



Llywodraeth Cymru
Welsh Government

A new Curriculum for Wales

The story so far...

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.
This document is also available in Welsh.



Digital ISBN 978-1-78859-131-7
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WG32444

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Introduction

A new curriculum is being developed for settings and schools in Wales through a collaborative process between Welsh Government, regional consortia and school based practitioners. Schools which were successful in applying to become [curriculum pioneers](#) are working in one of the six Areas of Learning and Experience (AoLE) groups

The Pioneer Schools Network is working as part of an all-Wales partnership in collaboration with Higher Education Institutes and key partners including Qualifications Wales and Estyn.

During [Strand 1](#) our [Pioneer Schools](#) focussed on the core principles of the new curriculum framework. The outcomes from this work have been published and will be embedded in the thinking for the new curriculum and tested as part of the peer review cycle.

The second strand has been the design and development of the six Areas of Learning and Experience (AoLE), which began in January 2017.

The 6 AoLE groups have met monthly to develop their proposals for an early structure/skeleton for each AoLE, which are now going through a quality enhancement process with external experts. Subject to the outcomes, Strand three and the more detailed development will begin in the Autumn term.

Within this document we have included six executive summaries which provide the latest thinking of each group:

- [Expressive Arts,](#)
- [Health and Well-Being,](#)
- [Humanities,](#)
- [Languages, Literacy and Communication,](#)
- [Mathematics and Numeracy](#) and
- [Science and Technology](#)

Pioneer Process

National and international experts have supported the Pioneers' work in a planned way, helping to develop a broad, balanced, inclusive and challenging curriculum. Support and challenge has also come from a Curriculum and Assessment Group as well as other national groups and bodies. As such the work will embody the best of current national and international thinking about structure, organisation, content, pedagogy and assessment in each (AoLE).

All Pioneer schools are working to engage with their own networks of schools and involve their colleagues from outside of the Pioneer network so that as many schools as possible can be involved in testing the emerging curriculum model.

The Pioneer approach is a brand new way of developing a curriculum, not just in Wales but internationally. It is an opportunity to create a new curriculum that teachers, parents and young people themselves believe in. Not a set of prescriptions to be delivered by rote, but a curriculum that is forward looking, and informed by best practice nationally and internationally. By placing schools and teachers at the heart of development, theory and practice can come together in a wholly new way of thinking and working.

[List of Pioneer schools.](#)

A NEW CURRICULUM FOR WALES...

STRAND
1

Strategic Design

Independent Review 'Successful Futures', and consultation with the profession and external experts, lead to 'A Curriculum for Wales – a Curriculum for life' – the routemap.

2016
AND CONTINUING

Assessment
& Progression



Enrichment
& Experience



Cross curricular
elements



Wider Skills,
Welsh Dimension,
International
Perspectives



Reports &
Recommendations

Launched In September 2016:
Digital Competence Framework (DCF)

Partner Engagement

Pioneer & Partner Schools
Regional Consortia
External Experts
Higher Education Institutions

Estyn
Qualifications Wales
Welsh Government

STRAND
2

Reports & Recommendations
Key areas:

- Four Purposes
- Scope & Boundaries
- Importance & Distinct Nature
- Presentation & Structure
- Degree of Detail
- Common & Distinct Pedagogy

Statement to show
how each Area
of Learning and
Experience supports
the Four Purposes
as referred to in
'Successful Futures'.

JAN 17
AND CONTINUING

Six AoLE Reports

1. Expressive Arts
2. Health & Wellbeing
3. Languages, Literacy & Communication
4. Mathematics & Numeracy
5. Science & Technology
6. Humanities

STRAND
3

Curriculum Content & Development

Pioneer School Engagement

During Strand 3 all of our pioneers will work together both within and across the six AoLE groups. Our professional learning and digital pioneers will support the refining, testing and evaluation of our curriculum as it is developed by the curriculum pioneers.

SEPT 17
AND CONTINUING

STRAND
4

Preparing,
testing & refining

2018
AND CONTINUING

EXPRESSIVE ARTS

End of Strand 2 Report for the Expressive Arts AoLE- Executive Summary

1. How the AoLE promotes the four purposes:

The Expressive Arts provides the greatest range of creative opportunities of all the Areas of Learning and Experience and directly fulfils the four purposes. During Expressive Arts experiences, the whole child is physically, socially, and emotionally engaged, leading to enhanced self-confidence and higher performance across the curriculum. The Expressive Arts delivers the four core purposes simultaneously in powerful contexts. Pupil voice within the Expressive Arts encourages learners to take ownership of their work, seek and enjoy challenge, set high standards, and strive to improve their performance. The practical nature of Expressive Arts allows learners the physical and emotional space to express their own identity, to be respectful to the needs of others, and acknowledge their own rights. Going forward the group is seeking to invite FE, HE and employers to discuss skills and future proofing. Lead Creative Schools' and best practice case studies will provide digital exemplification as to how Expressive Arts promotes the four core purposes. The group also wants to share current practice with further support on professional learning by Arts Council Wales, FE and HE.

2. Scope and boundaries

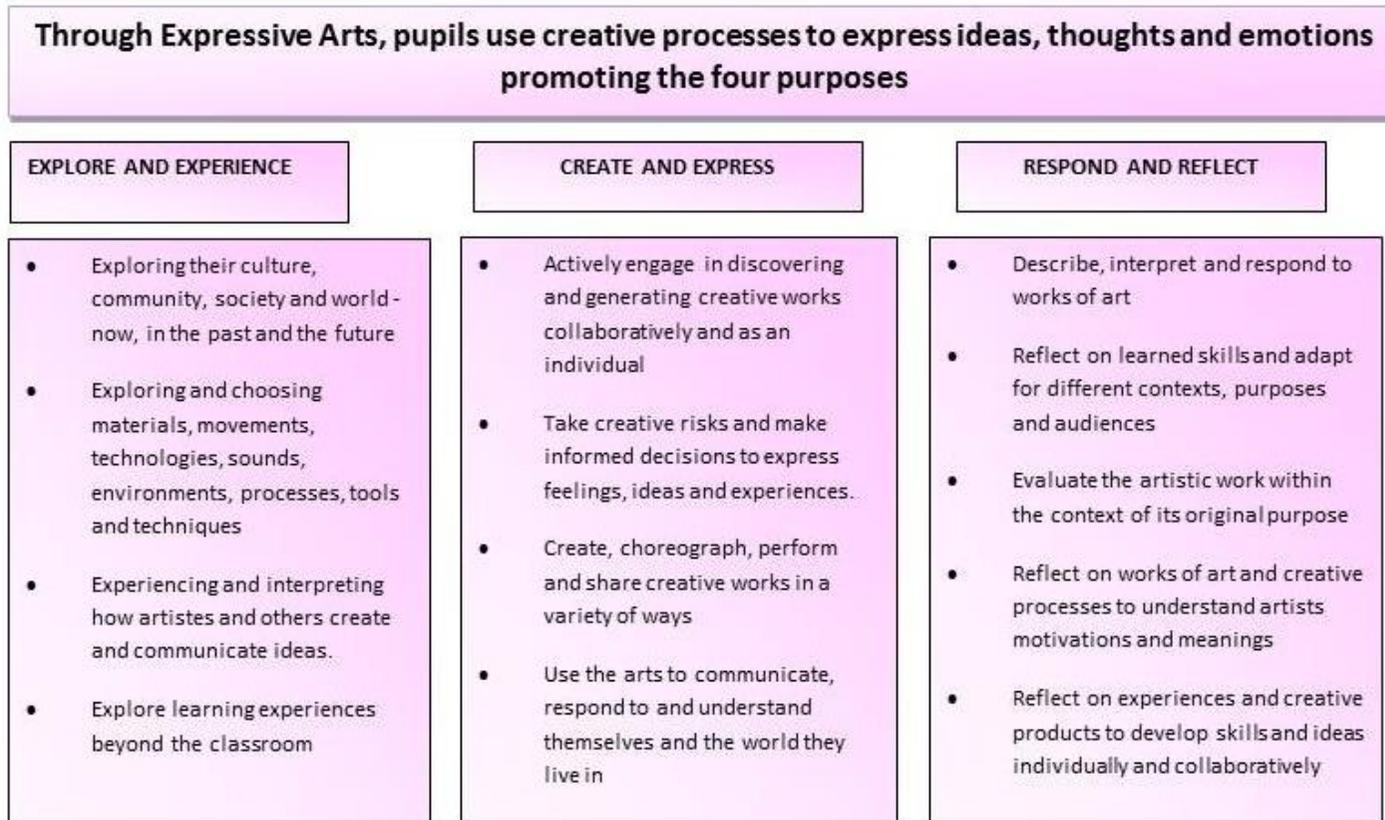
The AoLE centres on the disciplines of Music, Dance, Drama, Art, Film and Digital Media, with the embedded cross-curricular responsibilities of the Frameworks for Literacy, Numeracy and Digital Competence. Strand 1 cross-cutting themes have been discussed and their implications considered. Expressive Arts affords pupils opportunities to explore thinking, refine and communicate ideas, engaging thinking, imagination and senses creatively within powerful and purposeful contexts

The skills developed within Expressive Arts are multi-sensory, inclusive and take the diverse needs of the full range of learners as well as matters of student equity into account. Whilst recognising that the Expressive Arts' disciplines have their own discrete knowledge, it is intended that they will re-conceptualise into a multi-disciplinary, skills-centred approach. The group will be trialling projects in schools to research approaches to pupil voice.

3. How best to present the various component subjects and/or strands within the AoLE:

A model with the four purposes at its core, focussing on three inter-linked creative processes - '**Explore and Experience**', '**Create and Express**', '**Respond and Reflect**' has been evolved (see below). The three main pillars within the model are essential in developing the creative process and pedagogy that are central to the delivery of Expressive Arts. They can be used in any order but have intrinsic links. Going forward there needs to be greater specificity in respect of the discrete skills and knowledge within each Expressive Arts' discipline. We will be looking at collaborative planning with other AoLEs to ensure any overlap is productive not repetitive, and will further develop the granularity of Expressive Arts' disciplines with Pioneers and partner schools.

MODEL EVOLVED TO DATE:



The Expressive Arts disciplines of Dance, Drama, Music, Visual Arts, Film and Digital Media must provide rich learning experiences across the curriculum. The competencies of Expressive Arts could / will include:

Dance: Form and movement principles, body, space, dynamics, time relationships

Drama: Character, time, place, plot, tension, mood, focus, contrast, balance

Music: Beat, pulse, metre, duration, rhythm, tempo, pitch, timbre, dynamics, harmony, form, texture

Visual Art: Line, shape, space, texture, colour, form, tone, pattern, balance, contrast, emphasis, rhythm, movement and variety, proportion, harmony

Film and Digital Media: Composition (to be completed)

4. A commentary on the presumed levels of specificity throughout the AoLE and reasoning behind this.

The Expressive Arts AoLE guidance will include a number of generic competencies and specification of core content. Schools will use the 'Model' mentioned above as guidance to develop their own curricular models – as long as disciplinary concepts and content remain visible so that progression and coherence are visible. Progression in the Expressive Arts equates to increasing complexity and sophistication by describing at each milestone key aspects of the Expressive Arts disciplines that form the context within which broad achievement outcomes are pursued, applied and achieved. Going forward the group will be exploring the development of a knowledge and skills progression continuum, in line with Successful Futures' milestone steps, and looking at the availability of case studies (both print and digital), to provide exemplification.

HEALTH AND WELL-BEING

End of Strand 2 Report for the Health and Well-being AoLE- Executive Summary

1. How the AoLE promotes the four purposes

The Health and Well-being (H&Wb) AoLE advocates a purpose-led approach to this part of the curriculum, rather than a content-led one, keeping in mind a child-centred philosophy and a whole school approach.

Health and Well-being forms the foundation upon which a rounded and robust educational experience can be built both in terms of providing relevant skills and knowledge to promote healthy activities and practices, and also in fostering the appropriate environment and individual competencies and aptitudes for the promotion of learning. In this way, this AoLE is central to the promotion of all four purposes.

The group believes that the H&Wb AoLE is distinct from the other areas because of its cross-curricular and wide-ranging nature, and for this reason was particularly anxious to focus on 'What Matters'. Through mapping all four purposes the group identified a range of cross-curricular competencies which can deliver the four purposes through informing all teaching and learning. These competencies are: readiness, reflectiveness, resilience, respectfulness, resourcefulness and responsibility.

2. The scope and boundaries of the AoLE, including its central concerns, how it is distinct from other areas, and why it's important for the education of each child and young person

The group is in agreement that the scope of this particular part of the curriculum should be on direct health and well-being outcomes for children and young people. In considering the current Personal and Social Education (PSE) framework it was acknowledged that there are certain topics currently taught as part of PSE for which the direct health and well-being outcomes are harder to identify.

As a result it is proposed that a discussion needs to take place between the 6 AoLE so that decisions can be made as to where the identified 'overlapping' topics fit best. The AoLE would propose the following topics as examples of those which rest primarily outside the scope of the new H&Wb AoLE:-

Sustainable Development,
Environment
Financial capability

Global Citizenship (Humanities)
(Humanities / Science and Technology)
(Mathematics and Numeracy)

For those topics which fit within the AoLE's boundaries, the H&Wb Pioneers were anxious to resist formulating a list of 'Content', as this would lead to a tick-box approach and would be unlikely to lead to successful whole school delivery. However, it was acknowledged that a set of key 'Themes' was required for the AoLE in order to organise the broad range of aspects of Health and Well-being which this part of the curriculum would be engaged with. As a result the following 6 indicative Thematic areas were defined by the group:

Personal Care and Development
Healthy Choices
Learning to Learn
Relationships and Emotions
Keeping Safe
Physical Activity

The group is currently in discussions with Public Health Wales about this indicative list of thematic headings, with a view to aligning the curriculum areas as far as possible with the framework headings in the Healthy Schools National Award, which are currently under review.

There has been considerable discussion about Physical Activity within the AoLE, and on the particular scope and boundaries which should apply to this part of the curriculum. It is felt that there needs to be a philosophical shift in the way in which Physical Education in schools is delivered in order to promote positive attitudes towards lifelong participation in physical activities.

The AoLE is working with the SRE Expert Panel and relevant policy leads to determine how best to shape this aspect of the curriculum. The SRE Expert Panel will provide its final recommendations in the Autumn, although it has produced an interim version already, and these will help shape the curriculum design and development process.

3. How best to present the various component subjects and/or strands within the AoLE

The H&Wb AoLE group recognises that good health and well-being begins with a strong sense of self which can be divided into 3 overarching domains: mind, body and emotions. Teaching and understanding the interconnection between the three lies at the heart of the H&Wb AoLE. When a person has a strong sense of self they are able to connect and build positive, healthy relationships with others.

Although the focus is on being purpose-driven and not content-driven, the need to identify a range of thematic areas has been recognised, in order to shape day-to-day delivery of this part of the curriculum.

4. A commentary on the presumed levels of specificity throughout the AoLE and reasoning behind this

The group's preference is for a low level of specificity to allow schools to autonomously shape their curriculum to suit locally and nationally identified needs relating to H&Wb. There must be room for creativity and innovative practice which makes learning real and empowers the learner. It is recognised, however, that the curriculum and its associated assessment may need to become increasingly prescriptive post-14 and that content is best presented in degrees of specificity.

It is therefore proposed that under each of the 6 Thematic Elements content can be arranged in 3 layers:

1. Specific content to be covered - those aspects which are considered to be at the core of the H&WB curriculum or 'non negotiable'. This content may require a scheme of work.
2. Overarching ideas (those which may form contexts for learning where relevant or necessary).
3. Information on possible whole-school approaches and Pedagogical models which may underpin learning for individual establishments

HUMANITIES

End of Strand 2 Report for the Humanities AoLE- Executive Summary

1. How the AoLE promotes the four purposes

The Humanities working group has developed a statement outlining how the Area of Learning and Experience (AoLE) promotes the four purposes:

Through exploring big ideas about the Humanities, pupils will study the past and present, and by imagining possible futures, will learn about people, place, time and beliefs. Pupils will:

- understand historical, geographical, political, economic and societal concepts.
- explore their environment to further develop their sense of place and well-being.
- engage in learning experiences about rights, values, ethics, beliefs, religion, philosophy and spirituality.
- consider, explore and make informed choices regarding sustainability and the impact of their actions.
- positively contribute to their community and critically engage with local, national and global issues to become a responsible citizen of Wales and the wider world.

By exploring big ideas, pupils will gain a solid base of knowledge and understanding of different times, places and beliefs to become ambitious, capable learners. To become enterprising, creative contributors, they will develop enterprising skills and dispositions, in order to improve the everyday lives of people in their local community and in the wider world. Through understanding and respecting different beliefs and understanding how to exercise their democratic rights and responsibilities, pupils will become ethical, informed citizens. By developing personal stances on matters of faith, spirituality, sustainability and social inclusion they will become healthy, confident individuals.

This is an initial draft and a working statement that will be reviewed and updated regularly as the AoLE itself is developed.

2. The scope and boundaries for the AoLE including its central concerns, how it is distinct from other areas and why it is important for the education of each child and young person

As outlined in Successful Futures, the Humanities AoLE will include the study of history, geography, Religious Education, business and social studies. The group proposes that through exploring big ideas and key concepts in the humanities, learners will also be able to draw on opportunities to explore elements of citizenship, classics, economics, law, philosophy, politics, psychology and sociology. The importance of learners acquiring knowledge about, exploring, experiencing and contributing to aspects of society at a local, national and global level will be reflected in the content of the AoLE going forward.

We will return to the scope and boundaries of the AoLE on a regular basis as we develop the detail of its content from September onwards.

3. How best to present the various component subjects and/or strands within the AoLE;

The Humanities working group has considered a variety of international curricula models and other key papers and literature. As a group, we feel that the 'big ideas'/what matters approach as exemplified within Wynne Harlen et al's 'Working with Big Ideas in Science' would provide an organising construct that would deepen learners' understanding within the stated disciplinary domains, whilst allowing sufficient flexibility for these 'big ideas'/what matters key concepts to exist across a number of disciplinary areas (and potentially beyond in to the other AoLEs). The four purposes of the curriculum will be core to all concepts.

The group has outlined a planning methodology to develop the AoLE – by identifying the key knowledge/concepts, skills and competencies for each discipline within the Humanities and then 'building' the AoLE by identifying overarching 'big ideas'/what matters key concepts that will be drawn across the disciplines. Some may also remain within disciplinary boundaries. This next strand in the development work will begin during the Autumn term.

4. A commentary on the presumed levels of specificity throughout the AoLE and reasoning behind this.

The group has had some initial discussions in relation to this task and has developed some principles as a starting point for future work. The group's approach will ensure a good balance between knowledge, skills and the development of the four purposes. It will also ensure less specification in relation to disciplinary range and a greater choice for practitioners to select appropriate disciplinary content to reflect their school's/setting's context.

During the Autumn term, we will continue to consider the most appropriate ways of embedding the Welsh dimension, international perspectives and the cross-curriculum responsibilities and wider skills (as outlined in Successful

Futures) within the Humanities. Further discussions will also be had across AoLEs to ensure a consistent approach.

As we develop the Humanities AoLE, consideration will be given to the professional learning opportunities and sample resources that practitioners will need to deliver the new curriculum.

LANGUAGES, LITERACY AND COMMUNICATION

End of Strand 2 Report for the Languages, Literacy and Communication AoLE- Executive Summary

1. How the AoLE promotes the four purposes

Effective communication is a key building block for learning across all AoLEs for pupils' wellbeing, improved employability and, as Prof. Donaldson notes in *Successful Futures*, for life more generally.

- The Languages, Literacy and Communication (LLC) AoLE will develop ambitious and capable learners who can communicate effectively in different forms and settings, using both Welsh, English and international languages. The creative use of digital technologies can enhance language learning, facilitate communication and inspire and motivate pupils. This AoLE must also equip pupils with the skills, confidence and motivation to embrace the challenges associated with language learning.
- To become enterprising, creative contributors, pupils must be able to identify and grasp opportunities to use their languages in school and beyond. Risk-taking and making mistakes are inherent in the language learning process; pupils need to reflect on mistakes to make progress. International research also suggests that having two or more well-developed languages may have a positive impact on creativity and problem solving skills.
- To become ethical, informed citizens, pupils should understand the importance of language for identity, culture, community and society. The Welsh language is inextricably linked to identity in Wales and is an integral part of our heritage. The growing complexity of our linguistic landscape needs to be acknowledged and the value of all languages and cultures in our schools and wider communities must be celebrated. Learning about other languages, cultures and forms of communication also helps pupils learn to respect the needs and rights of others, as members of a diverse society. Languages help us make authentic connections with other parts of the world. International literature, as well as literature from Wales, can inspire and act as a stimulus for learning across all AoLEs.
- Through LLC, pupils will become healthy, confident individuals by developing a strong personal identity linked to their community and the wider world. Communication skills and the ability to articulate one's thoughts and feelings are essential for strong relationships which in turn support mental and emotional well-being. Children and young people need

LLC skills in order to access information and support to keep safe and well in the real and the virtual world. The group will continue to refine this description and is considering how best to incorporate examples of best practice.

2. The scope and boundaries for the AoLE including its central concerns, how it is distinct from other areas and why it is important for the education of each child and young person

Oracy and communication will have a prominent role in the LLC AoLE. Every learner will have an entitlement to learn Welsh, English and an international language at primary school. Schools will also help pupils make the most of their other languages (home languages, BSL etc). In order for all pupils to become competent and resourceful learners of language, this AoLE will provide:

- An understanding of language acquisition and language learning;
- Fundamental building blocks for learning about language;
- Opportunities to build on commonalities between languages;
- A firm foundation and structure for language development, literacy and communication;
- A model of development from having few language skills to becoming proficient;
- A love of language and literature that inspires imagination and creativity;
- Opportunities for pupils to reflect on and record their progress, experiences and achievements; and
- An outline of effective pedagogy and methodology based on research.

3. How best to present the various component subjects and/or strands within the AoLE;

The group has researched curricula models from the UK and around the world (including The Common European Framework of Reference for Languages (CEFR) and Welsh for Adults). Drawing on the Literacy Framework, it is proposed that the curriculum for LLC will be based on 'what matters', the essential in languages, literacy and communication knowledge and skills.

This will be supplemented by a continuum for communication and language acquisition and learning. The continuum will encompass productive/expressive skills (speaking, presenting and writing) and receptive skills (listening, viewing and reading). It will encompass Welsh (for Welsh medium, bilingual and English medium settings and schools) English and EAL, international languages and non-verbal communication. The progression steps will include early language acquisition and will be inclusive for all stages/ages (including those starting a new language later in their school career). Equity of support and provision are fundamental principles including for BSL, Makaton, Braille etc. The group is seeking to reconcile the differences between the language of instruction and other languages learned

at school. We will be looking in more detail at the impact of child development on language acquisition and language learning.

4. A commentary on the presumed levels of specificity throughout the AoLE and reasoning behind this.

Starting with 'what matters' in Languages, Literacy and Communication allows teachers the freedom to be creative and facilitates innovation to ensure pupils are enthused and have the opportunity to enjoy a rich language learning environment. The balance between teacher autonomy and adequate support will be carefully considered when deciding on specific knowledge, skills and pedagogy.

The continuum will help map the journey from emerging LLC skills to proficiency. Progression Steps will differentiate according to how much contact a child has with a particular language, how long they have been acquiring or learning the language and the nature of the provision. The AoLE will also reflect how language skills and knowledge are transferred to new and increasingly complex contexts.

The group is keen to identify effective methods to record progress, experience and achievement, so that they are celebrated throughout the language learning journey and encourage motivation and passion for languages.

MATHEMATICS AND NUMERACY

End of Strand 2 Report for the Maths and Numeracy AoLE- Executive Summary

1. How the AoLE promotes the four purposes

Mathematics and Numeracy AoLE promotes **Ambitious, capable learners, ready to learn throughout their lives** by:

- Demonstrating a depth of mathematical knowledge appropriate to age and ability
- Communicating mathematical ideas and methods both written and oral
- Developing secure mathematical and numerical skills in mathematical and numerical lessons and applying them to cross-curricular activities and experiences
- Encouraging pupils to be curious, open-minded, willing to accept mistakes and learn from them in a mathematical purposeful way
- Encouraging pupils to find and understand numerical information in a purposeful way in order to be independent, life-long learners
- Explaining mathematical concepts and ideas, checking solutions when problem solving
- Developing a keen ongoing interest in mathematics that is purposeful to pupils, future needs

The Mathematics and Numeracy AoLE promotes **Enterprising, creative contributors, ready to play a full part in life and work** by:

- Encouraging learners to take risks when considering different ways of tackling mathematical and numerical problems
- Promoting mathematical and numerical problem-solving skills and reasoning skills for learners to confidently tackle a variety of problems, including real-world contexts
- Promoting creativity when looking at different ways of tackling problems
- Developing resilience when applying mathematical skills to creative challenges, working individually and in groups
- Instilling competency in learners to analyse mathematical situations and construct logical arguments in response

The Mathematics and Numeracy AoLE promotes **Ethical, informed citizens of Wales and the world** by:

- Creating opportunities to have evidence based discussions
- Enabling the critical analysis of data to develop informed views on social, political, economic and environmental matters
- Promoting pupils' understanding of personal, local, national and international finance

The Mathematics and Numeracy AoLE promotes **Healthy, confident individuals, ready to lead fulfilling lives as valued members of society** by:

- Developing confidence and resilience to face and overcome challenges and solve problems in order to become independent life-long learners
- Encouraging pupils to use their numeracy skills across the curriculum to make informed effective choices and decisions to ensure lifelong health and well-being
- Instilling the knowledge and skills to manage personal finance and budgeting now and in the future, intercepting information and data to assess risk
- Enabling the understanding and taking of different roles within a group to form positive relationships based upon trust and mutual respect

2. The scope and boundaries for the AoLE including its central concerns, how it is distinct from other areas and why it is important for the education of each child and young person

Mathematics and numeracy is a single discipline AoLE, and unlike some other multi-disciplinary AoLEs lends itself to a more concise definition which in the view of the group centres on the disciplines of mathematics and numeracy, providing knowledge and skills which will equip learners for life. Mathematics and numeracy are perhaps unique in providing learners with the confidence, skills and knowledge necessary to develop in all areas of learning during and beyond their school lives. The mastering of mathematical and numerical concepts and processes enables learners to apply them appropriately across all other areas of learning. Mathematics helps young people make sense of the world around them. It is an ideal vehicle through which to develop skills needed in everyday life. Mathematics helps to develop resilience, problem solving abilities, logical thinking and the knowledge, reasoning and skills which enable continuous development.

3. How best to present the various component subjects and/or strands within the AoLE

The aim is to develop mastery approaches that allow pupils to acquire deep learning and conceptual understanding through problem solving. The group considers that a visual representation or info-graphic of the key components of the new curriculum should appear prominently at the front of the final document.

4. A commentary on the presumed levels of specificity throughout the AoLE and reasoning behind this.

In order to accommodate a mastery approach the group believes that the current mathematics curriculum needs to focus on “what matters” in order to give pupils a richer and deeper learning experience and to allow more opportunity to develop greater understanding of not just the “what”, but importantly, the “how” and “why” underpinned by a suitable balance of knowledge and skills.

SCIENCE AND TECHNOLOGY

End of Strand 2 Report for the Science and Technology AoLE- Executive Summary

1. How the AoLE promotes the four purposes

Beginning with the illustrative examples in Successful Futures, the Science and Technology working group developed a more comprehensive summary of how the Science and technology Area of Learning and Experience will contribute to the four purposes:

- ambitious, capable learners: gaining a solid base of knowledge and understanding of key concepts in science; developing skills in observation, research and critical thinking; becoming skilled in the creative use of technologies; developing skills in reflection and evaluation of performance and planning to develop their ideas; becoming skilled in engaging with external agencies and groups to achieve a purpose; developing the skills to equip them with a positive approach to challenge; developing effective learning styles and communication skills.
- enterprising, creative contributors: designing processes and creating digital products and objects; working with others to develop innovative solutions and to create products for the marketplace; developing skills in individual and group work to solve problems; develop the skills to work safely; use science, technology & engineering for a purpose (for a product, to solve a problem, for commercial context); use science and technology to explore links with industry and community; explore, celebrate and develop innovation and new technologies; develop opportunities for creative work and projects.
- ethical, informed citizens: evaluating the impact of scientific and technological developments; taking informed personal stances on ethical issues associated with scientific and technological innovation; develop safe and robust enquiry and research skills; develop knowledge and empathy of local and global issues; develop knowledge and opinion on environmental issues; be able to take an informed interest in Science and Technology developments.
- healthy, confident individuals: learning to make use of scientific data to assess risk and take informed decisions; using digital technologies safely and with respect for others; use science and technology to support a healthy lifestyle; use science and technology to engage with the outdoor environment; use science and technology to support everyday life; use science and technology to assist and support engagement with external communities, groups and agencies; reflect on individual and team

characteristics and strengths; look for opportunities in science and technology to explore and develop their learning in challenging ways.

This summary will be developed and refined and will inform the development of the AoLE.

2. The scope and boundaries for the AoLE including its central concerns, how it is distinct from other areas and why it is important for the education of each child and young person

The Science and Technology AoLE will include elements drawn from; biology, chemistry, physics, engineering, design technology (including food technology, textiles and product design) design, computer science and IT. It will include domain-specific content as well as the technology, and design' skills and principles arising from these.

The scope of the AoLE be considered “live” and allowed to develop as new technologies emerge and domain specific knowledge is uncovered.

3. How best to present the various component subjects and/or strands within the AoLE;

The group considered a number of curricula models internationally. The group has concluded that the AoLE should be presented around the concept of Big Ideas of Science and Technology, based on Wynne Harlen et al's Big Ideas in Science. This would structure the AoLE around a number of “big ideas” or a single thought, idea or sentence that encapsulates a fundamental component of the AoLE. The approach will promote interdisciplinary, cross-curricular and subject specific learning.

Each big idea would be supported by a “Key focus” – an amplified description of the big idea or statement and a “Journey” that details stages of progression within the AoLE. This would also include skills that to be developed through the progression. Some big ideas/statements will cover the entire range of progression, whereas others may start and finish at age-appropriate positions within the Journey. Likewise, some will cover all disciplines within the AoLE whereas others may not.

4. A commentary on the presumed levels of specificity throughout the AoLE and reasoning behind this.

The group recognises that the big ideas need to be developed with indicative skills and content appropriate to the progression level. The group also recognises the need to provide sufficient scope for interpretation and flexibility for practitioners at each progression level. The group does not envisage that big ideas/statements will include a highly detailed prescriptive exemplar list of content but also recognises the need for some commonality to allow for progression. The group also recognises the need for a number of big ideas/statements which is manageable.

