that you too can play quidditch and perform feats of magic? As well as some fun practical activities, students will delve into the mythical world of Harry Potter and will deconstruct the books to find links between Harry’s world and our own: examining topics such as whether snakes and owls really are mystical beasts; whether there is any proof of the existence of goblins and fairies; and if the so-called witches and wizards in our society have anything in common with the wizards and witches in Hogwarts.

**Horrid Histories - USA**

Howdy folks! Have you ever heard of the Wild West or the magnificent Moon Landing? Well, Look no further! From the famous Christopher Columbus and the admirable Abraham Lincoln, this course reveals some the terrible and tantalising truths behind one of the world's greatest empires: The United States of America. So forget the potty prospectors and snoozy settlers to discover the most disgusting and jaw-dropping stories from American history, including cheating cowboys, a tea-party gone very wrong, and the boldest battles the world has ever witnessed.
**Inside the Frame**
This course introduces students to the analysis of film and screen media. Looking at the various aspects of cinematic production including sound, lighting, costume, acting, cinematography, genre and others, this course will look at how each of these aspects affect how we understand films, and how we might write about them. As the world becomes increasingly visualised on screen through film, tv, advertising, social media and the internet, this course will teach students to decode the meanings behind the use of imagery.

**Japanese Language and Culture**
This course aims to introduce students to the fascinating country, Japan. Participants will cover both elements of the language and culture, touching on Japanese art, cuisine, music and literature that have, and have not, made their way into Western culture.

**Marine Biology**
The exciting world under the sea! You'll get to learn about some interesting specimens such as sharks, dolphins and sea-turtles, and will get to see how they differ from humans. You'll also learn about seaweeds, limpets and more and learn why they're important to sea-life surviving.

**Mathematical Magic**
This course looks at some mathematical artistry! With plenty of puzzles to solve and codes to break, students will see how maths impacts on practically everything we do in life. The class will learn how to do some fantastic tricks with numbers, including shortcuts and fun mathematical feats to dazzle your friends.

**Medical Mysteries**
How did mouldy bread save millions of lives? What makes identical twins identical? What is that growing on your toe? Tough questions like these are at the heart of medicine as a discipline, and tackling them leads to direct improvements in our everyday lives. From the first caveman to eat tree sap for its pain-killing qualities to the cutting edge of modern medicine, this course will look at the questions that power medical advancement. In this class you will learn how to approach these problems like a doctor and a scientist, and how these experts go about solving such problems in the field.

**Medicine**
This exciting course will bring the student on a fascinating journey of human health. It will cover both ways to keep you healthy such as nutrition, exercise and laughter, and also explain how modern medicine can help people recover from illness - from first-aid to hospital care. Discover how your heart beats, how your muscles move, what headaches are and how Aspirin makes pain disappear.

**Miraculous Microbes**
A step into the world of microbiology, taking a look at bacteria, fungi and viruses. Microorganisms can be found everywhere, some helping us and some harming us. This class will focus on characterising microorganisms, as well as looking at their function in our world.

**Model UN**
Famine, disaster, war, epidemic and the environment; at the Model United Nations you will learn much about world politics through real life situations. Learning the skills of debate and negotiation, you will put forward your case for your country. Discuss, confer, bargain, agree, collaborate and cooperate with other countries. This is real world politics and every decision will have immense consequences for good and for bad! This course will suit students who have an interest in debating and are concerned with world justice and fairness.
Myths & Legends
In this course we will look at the ideas that surround the study of Mythology. We will look and compare myths & legends from different cultures, such as the Graeco-Roman, Nordic, Celtic, Egyptian and others. We will try to answer questions such as:- What is a myth? - What is a legend? - What is a Cosmology? - What is a Pantheon of Gods? Are there any myths nowadays? Using traditional stories, legends and folktales and through different activities we will develop an understanding of all these interesting ideas.

Nanoscience
Nanoscience is the science of the really, really, really small! Would you like to replace all your school books with one sheet of flexible, electronic paper? How could this be possible? Nanoscience! What has the potential to create shoes that allow humans to walk up walls or clothes that could charge your mobile phone? Nanoscience! This exciting, hands-on course looks at everything from nanotechnology and the nanoscale, to nanoscience in nature. Did you know your fingernails grow 1 nanometer every second? On this course we will be exploring lots of different Nano Wows!! Students will work as ‘nanoscientists’ discovering, through fun experiments and practical activities, all that the exciting world of nanoscience has to offer!

Neuroscience
Did you know that to wiggle your big toe your brain has to send a message by nerve impulses down to your big toe? Neuroscience will give students the chance to study one of the most exciting areas of scientific research. This course will focus on how information is processed in the brain and the ways it affects our perception of the world around us, while covering a wealth of scientific theory and fun practical experiments.

Poetry & Performance
Are you passionate about drama or poetry? Have you ever starred in a play or written one yourself? By bringing together the most enjoyable elements of drama and creative writing, this course will teach you how to craft dramatic monologues, sophisticated scripts, and playful poems and show you how to perform them like a natural! Whether you’re a beginner or an experienced actor, this course is all about sparking your enthusiasm for the performing arts in a way that imaginatively boosts your confidence and self-expression. So take a seat ladies and gentlemen, as you’ll be sure to break a leg by the end of this course!

Rocket Science
Rocket Science is a broad term given to a huge variety of challenges that need to be overcome in order to leave our planet. The space race of the 20th Century involved many of the best and brightest minds pushing – and surpassing - the technological limits of humanity. In this century the race continues, but the goals are even more ambitious. Developing nations such as China and India are well on their way to putting a person on Mars and companies such as Space X and Virgin Galactic are getting closer and closer to their goal of making space travel possible for ordinary citizens. In our Rocket Science course, both the challenges and the rewards will be high so why not make this your year to embark on a space odyssey?

Sports Science
Did you know that without their physiotherapists many leading sports stars and teams (such as Munster), wouldn’t be as successful? This is because good physiotherapy ensures that injuries heal well and fast and can even prevent them happening in the first place! Study the anatomy of the human body and see how an athlete’s body differs. Come to the class and learn why golfers such as Tiger Woods use computer simulations to analyse their golf swing; rugby players like Ronan O’Gara study how the projectile path of the rugby ball can ensure a successful conversion over the posts in rugby; and ‘Nike’ use technology to design what they think is the perfect football boot.
Superhero Science
How does Superman fly? Why do the X-Men have so many different powers? Could the Arctic ice really have kept Captain America alive all those years? Would Batman’s grappling hook actually work? Most importantly where does the Hulk keep finding purple pants!? If you’re into Superheroes and you love Science then this course is just for you. In this course you’ll get the chance to look at your favourite Superheroes through the lens of real world Science and Science through the eyes of the Super-hero! From the Avengers to the Justice League, Newton to Einstein, Marvel to DC, Darwin to Crick, Rocket Racoon to Ch’p and Boyle to Avogadro this is the place to learn the Science of Superheroes!

Volcanoes, Earthquakes & Tsunamis
This course will examine some of the natural disasters that the world experiences, and trace back the causes of such occurrences. The course will go deep into the earth to explain why volcanoes and earthquakes occur and how they affect the surrounding landscape. Examining the areas around the globe that are particularly susceptible to these natural disasters, students will learn how technology has been used to create warning systems and minimize the human impact. This exciting course will be of interest to anyone with an interest in science or geology.

Write, Act, Perform
Write, Act, Perform will introduce students to the basics of creative writing and performance. It will foster a love of poetry and drama and focus on improving self-expression and confidence. Acting and public speaking will also be important parts of the course. All of this will be taught in a creative and imaginative way, giving students indispensable skills for professional and personal life. The session will end with a performance of poetry, drama and sketches written by students themselves.
All details can be found in our brochure, but if you have a query or require further information on our Young Student Programmes please contact:

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Application Deadline
Friday 6th November

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