



Glasgow Challenges Climate

Breathing Space





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:

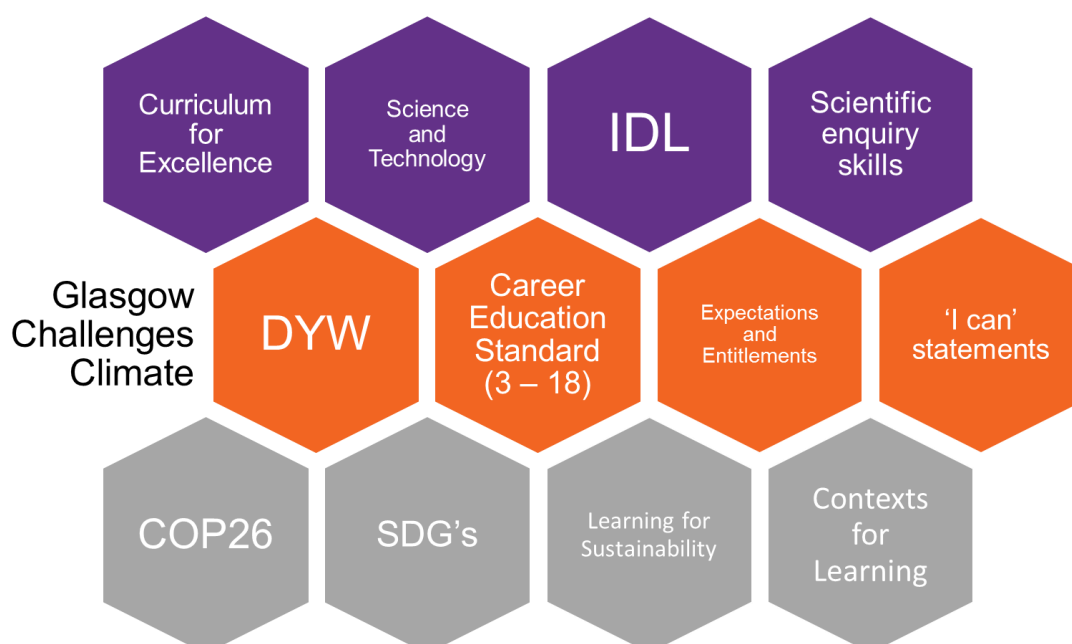
- *Learn new knowledge or skills, and develop new understanding of concepts*
- *Draw on prior knowledge, understanding and skills*
- *Transfer and apply that collective knowledge to new problems or other areas of learning*

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: *Breathing Space*

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.*

Breathing Space

Good air quality is essential for our health, quality of life and the environment. Air becomes polluted when it contains substances which can have a harmful effect on the environment and our health.

The UK is failing to meet legal limits of nitrogen dioxide (NO₂) pollution, where the annual average concentration level cannot exceed 40µg/m³ (micrograms per cubic metre of air). Glasgow's current NO₂ level is 56µg/m³.

One of the ways to improve air quality is to have Low Emission Zones (LEZs) are areas in town or city centres where the most polluting vehicles are banned from entering. They are one of the most effective ways to protect vulnerable people from dirty air and exist in over 200 cities across Europe. Glasgow is the location of Scotland's first LEZ, introduced at the end of 2018.

The Project: How can you monitor and improve the air quality in Glasgow?

Outcome

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

- Video (max. 3 mins)
- Written report
- Classroom display
- PowerPoint (this could be narrated)



Glasgow Challenges Climate:

Breathing Space

Getting Started

What do you already know?

- Glasgow is the location of the first Low Emissions Zone in Scotland.
- Due to Covid-19 restrictions, Scotland's air quality was within legal limits in 2020 for the first time. This is unlikely to last, unless we have real change in the way we move around.
- Heating systems for homes and other buildings can also be a source of air pollution. Combustion of fuels such as coal, oil, gas and wood (sometimes now described as biomass) all result in emissions to air.

What do you need to know?

Some questions to consider:

1. Identify an areas of the city that has high levels of air pollution. How are you going to measure and monitor the air pollution of this area?
2. In addition to measuring air pollution could anything else be measured?
3. What are the different causes of air pollution and what you be done to reduce emission levels?
4. Can data and information be shared with the people in Glasgow to benefit the city? How should this be shared?
5. How much would it cost to implement a solution?

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=1MvlodXtnteC1SajZYOlPk0E6Kia2qstC&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?



Teams should use the **Gantt Chart** below to plan their project. A copy of this should be included in the final report.

Tasks	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Select project, assign roles										
Initial ideas										
Research and investigation										
Site visit										
Idea generation										
Analyse and evaluate										
Draw conclusions										
Report writing										
Display										
Presentation										



