



Glasgow Challenges Climate

Water, Water, Everywhere





Interdisciplinary Learning

What is it?

Interdisciplinary Learning is a planned experience that brings curricular areas together in one coherent programme or project. These might fall within one curricular area (e.g. languages, sciences) or between several curricular areas. IDL enables children and young people to:

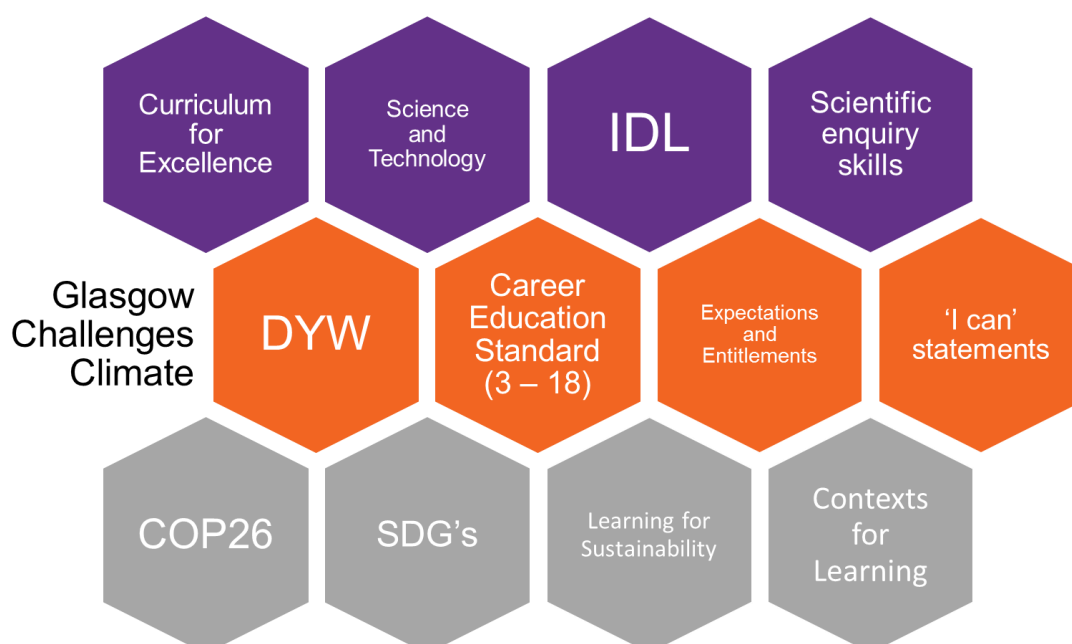
- *Learn new knowledge or skills, and develop new understanding of concepts*
- *Draw on prior knowledge, understanding and skills*
- *Transfer and apply that collective knowledge to new problems or other areas of learning*

Interdisciplinary learning should be challenging for learners. The challenge is personalised, owned by the learner, and so intrinsic engagement is higher than in a more traditional one-size-fits-all experience.

IDL relies on learners developing certain skills over the long haul, if they are to be able to seek out different ways to tackle a project or topic, for themselves, and not one set path defined by the practitioner. These skills include the Skills Development Scotland Meta-skills which have been identified as the skills employers are looking for in the future workforce.

Through an IDL experience every learner should be able to express what they're learning, and why.

For more information on IDL please refer to the recently released IDL Thought Paper from Education Scotland: <https://education.gov.scot/media/mkomulen/interdisciplinary-learning-thought-paper.pdf>





United Nations Climate Change Conference

What is it?

The 2020 United Nations Climate Change Conference, also known as **COP26**, is the 26th United Nations Climate Change Conference.

The purpose of the conference is to allow nations to work together to respond to the climate emergency. The conference will last for two weeks and it has been described as the most important gathering on climate change since the Paris agreement was signed in 2015.

2020 is also the year in which governments are due to review their promises to cut carbon emissions.

Up to 30,000 delegates are expected to attend the event in Glasgow

When is it?

It will be held in Glasgow from the 9th -19th November 2020.

Where is it?

The conference will take place at the Scottish Events Campus (SEC).



The **Sustainable Development Goals (SDGs)** are a collection of 17 global goals designed to be a "blueprint to achieve a better and more sustainable future for all". The **SDGs**, set in 2015 by the United Nations General Assembly are intended to be achieved by the year 2030

The Glasgow Challenges Climate project focuses on 3 of the SDG's:

- **Goal 9** - Industry Innovation and Infrastructure
- **Goal 11** - Sustainable Cities and Communities
- **Goal 13** - Climate Action





Glasgow Challenges Climate: *Water, Water, Everywhere*

Curriculum for Excellence

Experiences and Outcomes

Science: SCN 2-02b, 2-04a, 2-05a, 2-16a, 2-20b

Technology: TCH 2-02a, 2-09a, 2-10a, 2-12a

Skills Development Scotland

The Meta-skills are the skills employers are looking for in the future workforce. These skills are themed into the following categories:

1. *Social Intelligence*
2. *Innovation*
3. *Self Management*

Scientific analytical thinking skills

- *Demonstrate creative thinking by offering suggestions and solutions to everyday problems.*
- *Demonstrates reasoning skills by explaining choices and decisions.*

Skills and attributes of scientifically literate citizens

- *Demonstrates awareness of the importance of respecting living things and the environment and of managing the Earth's resources responsibly.*

Water, Water, Everywhere

The west coast of Scotland is one of wettest places in the Europe with an average of 170 days of rain a year, this makes Glasgow officially the wettest city in the UK. Due to the amount of rainfall and hills in the city, Glasgow is prone to flooding in the city centre, residential areas and greenspaces. This can cause issues with transport, accessibility and building foundations.

The Project: Can a new flood defence system be developed to prevent rainfall flooding Glasgow city centre streets or greenspaces?

It is suggested that pupils select either an area local to their school or one of the following to focus on:

- Buchanan Street - Due to the lack of greenspace and the incline of the street rain cannot be absorbed into the ground
- Glasgow Green - Regularly flooded by high rainfall which can cause issues for public access or when used to host larger events such as Trnsmt Festival or the Pipe band Championship
- Bellahouston Park - Host to outdoor concerts and sporting events but is easily flooded by high rainfall

Outcome

Pupils should complete their final project in one of the following formats:

- Video (max. 3 mins)
- Written report
- Classroom display



Glasgow Challenges Climate:

Water, Water, Everywhere

Getting Started

What do you already know?

- Glasgow has a higher rainfall than any other city in the UK with an average of 1124mm yearly and 170 days of rain per year
- Engineers often design drainage systems to send rainfall to greenspaces on purpose. This is to protect streets, buildings and housing but this can make public greenspaces unusable.
- Glasgow is built on 180 hills and has three main rivers that run through the centre of the city (Clyde, Kelvin and Cart)

What do you need to know?

Some questions to consider:

1. Research the different types of flooding that Glasgow has to deal with. There are 3 main types; coastal, river and surface flooding. Which one is causing the main issue and how have people tried to tackle this in the past?
2. What does the existing Glasgow drainage system look like?
3. How do you make a solution sustainable?
4. Could the water from rainfall be used for something else other than drinking water?
5. Is there an opportunity to share information about rainfall and climate change with the public? How will this be done?

Glasgow Doors Open Day Digital Festival



Glasgow Doors Open Days Festival is an annual event celebrating the city's architecture, culture & heritage. Each

September dozens of participants throw open the doors of over 100 historic buildings, theatres, museum stores, factories, studios, breweries & more, across the city, to the public, for free. Their mission is to increase civic pride amongst Glaswegians and to broaden awareness of the city's rich built & cultural heritage at local, national & international levels. This year the festival has gone digital with lots of resources available on the Open Doors website, including audio trails, workshops and more:

For more information visit:

www.glasgowdoorsopendays.org.uk

Pupils taking part in Glasgow Challenges Climate will also have access to the Glasgow Doors Open Digital Map which allows users to easily explore the historic buildings on their doorstep:

<https://www.google.com/maps/d/viewer?mid=1MvlodXtnteC1SajZYOIPk0E6Kia2qstC&ll=55.856035138518436%2C-4.26720060224609&z=13>



Skills 4.0

Meta-skills

<u>Self Management</u>	<u>Social Intelligence</u>	<u>Innovation</u>
Focussing	Communicating	Curiosity
Integrity	Feeling	Creativity
Adapting	Collaborating	Sense Making
Initiative	Leading	Critical Thinking

Skills Development Scotland—Skills 4.0

Career Education Standard (3-18):

By the end of Second Level

- I can recognise the skills I have needed for work.
- I can identify people in my network who help me broaden my horizons.
- I can discuss the relevance of skills to the wider world and make connection between skills and the world of work.

By the end of Broad General Education (BGE)

- I can demonstrate and apply the skills I have learnt across the curriculum in relation to the world of work.
- I can access advice and support to help me make informed choices about further learning and opportunities.
- I can investigate and assess ethical issues in business and trade decisions.



Glasgow Challenges Climate IDL Planner



KWL

What do we know?

What do we want to know and
how will we find out?

What have we learned and how
do we going to share?

Outdoor Learning

What are the planned outdoor learning opportunities?



Challenge Questions

Have local links been taken into consideration to contextualise learning and make it more relevant for learners?

Are there opportunities for partners/other school staff to be involved?

Is there a shared goal among learners and have the skills required to achieve this been identified?

Have relevant cross curricular links been made?

Does the IDL provide breadth, challenge and depth?



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