



MIT Global Teaching Labs in Wales 2023

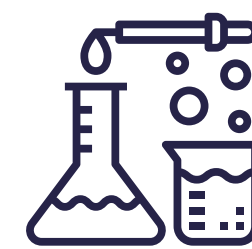
Curriculum

Curriculum

Science and Technology



Biology



Chemistry

Topic Titles	Single Lesson or Workshop*	Topic Titles	Single Lesson or Workshop*
Basic Genetics	Workshop	Chromatography	Either
Building with Cells	Workshop	Creating Crystals	Workshop
Evolution & Inheritance	Either	Dynamo Theory	Either
Exploring Chromatography	Either	Harpoon Mechanism	Either
Gene Editing & CRISPR	Workshop	History of Atomic Theory	Workshop
Human Circulatory System	Workshop	Organic Chemistry	Workshop
Introduction to Immunology	Either	Periodic Trends	Either
Life Cycles/Outbreak Science	Workshop	Principles of Chemical Science	Workshop
Molecular Biology	Either	Quantum Dots	Single
Neurotechnology	Workshop	States of Matter	Workshop

*Workshops range from two to six lessons

Curriculum

Science and Technology



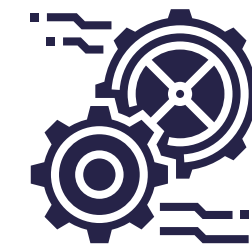
Computer Science

Topic Titles

Artificial Intelligence Basics
Coding Complexity & Chaos
Cybersecurity
Image Analysis with Python
Introduction to Binary
Introduction to Python
Introduction to Recursion
Micro:bit Programming
MIT Application Maker
Programming mBots
SSH & Data Processing
Understanding Algorithms

Single Lesson or Workshop*

Single
Workshop
Workshop
Workshop
Either
Either
Single
Workshop
Workshop
Either
Workshop
Either



Design Technology & Engineering

Topic Titles

ACDC!
Aeronautical Engineering
Design an Earthquake-Proof Building
Chemical Engineering
Electrical Engineering
LEGO League & Robotics
Rollercoaster Quadratics
Sustainable Design
Waterproof that Roof!

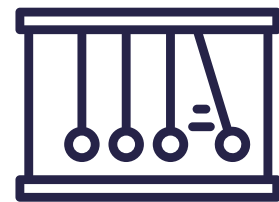
Single Lesson or Workshop*

Workshop
Workshop
Workshop
Either
Either
Either
Workshop
Workshop
Workshop

*Workshops range from two to six lessons

Curriculum

Science and Technology



Physics

Topic Titles

Bose-Einstein Condensate

Catenary Curves

Classical Mechanics

Electrical Circuits

Heat Transfer

Introduction to Astrophysics

Introduction to Cosmology

Kinematics & Electromagnetism

Laws of Motion

Special Relativity

Single Lesson or Workshop*

Either

Either

Either

Workshop

Workshop

Single

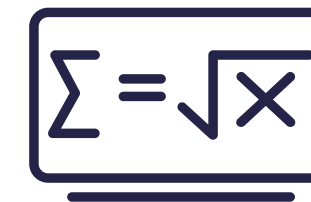
Single

Either

Workshop

Workshop

Mathematics and Numeracy



Algebra, Geometry & Statistics

Topic Titles

Amazing Prisms!

A Primer on Game Theory

Conditional Probability

De Moivre's Theorem

Introduction to Boolean Algebra

Parametric Equations &

Differentiation

Projectile Motion

Projects in Applied Maths

Speed, Distance & Velocity

Solving Equations with Matrices

Solving Quadratic Equations

Taylor Series

Single Lesson or Workshop*

Workshop

Either

Workshop

Workshop

Workshop

Either

Either

Workshop

Either

Workshop

Either

Single

*Workshops range from two to six lessons

Curriculum

Humanities



Geography, history, religion, values & ethics (RVE), business studies and social studies
(which also includes: classics, economics, law, philosophy, politics, psychology and sociology)

Topic Titles	Single Lesson or Workshop*	Topic Titles	Single Lesson or Workshop*
All About Weather	Single	1-to-1 or Small Group Tutoring	Single
Basic Cartography	Workshop	Debate like a Professional	Single
Climate Change & Biomes	Workshop	History of the Black Panther Party	Single
Computational Cognition	Either	How can we see Magenta?	Single
Earthquakes!	Workshop	Introduction to Philosophy	Single
Mountains, Rivers, & Coasts	Workshop	Science of Photography	Single
Rainforest Eco-Systems	Either	Unconventional Google Research	Single
Sustainability & Life Cycles	Workshop	Tools	
Tectonic Hazards	Workshop	Zoom University	Single
Urban Planning & Management	Workshop		

*Workshops range from two to six lessons

Curriculum



Masterclasses

Topic Titles

Applying to Competitive Universities

Building Professional Experience

Careers in STEM

International Educational Opportunities

Sports & STEM

Student Life at MIT

Women in STEM

Single Lesson or Workshop*

Single

Single

Single

Single

Single

Single

Single



Catch Up Lessons

Our instructors are also able to deliver specific Catch Up Lessons more closely tied to the curriculum. If you would like to suggest a subject or topic that you would like to be taught, either as a single lesson or as a workshop, please get in contact with us.

*Workshops range from two to six lessons



