

Learning Lab

from Glasgow Science Centre



Learning Lab

Outstanding learning experiences to inspire the next generation of scientists and engineers.



What is Learning Lab?

For Learners

An exciting way to explore hands-on science, meet inspirational professionals, share ideas and discover that we are all scientists.

For Educators

A programme that encourages deeper engagement with STEM topics, supports curriculum outcomes, provides a structure for interdisciplinary learning and increases confidence in STEM.



What's included?

This unique learning programme includes a range of exciting STEM topics, each running over **several weeks**.

Aligned with CfE experiences and outcomes, Learning Lab supports teachers to deliver **amazing science in the classroom**.

With a suggested teaching time of **2 hours/week**, each programme comprises:

- lesson plans and worksheets
- original video content
- live interactions with scientists
- twilight professional learning session
- family learning activities
- a visit to Glasgow Science Centre or from GSC on Tour
- learning materials on MS Teams or Google Classroom



has been calculated for each of the Effects of Climate Change in the table below.

Effects of Climate Change		
Sea Level Rise (1 - 4)	Increasing Rainfall (1 - 4)	Increasing Storm Strength (1 - 4)
4	4	3
4	4	4
2	4	1
$1 + 4 + 2 = 7$	$4 + 4 + 4 = 12$	$3 + 4 + 1 = 8$
$7 \div 4 = 1.75$	$12 \div 4 = 3.00$	$8 \div 4 = 2.00$

increasing rainfall has a very high impact on Castle A exposed to weather so it gets a score of 4.

rating for each of the Effects of Climate Change can be calculated by adding up the score for each castle feature and

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Lesson Outline

Build a Wind Turbine

Energy Sources Matching

Worksheet with instructions and diagrams.

BODYWORKS

Exploring the science behind human health and wellbeing.

Through exploration of different **body systems**, learners will discover:

- what we all have in common
- the differences that make us unique
- factors that affect our health and wellbeing

Watch a lung dissection, make your own intestines and meet a real healthcare scientist! Activities support second level experiences and outcomes in **Biological Systems** and **Health & Wellbeing**.

P5-P7



Learning Lab^o



Castle CSI

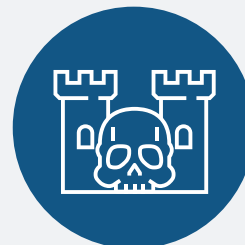
Uncovering famous Scottish castles using scientific techniques.

Learners become forensic scientists as they:

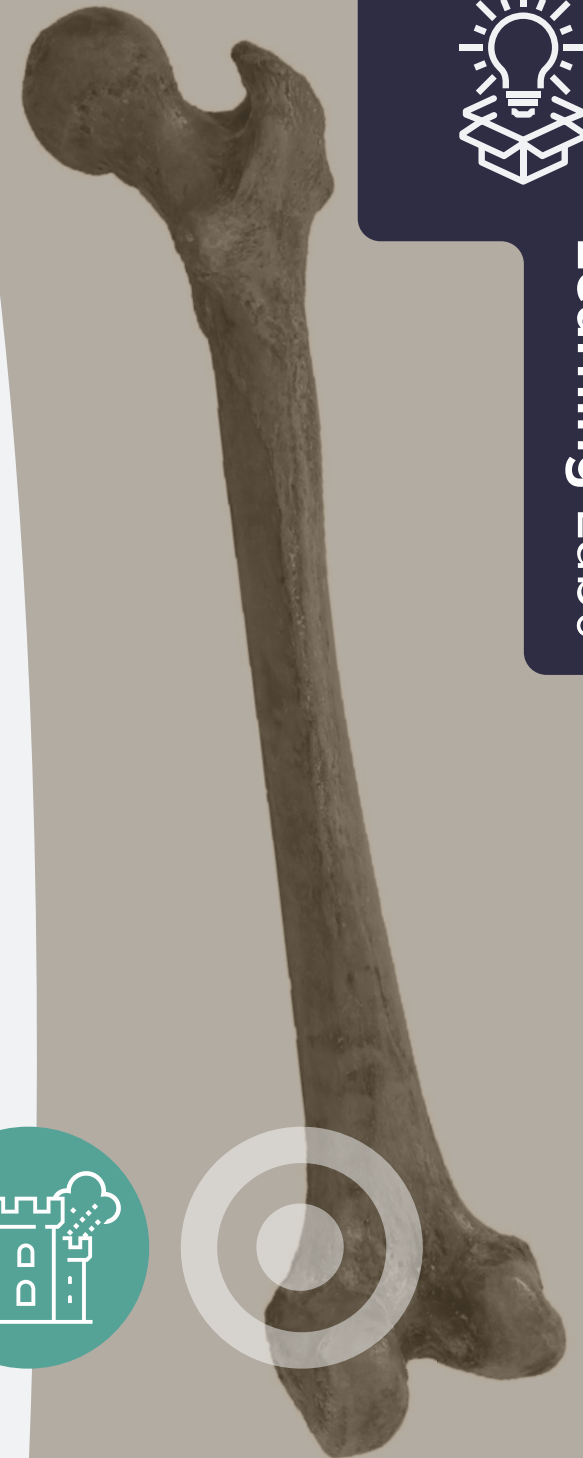
- discover how **climate change** is affecting our historic sites
- solve the mystery of unidentified remains using **forensic data**
- complete hands-on activities with **Castle CSI on Tour**

Covering second level outcomes in **Social Studies, Health and Wellbeing** and **Sciences**, Castle CSI asks pupils to piece together clues about a mystery skeleton, and carry out investigations into soil erosion, and weathering using Skittles!

P6-P7



Learning Lab



Scotland in Space

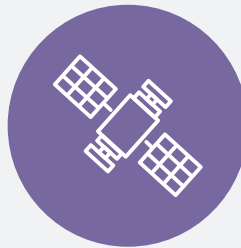
Celebrating the innovative spirit in all of us and how that spirit can change the world.

Supporting young people to:

- investigate the science behind rocket and satellite technology
- research applications of space technology that are changing the world
- recognise Scotland's contribution to the space industry and the opportunities available
- explore their individual skills and strengths

Third and fourth level outcomes in **Sciences and Technologies** are supported by activities like making a rocket car, protecting a potato satellite from space junk and exploring satellite imagery. Pupils also have the opportunity to meet a professional from Scotland's growing space industry.

S1-S2



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POWERING THE FUTURE

Exploring the future of energy.

Through investigation of **renewables technologies** and the **pathway to net zero**, pupils will discover opportunities in the energy sector and explore how their skills could change the world.

Supporting curriculum outcomes across **Sciences, Social Studies** and **Technologies**, Powering the Future includes unique hands-on activities, group discussions, a Science Centre visit and the opportunity to meet professionals from Scotland's energy industry.

P6-P7

S1-S2



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Our Amazing Air

Exploring the air around us, how it supports life, and the ways we can improve it.

Supporting learners to investigate:

- what air is and why it is so important
- what air pollution is and how we monitor it
- how air quality can be improved

Make your own air pollution catcher, grow plants in a terrarium and meet an air quality scientist! Hands-on activities support outcomes in **Planet Earth, Health & Wellbeing**, and **Numeracy and Literacy**.

P5-P7



Learning Lab°

our World our impact

Exploring our connection to the changes on our planet.

Through exploration of **Climate and Weather, Energy, Biodiversity** and **Food**, learners will gain understanding of:

- the basics of climate science
- the human impacts on our world
- career opportunities in the field

Supporting second level outcomes in **Planet Earth, Health & Wellbeing, Numeracy and Literacy**. Pupils will make their own rain gauge, explore biodiversity in their school environment and meet experts in the field.

P5-P7



Our World

Celebrating our amazing planet.

Through the themes of **Our Place in Space, Living Things** and **Climate and Weather**, young learners will explore our changing planet and how it is affected by human choices and actions.

Make your own solar system, discover how clouds are made and complete a living things scavenger hunt! Aligned with **first level experiences and outcomes** and supported by **live sessions with scientists**.

P2-P4



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RENEWABLES CHALLENGE

Exploring energy production.

Learners will build their understanding of **carbon neutral**, **renewable energy sources** and **career opportunities** in the field.

In this 4-week challenge, pupils will work together to design an innovative solution to power their school using renewable energy!

P5-P7



Tiny Forests

Celebrating green spaces and the great outdoors.

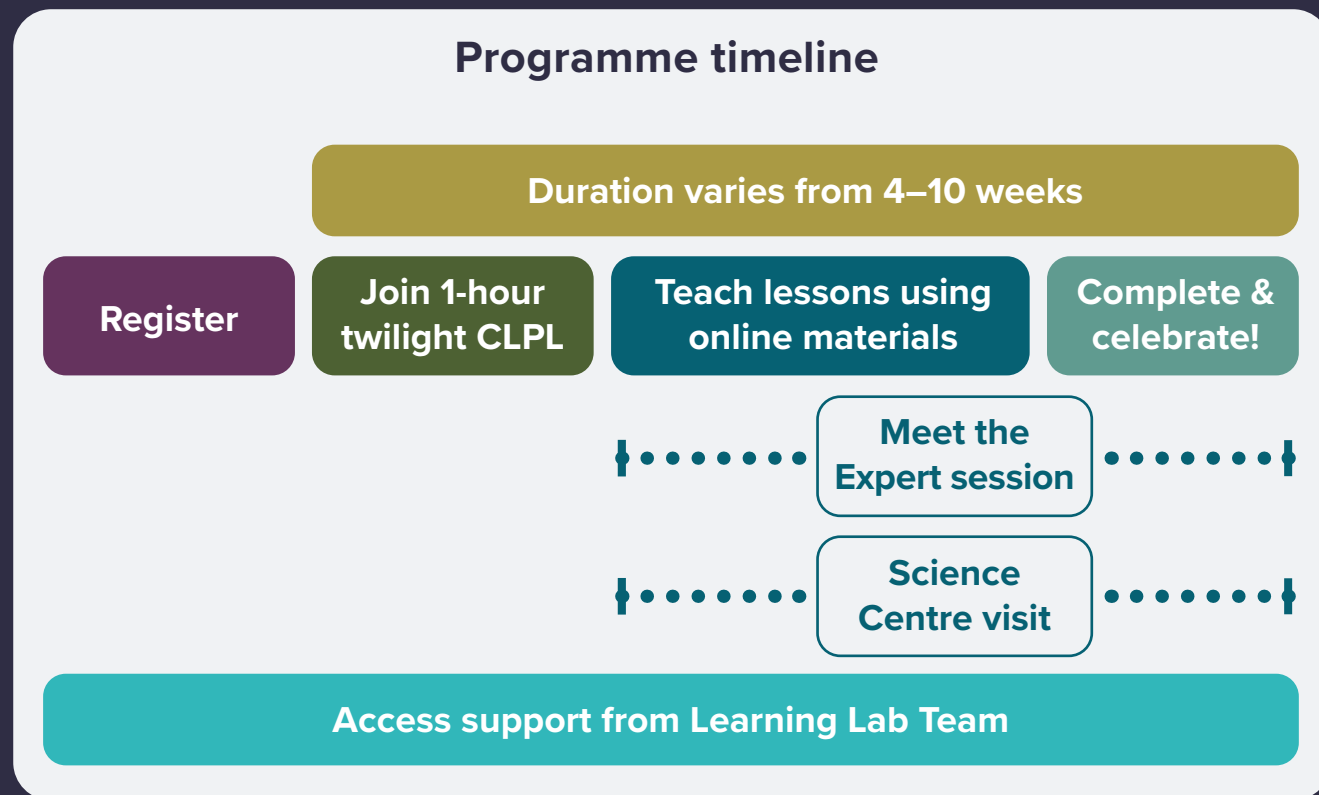
In this **outdoor learning** programme, young explorers will investigate **living things**, **grow their own plants** and discover the **science all around us!**

Supporting curriculum outcomes in **Health & Wellbeing**, **Planet Earth**, and **Numeracy and Literacy**.

Pre-school-P1



How does it work?



Thanks to generous support from our partners, participation in many Learning Lab programmes is free or subsidised.

Please contact us at learninglab@gsc.org.uk or visit glasgowsciencecentre.org/learning-lab to enquire and book.

Scan to book



Partners



Delivery partners



My favourite thing about Learning Lab is the video calls because I liked meeting a real scientist!

- Pupil

I really appreciate the fantastic resources, clear teacher guides and input given by the team.

- Teacher

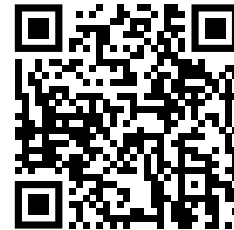
The content is relevant, engaging and mapped to Curriculum for Excellence which has allowed for easy integration into the classroom. The content has challenged pupils to apply their skills and understanding to real life contexts and has supported teachers to deliver high quality learning experiences.

- Glasgow City Council Education Dept



For more information and to book visit our website.

glasgowsciencecentre.org/gsc-learning-lab



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