



Education for a Sustainable Future

#AscentisNationalConf22
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Embedding Sustainability into your curriculum

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Education for Sustainable Development



- According to a seminal UNESCO report of 2014, *Education for Sustainable Development* (ESD) allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future
- Education has a critical role to play as we meet the UK Government's target of Net Zero emissions by 2050 and reduce the global impacts of climate change



Education for Sustainable Development



- Understanding the key concepts of sustainability and the impacts of climate change will thus empower and enable learners to make informed choices and decisions
- A strategic aim of the UK Government is to provide ‘Excellence in education and skills for a changing world: preparing all young people for a world impacted by climate change through learning and practical experience’
- (Sustainability and Climate Change: a strategy for the education and children’s services systems, April 2022)



Education for Sustainable Development



- Establishing and promoting Education for Sustainable Development will also provide learners with transferable skills required for all business sectors to transition to a revolutionised economy
- The UK Government's 10-Point Plan for a *Green Industrial Revolution* (Nov 2020) and *Net Zero Strategy* will support the transition to net zero emissions and fund the development of 190,000 contemporary jobs by the middle of the decade and up to 440,000 jobs by 2030



Education for Sustainable Development



- At Ascentis, we are committed to embedding Education for Sustainable Development across our curriculum
- We have specialised qualifications such as Environmental Sustainability and Carbon Literacy and the Impact of Climate Change
- Ascentis also have provision embedded within courses such as Environmental Science and Sustainable Construction



Access to HE

- **Chemistry and Our Earth** which offers learners the opportunity to study how human activities are affecting the Earth and its environments
- **Biology and our Environment** which considers the impacts of human activities on ecosystems and strategies that are used to mitigate these impacts
- **Environmental Science** which includes the impacts of human activities on the atmosphere and the role of recycling, including the concept of the circular economy



Access to HE

- The **Geography** subject set includes units on energy in a sustainable world and the impact of population growth on our use of resources
- Energy use and environmental issues are also included in the **Physics** subject set
- The **Biology** subject set includes **Ecology** which considers how human activities impact the environment and the carbon cycle leading to climate change



Access to HE

- In **Chemistry** learners have the opportunity to study **Environmental Chemistry**, including the chemistry of the greenhouse effect and issues linked to the use and disposal of polymers
- The **Automotive Manufacturing** unit within the **Automotive Design** subject set enables learners to understand the sustainable manufacturing techniques employed by vehicle manufacturers and to analyse the impact of these processes on the environment



Access to HE

- Sustainability issues surrounding the use of carbon fibre in automotive manufacturing are covered in the **Automotive Composites** unit in the **Automotive Science** subject set
- **Sustainable Construction** is included in the **Built Environment** subject set; learners study the role of environmental impact assessments, the impacts of pollution and methods to protect the environment from construction activities



Access to HE

- How sociological theories explain some aspects of environmental issues is considered in **Sociology of the Environment**, found in the **Sociology** subject set





Construction



- We have developed a new optional unit to complement our provision within our Level 2 Award, Certificate and Diploma in Skills for Employment in the Construction Industries
- The *Awareness of Domestic Retrofit* unit has been developed in response to an emerging sectoral requirement for retrofitting of under-insulated and ill-performing buildings
- This unit provides theoretical underpinning to the principals behind retrofit surveying, installation and evaluation



Pre-Access

- Level 2 Certificate and Diploma in Skills for Further Education and Employment
- **Chemistry and Our Earth** offers learners the opportunity to study how human activities are affecting the Earth and its environments
- **Biology and our Environment** considers the impacts of human activities on ecosystems and strategies that are used to mitigate these impacts

Environmental Science includes the impacts of human activities on the atmosphere and the role of recycling, including the concept of the circular economy



Short Online Qualifications

- [Ascentis Level 1 and 2 Award in Environmental Sustainability](#)
- These qualifications are designed to give learners knowledge and understanding of the basic principles of sustainability and environmental impacts
- Learners are introduced to the key issues raising awareness and encouraging them to consider their role in helping to make sustainable choices



Short Online Qualifications

- [Ascentis Level 1 Award in Preventing Plastic Pollution](#)
- This qualification enables learners to understand the different types of plastics and their uses, the problems associated with plastic pollution and how they can be reduced





Short Online Qualifications

- [Ascentis Level 2 Award in Carbon Literacy and the Impact of Climate Change](#)
- This qualification aims to provide learners with the knowledge and understanding to be able to make informed choices leading to positive actions that reduce their carbon footprint
- An understanding of how climate change affects everyone gives learners the confidence to share their understanding and motivate others to do the same



Short Online Qualifications

Indicative Content

Level 1

The three strands of sustainable development

Sustainable development can be defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

Brundtland Report, WCED 1987.

There are three main pillars (strands) of sustainable development: social, environmental and economic. These are informally referred to as people, planet and profits.

Excess consumption and problems caused

Excessive consumption, or over-consumption, is a situation where the use of resource/s has outpaced the sustainable capacity of the ecosystem*

The negative impacts of prolonged over-consumption are depletion of resources, degradation of the environment and reduced health of the ecosystem.

The ways that individuals impact on the environment

The more people on the planet, the greater the consumption of natural resources to support their lives.

However, different individuals affect the environment in different ways according to their wealth, the lifestyle they choose and the pollution they generate.

The Importance of Natural Resources

Natural resources and their importance

Natural resources are materials and components that occur in nature, without the actions of people (i.e. they are not man-made).





Short Online Qualifications

Glossary

Here is a glossary of terms that your learners may find useful during the delivery of this qualification, to help with key terminology in order to successfully complete the course.

Term	Meaning
Absorb	To take in or soak up.
Algae	Simple plants that live in water, they are often very small, made of just one cell.
Barnacles	Small sea animals with shells, they are found stuck to rocks.
Bioaccumulation	How harmful or dangerous chemicals build up in the bodies of animals.
Biodegradable	Can be broken down naturally, without causing harm to the environment.
Biomagnification	How harmful or dangerous chemicals build up in food chains. Animals at the top of the food chain have more of these chemicals in their bodies than animals at the bottom of the food chain.
Bioplastics	Types of plastic that can be broken down naturally in the environment, they are not made from crude oil and they don't cause pollution.
Carrier bag tax	A government tax which makes carrier bags more expensive, to help reduce the use of carrier bags.
Concentrate	When the amount of a material increases.
Crude oil	Oil from underground which has not been changed for its intended purpose.
Decompose	To break down into smaller pieces or particles over time.
Deposit return scheme	A scheme where you get money back if you return your bottle for recycling. To reduce the number of bottles being thrown away.
Disposable	Designed to be thrown away after it has been used.



Short Online Qualifications

1. Chlorofluorocarbons (CFCs) are **NOT** significant greenhouse gases because they:

Tick one box

- a) do not absorb infra-red radiation.
- b) are no longer released into the atmosphere in large quantities.
- c) do not absorb visible radiation.
- d) move into the upper atmosphere.

2. How are the anole lizards in the Caribbean evolving to adapt to survive stronger hurricanes?

Tick one box

- a) They are moving to other islands
- b) They are developing smaller front legs
- c) They are developing larger toe pads
- d) They hide beneath rocks

3. How would a 2 °C increase be likely to affect human populations?

Tick one box

- a) People will be richer
- b) The population will increase
- c) There will be food shortages in poorer countries
- d) Water will be more available to people in poorer countries



Short Online Qualifications



British Values and Citizenship

Environmental

Equality, Diversity, Inclusion and Safeguarding

Food Safety in Catering

Health and Safety

Health and Well-Being

Infection Control and Prevention

Internet Safety

Personal Development



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Vocational

- [Ascentis Level 2 Award in Forest School Programme Support](#). This qualification includes an understanding of sustainable woodland management
- It is designed to meet the needs of teachers, youth workers, students and others in providing preparation for further development and study to becoming a Forest School Leader



Resource








My Plastic Diary



Name:

Over the next week keep a tally chart of how many single use plastic items you use.

 Monday Tuesday Wednesday Thursday Friday Saturday Sunday Total for the week								
Plastic bottles 								
Plastic cups 								
Plastic bags 								
Plastic straws 								



Resource



List here any other single use plastic items that you have used:

What alternatives to single use plastics have you used or could you use in the future?



Embedding into Vocational and Technical Qualifications



In order to build our provision we are working on several separate projects to embed new units into our existing qualifications these include:

- Educational Sustainable Development (ESD - *Green*)
- Digital
- Retrofit
- Health and well-being
- Cost of Living



Embedding into Vocational and Technical Qualifications



ESD

We have commissioned a new section on the website with introductions to the sector and then to our existing qualifications

National conference is focussing on ESD

Current units being highlighted for ESD

New units, resources or Indicative content being commissioned

Digital

A similar approach to ESD

Also looking to develop a qualification in digital for Wales

Retrofit

New unit written and added to Construction qualifications

Level 3 Access retrofit being considered to be added to our Built Environment



Embedding into Vocational and Technical Qualifications



Health and Well-being

Slightly different start to this project as we are mapping our what existing qualifications and units , resources and Indicative content we have across the portfolio with a view to add to it as before

Cost of Living

Scoping our early discussions around packaging financial wellbeing together



Thank you



Questions?





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