The Education and Training Inspectorate - Promoting Improvement

An evaluation of the implementation of

The World Around Us

in primary schools

by the Education and Training Inspectorate

CONTENTS

THE MAIN PURPOSES OF THE REPORT:

i. To summarise the Education and Training Inspectorate's (ETI) findings on the quality of the current World Around Us provision in a sample of primary schools.

ii. To identify the main trends and characteristics, including the key strengths and areas for improvement, in relation to current practice.

iii. To make a set of recommendations in relation to the key findings.

Quantitative terms

In this report, proportions may be described as percentages, common fractions and in more general quantitative terms. Where more general terms are used, they should be interpreted as follows:

Almost/nearly all	-	more than 90%
Most	-	75%-90%
A majority	-	50%-74%
A significant minority	-	30%-49%
A minority	-	10%-29%
Very few/a small number	-	less than 10%

Performance levels

The ETI use the following performance levels in reports:

DESCRIPTOR
Outstanding
Very Good
Good
Satisfactory
Inadequate
Unsatisfactory

EXECUTIVE SUMMARY

This summary outlines the main findings and key recommendations of an evaluation of the implementation of the World Around Us (WAU) in primary schools. The evidence base gathered over the period December 2013 to June 2014 comprised:

- 35 survey visits to various schools across all Education and Library Boards, management types and sizes;
- 150 direct lesson observations spread evenly across foundation stage, key stage 1 and key stage 2;
- discussions with children, co-ordinators, teachers and principals, representatives of the Education and Library Boards (ELBs) and the Council for the Curriculum, Examinations and Assessment (CCEA), and other stakeholders including, for example, members of professional organisations such as the Association for Science Education (ASE) and the Primary Science Teachers' Trust (Northern Ireland) (PSTTNI); and
- 291 questionnaire returns and associated extended written responses to a web-survey completed by principals in consultation with their staff.

Main findings

- Schools are at different points in the implementation of WAU. Two-thirds of schools have prioritised the development of WAU within the last three years.



- Overall, schools are more confident about the quality of their provision in history, geography and thinking skills and personal capabilities (TSPC). In contrast, it is disappointing that just 54% who responded to the web-survey believe they include the progression of the relevant practical and experiential (science and technology) skills within their WAU planning. Schools referred to various reasons for the stage their work had reached, including, for example, competing priorities such as literacy, numeracy and assessment and lack of access to training.

- Eighty-seven per cent (251) of schools who replied to the web-based survey have one or more teachers with specific knowledge and/or experience in key aspects of WAU. Sixty-eight per cent have a member(s) of staff with specific qualifications.

- ETI's direct observation of lessons indicates that high quality, well-planned and progressive learning experiences in WAU contribute significantly to the quality and extent of the children's learning and to the development of their thinking skills and personal capabilities in particular. This is the case for children in all key stages and of all abilities. This finding is of fundamental importance to the aims and delivery of the Northern Ireland Curriculum (NIC).

- The children's learning through WAU benefits most when the staff agree a collective understanding of how the associated skills and concepts develop through the key stages. A minority of schools have embedded this understanding fully, including the evaluation of the impact of the school's work on the progression in the children's achievements and standards in each of the contributory strands; most schools are still working towards this stage of implementation.

- In discussions and through the web-survey, teachers expressed commonly that WAU affords them greater flexibility to express their own wider interests or areas of particular expertise. They value the



children's high levels of enjoyment and engagement with its diversity of opportunities to connect the learning across the curriculum, including the development of the children's thinking skills and personal capabilities.

- Where there is clear curricular leadership and advocacy for WAU from, for example, the principal, senior management, and/or the WAU co-ordinator, the learning area is more likely to be prioritised and developed strategically through well-embedded school development planning processes. These approaches bring about better provision and outcomes for the children.

- Over half of the lessons observed by inspectors were science and technology; the quality of most (86%) of the learning and teaching was evaluated as good or better with over half being very good or outstanding. This was in contrast to the concerns about science and technology raised by a significant minority of the schools in discussions and in the comments submitted in the web-survey. For example, whereas almost all of the responding schools reported that their staff had the requisite skills and knowledge to teach the history and geography strands, it is of note that only 67% believed they had sufficient skills and knowledge to teach the science and technology strand confidently.

- Almost all (93%) schools make good or better use of educational visits and visitors and external providers to extend the children's learning in WAU. Opportunities to link and extend the children's work through clustering arrangements with neighbouring schools are not yet sufficiently exploited. For example, only 39% of primary schools have working links with schools in the post primary phase.

- A majority (76%) of schools reported that they identify and address their staff development needs in a variety of ways including in-house

training, for example, by the co-ordinator or supported by external bodies such as National Science Learning Centre (NSLC), ASE, ELB Curriculum Advisory and Support Services (CASS) and various private consultants. Significantly, only 37% (107) of schools who responded to the web-survey reported they had staff who have completed science, technology engineering and mathematics (STEM) training from providers such as the National Science Learning Centre (NSLC), the Association for Science Education (ASE) or ELB CASS. Alongside this, 24% of schools emphasise the need for further professional development from, for example, ELB CASS and for more opportunities to work with other schools. In particular, the schools require further support and training in planning and evaluating WAU.

Recommendations

For DE	**R1** To encourage and support the full implementation of the science and technology strand of WAU within the primary school to bring about high quality learning for all children. R2 To investigate how primary schools can be supported in the delivery of the WAU through a variety of means including expertise from the post-primary sector and from a range of external stakeholders, for example, CASS. **R3** To re-emphasise the importance of WAU, particularly the significance of science and technology, in policy and planning for initial teacher education.
For CCEA	**R4** To provide more detailed guidance on the development of the discrete concepts, skills and knowledge in the history, geography and science and technology strands to enable schools to plan and evaluate more effectively for continuity and progression in the children's learning.
For schools/co-ordinators	**R5** To ensure progression in the children's learning about the key concepts and skills across the contributory strands of history, geography and science and technology. **R6** To use the school's self-evaluation processes to develop an accurate analysis of the school's baseline position, in relation to provision for and achievements in WAU, to inform a staff development programme so that teachers and support staff are well-placed to develop the learning in WAU across the curriculum. **R7** To plan the WAU programme and the use of the available time for learning to connect effectively the linkages across the children's developing skills and knowledge in a range of meaningful contexts. **R8** To make WAU, particularly the science and technology strand, more investigative and enquiry-based and to emphasise its place in everyday life, including careers and the world of work.
For ETI	**R9** To identify, through inspection, examples of effective and innovative practice in WAU, including, where possible, examples of transition arrangements between primary and post-primary schools across the contributory strands. R10 To signpost and disseminate case studies of good practice to other schools, including post-primary, and other educational stakeholders.

1. Introduction and Context

1.1 The Northern Ireland Curriculum was revised in 2007. As part of the curriculum revision, The World Around Us (WAU) area of learning was formed to combine the three contributory elements of geography, history, and science and technology within four interconnected strands: *Interdependence, Place, Movement and Energy and Change over Time*. The purpose of these four aspects is to facilitate schools to make connections in learning between the contributory elements and because they are context-free, the strands also give teachers greater flexibility in selecting and planning the learning and teaching experiences for the WAU.

1.2 In 2008, the Education and Training Inspectorate (ETI) published An Evaluation of the Arrangements for the Implementation of the Revised Northern Ireland Curriculum[1] (RNIC).This publication highlighted the need for further information about the place of content in a skills-infused curriculum, for example, in the area of learning, the WAU.

1.3 Since this time, and making use of a variety of different guidance materials, resources and training opportunities, primary schools have been working on developing this area of learning to a greater or lesser degree, alongside many other competing priorities, such as, the implementation of the revised assessment arrangements.

1.4 As part of the inspection programme for 2013/14, ETI was requested by the Department of Education (DE) to carry out an evaluation survey on the WAU as an area of learning in primary schools. The key purpose of the survey was to find out how primary schools are implementing and developing this area of learning, particularly in terms of:

1 www.eti.gov.uk in Surveys/Evaluations: An Evaluation of the Arrangements for the Implementation of the Revised Northern Ireland Curriculum in Primary, Special and Post-Primary Schools (2008)

- where primary schools are currently in their understanding and development of the WAU (given the perceived emphasis on literacy, numeracy and more recently, assessment);
- seeing how teachers have interpreted and used the available guidance to bring about progression in the children's acquisition and development of relevant knowledge and skills;
- the whole-school focus afforded to WAU in comparison with other school improvement priorities within the school development plan;
- the quality of the learning and teaching in and beyond the classroom including how well-balanced the planning and programmes are in including geography, history and science and technology (including STEM) strands;
- observing and evaluating the progression in the children's learning; and
- identifying case studies of best practice to share with others.



2. Methodology

Three main elements formed the evidence base for this report:

- School visits, incorporating lesson observations;
- Discussions with key stake-holders; and
- A web-based survey which all primary schools were invited to complete.

Throughout the evaluation, inspectors considered carefully the schools' varying contexts and priorities and took particular note of any barriers to progress which the schools shared in discussions and through their additional written comments in the web-survey. All of the submissions, including the survey findings from the inspection team members, the online representations and the case studies collected were analysed to inform the findings of this report.

2.1 ETI visited a sample of 35 primary schools[2] representative of size, sector and geographical/ ELB spread. For twelve of these visits, inspectors were accompanied by associate assessors[3] with a particular interest in the WAU. The individual school visits involved:

- discussions with the principal, WAU co-ordinator[4](s) and a group of children from year 7[5];
- one or two classroom observations in each key stage, as arranged by the school[6] (to a maximum of six in total and in proportion to school size and context);

2 See Appendix.1 for a list of the schools visited

3 The Associate Assessors are current practising principals who received additional training to support inspectors during the survey.

4 See Appendix 2 for sample questions discussed with WAU co-ordinators and/or principals

5 See Appendix 3 for sample questions discussed with year 7 children

6 ETI requested to observe WAU lessons but did not indicate a preference for any particular contributory element.

- evaluating the quality of any relevant WAU documentation provided by the school, for example, the teachers' planning, skills progression frameworks, topic grids/ overviews and outlines; school development plan (SDP) and action plans, minutes of curriculum meetings, any arrangements for assessment of and reporting on the children's progress;
- evaluating the children's work in books and other recording formats, including photographs, digital recordings, models and displays; and,
- the visiting inspector providing brief oral feedback at the end of the visit.

2.2 The inspectors held discussions with other stakeholders including:

- CASS officers from the Education and Library Boards;
- the CCEA officer with responsibility for WAU;
- the Advisory Officer from BELB with responsibility for the development of STEM in schools through the NSLC based at York University;
- members of professional bodies including the Association for Science Education (ASE) and the Primary Science Teachers' Trust (Northern Ireland) (PSTTNI);
- the ETI Science and Technology Panel and other inspectors with specialist knowledge in history, geography and thinking skills;
- representatives from DE.

2.3 An electronic web-based survey[7] was made available to all primary schools (including the preparatory departments of grammar schools) from 27 January - 27 February 2014. The schools were provided with a web address and a unique username and password to ensure security.

7 See Appendix 4 for web-survey.

Principals were invited to complete the questionnaire in consultation with the staff in their school and to submit additional written comments, as appropriate. The survey contained three sections:

- Leadership and management;
- Quality of Provision; and
- Achievements and standards.

Analysis of Responses to the Web-Based Survey (See Appendix 4)

A total of 291 responses were received, including some partial responses, giving an overall response rate of 35%. One hundred and sixty-six schools (20%) also submitted additional written comments.

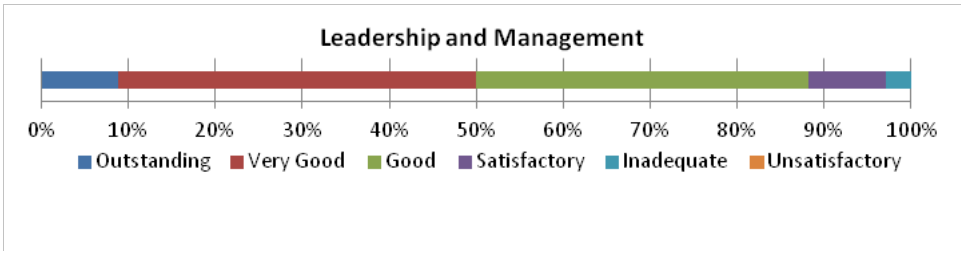
	Number of Valid Responses	Total Schools	% Response Rate
Primary (including Preparatory Departments of Grammar Schools)	291	839	35%



3. The Findings

3a. Leadership and Management

Overall, leadership and management of WAU was good or better in almost 90% of the survey schools and very good or outstanding in half of these schools.



Going Well...

3a.1 Schools that are progressing well have effective leadership and a clearly articulated vision to support the development of WAU. In these schools, WAU is usually prioritised alongside literacy and numeracy. The leadership supports the co-ordinator in promoting and leading a collegial approach to securing the staff's shared understanding of what constitutes high quality learning and teaching. This whole-school team approach to improving WAU, underpinned by a school ethos which is strongly committed to ongoing self-evaluation and continuous improvement, facilitates the achievement of learning outcomes of a higher and more consistent quality.

'We recognise the importance of WAU to develop the children's creativity and innovation and to promote life-long learning...'

Teacher

3a.2 Almost all of the schools visited as part of the survey and almost all of those which responded to the web-survey had a WAU co-ordinator, usually with a strong interest and/or qualification in at least one of the contributory strands, leading the improvement of the school's provision. In the best practice, appropriate staff development opportunities were taken up by the teachers, and improvement work, including developing progression in the children's learning across the key stages, was enabled through the planned release of co-ordinators and staff.

The co-ordination and strategic development of WAU was very good or outstanding in just over half of the survey schools visited.

3a.3 In the best practice, the co-ordinators monitored rigorously the quality of provision through, for example, regular reviews of the teachers' planning and the children's books. They carried out well-focused classroom observations to monitor the quality of the learning and teaching. These co-ordinators also demonstrated teaching strategies to extend colleagues' skills and knowledge and held well-focused discussions with the teachers about how to improve further key aspects of the provision. This work brought about greater confidence and purpose in the learning and teaching and supported continuous improvement in the schools' documentation. In a minority of the schools visited, there was regular, direct monitoring and evaluating of the quality of learning in WAU across the three phases by the WAU co-ordinator.

3a.4 Most (80%) schools reported they had developed and agreed a WAU Policy to guide the school's work in meeting its aims and objectives

and most (78%) stated they had informed governors and parents about the place and importance of WAU within the children's learning and the school's curriculum arrangements.

3a.5 Two-thirds of the participating schools stated they had prioritised the development of WAU within the last three years and most (80%) who took part had operated an action plan for WAU within the last three years. Where, in the schools visited, the co-ordinator was more active in promoting WAU throughout the school, there tended to be greater involvement of the whole staff in thorough and meaningful audits of the school's provision. As a result, the SDP processes for WAU were based on a clearer assessment of need and informed action plans which were realistic and focused appropriately on improving the quality of the learning and teaching.

3a.6 In the best examples of the action plans viewed, the improvement actions and success criteria were linked directly to improvements in the quality of the children's learning experiences and included rigorous strategies for monitoring closely the quality and extent of the children's progress in their learning. In these instances, the schools were more confident in their ability to evaluate the children's progression within aspects of the contributory strands of history, geography and science and technology.

3a.7 Almost all of the participating schools reported they had a whole school programme in place for WAU and had developed and used regularly a good range of links and partnerships to extend the children's learning. For example, approximately 98% of primary schools are currently registered and engaged at various levels of commitment within the Eco-Schools Northern Ireland programme[8].

8 Figure checked in June 2014 with Eco-Schools Northern Ireland

3a.8 Overall, the survey findings confirmed the commitment of the co-ordinators and teachers to providing high quality WAU, and their willingness to develop further their own skills and knowledge, including their participation in continuing professional development, where this was available.

Going Forward/ Even better if...

3a.9 By now, most schools have agreed a WAU Policy which draws upon an agreed vision and rationale for the area of learning. In some instances, this needs to be more fully articulated, particularly in relation to the progression in each of the contributory strands and the position of science and technology in the curriculum. The rationale for WAU needs to be clearly understood by all staff to the same extent as that of literacy and numeracy and special educational needs.

3a.10 Most schools understand the need to plan strategically for the implementation of WAU through the SDP process. Of those who had not yet reached this stage, a significant minority cited compelling reasons why WAU had not been prioritised. These schools referred to, for example, the importance of meeting other whole-school priorities, including raising standards in literacy and numeracy and familiarising with the new levels of

progression, initiative overload, and lack of time and training. In a minority of the schools visited where the baseline position for WAU was not yet established clearly, the action plans contained expected outcomes and success criteria which were expressed in broad terms and which needed to focus more sharply on the impact on the quality and extent of the children's learning.

3a.11 In a minority of the schools, the role of the WAU co-ordinator needed to be given a greater profile and to be developed to empower the co-ordinator to lead and effect change. Schools in this position referred to fewer opportunities for co-ordinator training as a barrier to this development work and the need for further guidance and support in relation to monitoring and evaluating in particular.

3a.12 Overall, in most schools, the monitoring and evaluation of the WAU provision is at an early stage. Only 16% of schools in the web-survey agreed strongly that their arrangements for monitoring and evaluating the provision were well-embedded and effective. Schools at an early stage in monitoring and evaluating often focused on the content in the written planners, such as the range of topics and themes and the allocation of resources. As a next step, schools need to evaluate the impact and implementation of the provision on the children's acquisition and application of skills and knowledge in history, geography and science and technology.

3a.13 Almost all schools agreed that their staff believe they have sufficient knowledge and skills to teach the history (94%) and geography (95%) strands of WAU. By contrast, 33% of schools disagree or do not know if their staff have sufficient knowledge and skills to teach the science and technology strand.

	Base	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
Staff development needs in WAU are identified and addressed.	284	13%	64%	21%	<1%	1%
The staff believe they have sufficient knowledge and skills to teach the science and technology strand of WAU.	272	9%	58%	27%	1%	5%
The staff believe they have sufficient knowledge and skills to teach the history strand of WAU.	280	21%	73%	5%	0%	2%
The staff believe they have sufficient knowledge and skills to teach the geography strand of WAU.	282	19%	76%	4%	0%	1%

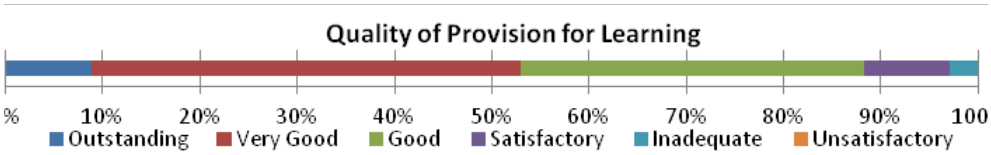
3a.14 Most schools are keen to access further training for the co-ordinators and teachers, especially for the science and technology strand. In schools where individual and groups of teachers had completed continuing professional development in WAU, and most particularly in science and technology, the teachers spoke very positively about the quality, rigour and enjoyment of the work, their increased confidence levels, and the subsequent impact on their school's provision. However, not all schools were necessarily aware of the training and support available to them currently or how to access it, for example, the NSLC training and bursaries or the work of ASE and PSTTNI and the DE-funded inter-ELB Science Project. A majority of schools expressed concern in relation to the

reduction of ELB CASS support for WAU and the difficulty in establishing and maintaining cluster group activities with other schools.

3a.15 In the 39% of schools which had established a WAU curriculum team with the staff working collegially, the improvement actions had a greater impact and good practice was more likely to be shared. Co-ordinators who worked in isolation were less likely to influence and develop the classroom practice of colleagues.

3b. Quality of Provision

The quality of provision for learning was good or better in 87% of the schools visited.



What's going well?

Learning and Teaching

3b.1 The inspectors observed 150 lessons across the three key stages in 35 schools. Schools were invited to share any aspects of their current work. Just over half (54%) of the lessons evaluated were science and technology based, 25% were geography based and the remaining 21% were history based. Overall, 87% of the WAU lessons were evaluated as good or better.

Lesson profile of the key contributory strands

History	84% good or better	56% very good or outstanding
Geography	89% good or better	61% very good or outstanding
Science and technology	86% good or better	56% very good or outstanding

This compares favourably with the data from the inspection period of September 2009 to June 2014 in Primary schools, in which 83% of the WAU lessons evaluated were good or better, with about 50% being very good and outstanding.

3b.2 Most schools in the survey are connecting the children's learning within a more holistic view of the curriculum including the development of the children's literacy, numeracy, information and communication technology (ICT) and thinking skills and personal capabilities. There is widespread recognition of the rich and rewarding contexts that WAU provides for developing many of the children's core skills in meaningful ways.

3b.3 Most survey schools are aware that they need to enable the children, from the earliest stage, to assemble their skills and understanding progressively through their WAU learning experiences, taking into account their interests and what they already know and can do.

In the very good and outstanding WAU lessons...

- effective teacher questioning and the quality of the interactions probe and draw out precision in the children's knowledge and understanding and deepens the learning;
- the teachers facilitate the children in learning which is enquiry-based, active and flexible;
- important aspects of decision-making and control are given over to the children;



- the teachers demonstrate a clear understanding of the key concepts, facts and learning behaviours for the stage of the contributory strand being considered;
- good account is taken of the children's different learning styles;
- there is meaningful and appropriate infusion of the progression of thinking skills and personal capabilities;
- the activities are well-planned and well-blended and the intended learning is clear;
- effective use made of the children's prior learning, the local and wider environment and visits and visitors to extend the learning; and
- there are appropriate levels of challenge for all of the children, including the most able.

Children in these lessons are...

- confident, active, motivated, engaged, and enjoying their learning;
- able to talk about and explain their thinking and the skills they are developing;
- asking pertinent questions and trying to find out for themselves;
- free to explore and extend their learning in line with their interests;
- taking risks and exploring more than one method of finding out;
- making connections across various aspects of their learning; and
- using their literacy, numeracy and ICT skills well to support their learning.

Children told us they enjoy their learning when ...

- it is hands-on and contains learning by doing;
- it involves art and creativity;
- they contribute to the planning and get to make choices and ask questions;
- they detect the teacher's enjoyment and enthusiasm;
- the learning is flexible and responsive to their suggestions and interests;
- they are able to work in groups, negotiate and take responsibility for their own decisions and actions; and
- they are enabled to turn their mistakes into opportunities for further learning.

When the learning and teaching are less effective...

- it is overly teacher-led with unnecessary levels of adult intervention;
- there is a lack of genuine enquiry and the lesson contains low-level, predictable activities including too many worksheets or unnecessary transcription;
- there is closed questioning which limits the potential learning;
- the topic or activity contains little appeal or relevance to the children's own interests and experiences;
- incidental opportunities for further learning are missed or glossed over;

- the teachers cater largely to the middle ability of the class and do not meet the needs of all the children; and
- in science and technology-focused lessons, there is further need for planned opportunities for the children to investigate and problem-solve rather than the teacher demonstrating or talking the children through investigative processes to ensure they reach the 'right answer.'

CASE STUDY: ST JOSEPH'S PRIMARY SCHOOL, MADDEN

St Joseph's Primary School is situated near the village of Madden, off the Armagh to Middletown Road. The enrolment has remained steady and is currently at 127; 26.7% of the children are entitled to free school meals and the school has identified 12.5% of the children requiring additional support with their learning.

The leadership and management of the school give a high priority to the World Around Us curriculum as a context for developing the children's communication, using mathematics and information and technology (ICT) skills. A key strength in the planning for the WAU curriculum is the progressive development of the children's historical, geographical and scientific skills through engaging, real and relevant investigations rather than a rigid adherence to the four strands contained in the curriculum guidance.

The teachers use the surrounding rural context creatively for the development of the children's knowledge, skills and understanding. For example, following the building of a new school, life at the old school was captured through a time capsule and a DVD of learning through the decades with recollections from children in the 1950s through to today. The school uses high quality resources and enrichment activities to enhance the delivery of WAU including a school garden, aquarium, environmental trails, the ECO council, links with the Armagh Multi Media Access Creative Learning Centre, local historians, visits to local sites or museums, media technology and iPads. The quality of the learning environment, including the displays of the children's work, is excellent.



The staff plan investigations linked to the locality and the interests of the children. These investigations are planned carefully with enquiry questions to promote the children's thinking skills and to develop their personal capabilities. Interesting investigations include:

- What was the significance of the Armagh Railway Disaster and how do we represent this event using an e-book?
- War versus Peace - People who made a difference such as Nelson Mandela, Rosa Park, Father Alec Reid?
- How do we represent the experiences of children during the Irish Famine on a DVD?
- Should overhead pylons be built in Madden?
- Why do athletes have slower heart rates?
- Why did the unsinkable Titanic sink?
- Why didn't I see the pedestrian? – What do we need to do to Be Safe and Be Seen?

By the end of year 7, the children understand how methods of recording the past have changed and recognise the impact of the digital age on the access to a greater range of original sources including oral, written, pictorial and physical.

- They ask questions with a strong sense of curiosity to find out answers to an enquiry, individually and in groups.
- They sequence events, make links between the causes and consequences of an occurrence and weigh up the impact of a range of reasons to reach a conclusion, for example, about the significant reason for the Armagh Railway Disaster.
- They display high levels of personal responsibility and confidence in communicating about the past both orally and in written work.
- They listen actively to the perspectives of historians and compare the secondary oral accounts with the primary written and pictorial evidence.
- They analyse a range of accounts from the time including newspapers and eyewitness accounts in order to select the most important information to write an e-book about the significance of the disaster.
- They experiment with different graphic designs using captions, photographs and factual evidence in order to maximise the impact of the account for the reader today.
- They compare each other's work to identify ways in which to improve their work further.

As a result, the standards of the children's work, including skills in communication and ICT are outstanding. Through such an enquiry, the children gain high level historical skills in empathy, change and continuity, chronology, the use of evidence and in how to interpret and represent the past. Furthermore, the investigative nature of the approach provides the children with opportunities to develop well their creative and critical thinking skills.

Planning

3b.4 All of the schools in the survey organise their planning within a topic or thematic approach. They make use of a wide range of available guidance materials including the CCEA statutory framework and suggested activities and the Ideas for Connected Learning (ICLs) as well as drawing on their own and various commercial materials. In addition, almost all schools report that they involve the children to varying extents in the planning and in generating lines of enquiry. Most schools are trying hard to avoid unnecessary topic repetition or duplication of key skills, concepts and knowledge; however, in discussions and through the web-survey written comments, a majority identified that further work is still required in this area.

3b.5 In the less-developed examples, the planning is sometimes a list of topics and content to be covered and lacks meaningful learning intentions focused on extending the children's knowledge and skills. Some teachers refer to 'the obscure headings' of some of the ICLs, while others find the WAU strands too vague in relation to the expected levels of progression in the children's WAU learning.

3b.6 In the best planning, there is clear progression in the children's skills and concept development as well as in the associated factual content across each of the contributory strands; the connected elements of WAU are interwoven skilfully into the activities and the tasks for each year group engage the children's curiosity and interest. These schools are taking as their planning starting points the history, geography and science and technology skills and concepts they wish to develop. There is usually a yearly overview and detailed medium-term and weekly planning which the co-ordinator and staff review regularly to ensure that all strands and statutory requirements are being met fully. In attempting to secure better cohesion in the children's learning, some schools still use the previous CCEA progression guidance materials.

3b.7 The teachers appreciate how WAU provides excellent content for the children's skills development in talking and listening, plan/do/review and giving real purpose to applying their literacy, numeracy and ICT skills. Inspectors observed many good or better examples of how WAU was used to provide meaningful contexts for the development and application of the children's core skills. For example, in the best practice, the children write well across various forms including chronological and non-chronological reports, expositions, persuasive letters, poster campaigns and procedural instructions as well as developing empathy and using supporting historical facts, for example, to strengthen their creative writing in stories, poems, drama scripts and oral presentations.

3b.8 Most teachers acknowledge that when planning thematically, it is important that the applied elements of literacy and numeracy do not overshadow the discrete strands of WAU.

Assessment

3b.9 The formalised assessment of the development of WAU skills is at an early and informal stage in most schools and is largely based on observation. It follows that if schools don't yet have a clear understanding of the progression of the skills, they are not yet in a position to report accurately on them. Only a minority of schools are at the stage of tracking children's skills and their understanding of concepts individually.

Resources and accommodation

3b.10 Overall, most of the schools visited and those which replied to the web-survey agreed they had appropriate resources for WAU. In the written comments received, replenishment of resources, particularly 'renewables', was raised frequently as an issue, with teachers often providing personal funding to resource practical science experiments and technology activities in particular. In the lessons which were less effective,

the resources tended to be less stimulating with a reliance on worksheets and cutting and sticking type activities rather than active enquiry and investigation. The varying size of primary classrooms, including temporary mobile accommodation, presents difficulties for managing practical and investigative activities in science and technology – most teachers do their utmost to cope reasonably well with these difficulties.

Links and partnerships

3b.11 The wide range of links and partnerships developed by almost all schools is a key strength of the current WAU provision. These working relationships span from connecting with members of the local community, including parents, with particular knowledge and skills through to local industries, travelling science and history workshops, external consultants and training providers. In the best practice, schools plan to ensure that arrangements for visits and visitors add greatly to the quality and extent of the children's learning. This sometimes includes making good use of the arrangements for Community Relations Equality and Diversity (CRED) with partner schools to extend the children's learning experiences in aspects of WAU. This good work needs to be extended further. A minority of schools which had accessed local clustering arrangements; where these were in place; for example, through shared education [9]arrangements reported valuable learning and mutual support in working together to enhance and extend the children's learning.

9 For example, the Primary Integrating / Enriching Education Project (PIEE) in the North Eastern Education and Library Board

Going forward, schools can improve their provision further by...

3b.12 making more use of learning resources in their own locality. For example, historical events and landmarks; geographical and landscape features; familiar natural, agricultural, industrial or commercial contexts; noteworthy people - past and present; current issues in the immediate vicinity and experiences and observations in children's everyday lives. A significant minority of the schools visited did not exploit fully the rich possibilities of studies 'on the doorstep' and provided topics which were sometimes disconnected from the children's interests. Where there is a lack of local links and little or no use made of the school, local or wider environment and insufficient development of outdoor learning, the programmes for learning risk losing relevance for the children.

3b.13 planning explicitly for progression in the key elements, concepts and skills of each of the contributory strands; including more precise identification in the planning of how the learning builds on what the children already know and can do together with how the needs of all the children, including the gifted and talented and the children who require additional support with aspects of their learning, are to be met. Where this is mostly becoming embedded in practice in literacy and numeracy, greater account needs to be taken of the children's stages of development and understanding in WAU.

3b.14 providing regular opportunities, within the history strand, for the children to use original historical sources and to develop enquiry skills.

3b.15 developing more shared WAU projects with other schools from all sectors and phases through clustering and partnership arrangements, both locally and further afield.

3c. Achievements and Standards

Going Well...

In the lessons observed, the children's achievements and standards were almost always good or better, being very good and outstanding in about 44% and 12% of the lessons respectively.

In evaluating this aspect, inspectors took account of:

- the children's learning interactions and behaviours; for example, how well they make decisions and formulate conclusions about various lines of enquiry across the three strands, including how they carry out a range of science-based investigations;
- the level of the children's knowledge and understanding of the subject matter as it develops in the course of class and small group discussions;
- how well the children respond to questions and explain their thinking, including their use of the appropriate topic relevant vocabulary and understanding of the concepts;
- the additional discussions[10] held with groups of the eldest children in each of the survey visit schools; and
- the quality and development of various forms of recording of the children's work in WAU books, folders, posters and displays. Inspectors also reviewed multi-media presentations, photographs and video clips, dramas, debates and a broad selection of related fiction and non-fiction writing across a range of forms.

10 See Appendix 2 for sample questions used in the discussions

Lightning

The lashing
Lightning,
Burning hot
lightning,
Striking
the air.
The burning
lightning
Strikes
again,
Flames
lick the
walls,
The houses
begin to
fall,
Raindrops
drip
down the
Windows,
Sliding everywhere,
The storm
can be a
danger,
Disaster
from
the air.



In the best practice, when the children's achievements and standards are of the highest quality:

THE SCHOOLS...

3c.1 plan carefully to ensure coherence, progression and increasing challenge in the children's learning experiences in order to build systematically their developing concept knowledge and skills.

THE CHILDREN...

3c.2 are given appropriately responsive adult guidance to approach their work independently and to progress their skills in all key stages; as a consequence, the children develop confidence and competence in negotiating and planning key aspects of their working within groups, including the selection and use of documentary and physical resources and equipment to reach evidence-based conclusions.

3c.3 can express their learning across an appropriate and interesting range of forms, including the oral, written, mathematical and creative communication of their learning.

3c.4 have good knowledge about a range of issues and topics across the three contributory strands including, for example, climate change and renewable energy, space and flight, the chronology and impact of a variety of key historical events such as the Famine and World War II, some of the consequences of how humans use the world's resources and some natural disasters.

3c.5 show a developing understanding of a range of key concepts across the contributory strands including, for example, change over time, the sequence, cause and effect of a select number of historical events and periods, how place influences the nature of life and the interdependence

of plants, animals and people, what makes a fair test, and, the importance of using evidence well to support their reasoning and inform their conclusions.

3c.6 know that history, geography and science and technology are all around them and can give opinions on why it is important and interesting to know about key historical, geographical and scientific skills and facts. In discussions with year seven children, most could give a good range of examples of their favourite topics in all three key stages; a significant majority could explain, for example, how learning about various historical events such as life during World War II or the Irish Famine was worthy of study in itself but also informed their views and thinking about developments in the contemporary world.

3c.7 can talk about various examples of careers linked to key aspects of their learning in WAU, most particularly the science and technology element.



CASE STUDY – CAMPBELL COLLEGE JUNIOR SCHOOL, BELFAST

Campbell College Junior School caters for boys, the majority of whom travel from South and East Belfast and North Down and less than 1% of the children are entitled to free school meals. The school is set in picturesque woodland which is used extensively as an outdoor classroom to facilitate effective learning and teaching of the World Around Us (WAU). During the building of the junior school, the children, equipped with hard hats and high visibility jackets, documented significant stages of the process.

The children on the Eco committee develop their leadership skills well through auditing the school's contribution to sustainable development in creating action plans to target the school's use of water, energy, transport, waste and the grounds; and the school's contribution to healthy living, biodiversity and the global perspective.

The children use their creative skills to build bird boxes which are sited around the Netherleigh Lake within the school grounds, create 'Bugingham Palace' for minibeasts and construct and maintain a wildlife garden. The boys are also members of the Ulster Wildlife Trust and the Woodland Trust.

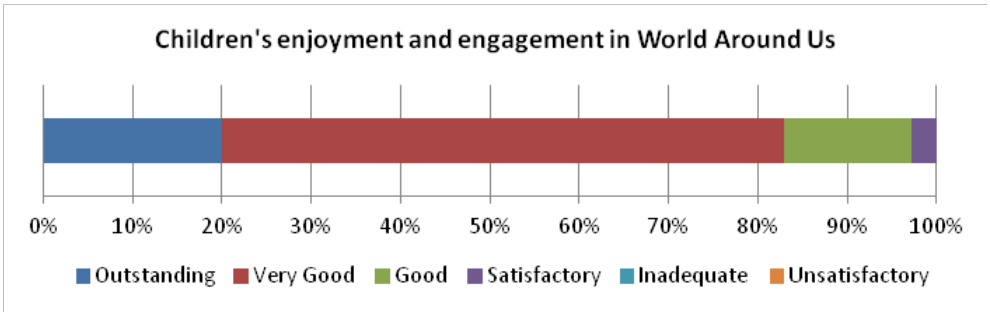
A key strength of the provision is the integration of WAU across the curriculum. Teachers' planning is high quality with precision given to the use of assessment for learning techniques, in particular, effective questioning and self and peer assessment to evaluate critically the children's work. The children engage in their learning experiences in WAU with a sense of awe and wonder. High quality resources, outdoor learning, links with a wide range of external agencies, practical activities, investigative work, ICT and trips to places of local historical interest, such as, the Ulster Folk and Transport Museum, the Titanic Centre and Stormont enhance the children's learning experiences. Furthermore, visitors, such as story tellers and re–enactors, arouse the children's curiosity.



In the classes observed, the children express their opinions and take an active interest in topics such as climate change and the work of the Eco Committee. They apply their knowledge and understanding to local and world events and are encouraged to become enthusiastic historians, geographers and scientists. In science, the children's natural curiosity is nurtured through stimulating and interesting topics in real life contexts, for example, the children link with a past pupil who is an Antarctic zoologist through video conferencing to investigate how penguins live in Antarctica. The children have very good practical and problem-solving skills in science, including predicting, testing and evaluating evidence progressively across the key stages. The children are self-confident, communicate clearly and effectively and are able to discuss their learning with others through a wide variety of enrichment experiences such as STEM events, K-nex challenges, and Sentinus Young Engineers.

The strategic leadership of the WAU is very effective across the key stages. The school gives a high priority to WAU in the school development plan and it is monitored and evaluated with rigour. The staff benefit from regular meetings, a wide range of staff development and the evaluation of the children's work to inform future planning. The staff have developed an innovative tracking system to monitor and evaluate the progression in the children's historical, geographical, scientific and wider thinking skills and personal capabilities.

Based on the evidence of classroom observations and the discussions held with children in the survey schools, it is clear that the children really enjoy and engage well with this aspect of their learning.



3c.8 In all of the schools visited, and supported by the additional strong evidence of the schools' responses to the web-survey, teachers value the children's high levels of engagement and enthusiasm for the core elements of WAU.

3c.9 In the discussions held with the children, they talked about preferring their learning when they are active and have more control over key aspects. The children are motivated and engaged further through the provision of interesting topics and participation in a range of external events and competitions such as, for example, inter-school challenges and projects.

Going Forward/ Even better if...

3c.10 Schools promote and enable the children's independence and thinking further by empowering the children to take greater responsibility for key aspects of their learning.



4. What about Science and Technology?

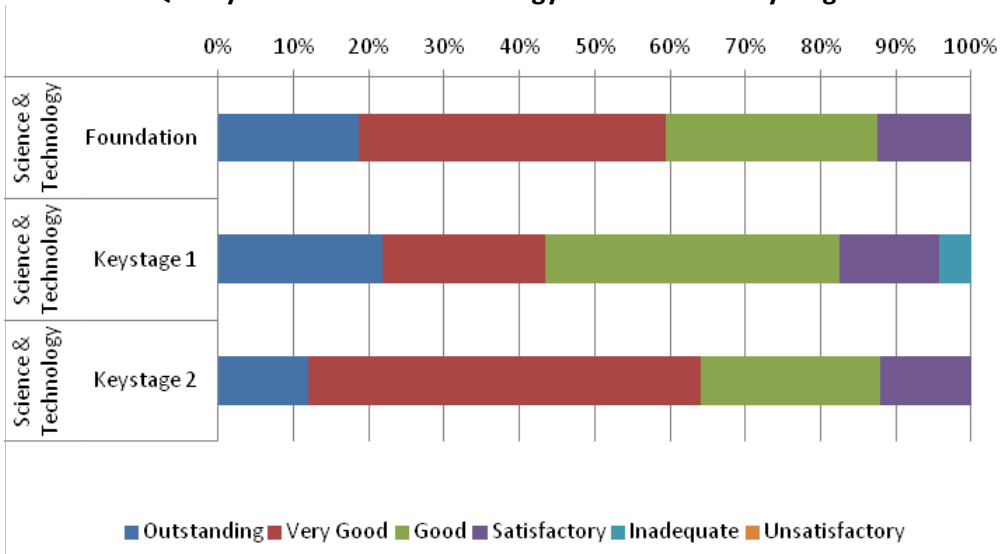
'THE SCIENTIST IS NOT A PERSON WHO GIVES THE RIGHT ANSWERS; HE'S THE ONE WHO ASKS THE RIGHT QUESTIONS.'

Claude Levi-Strauss



Of the 150 WAU lessons viewed in the survey, 80 (54%) were science and technology based. The quality of the science and technology provision for learning was good or better in 86%[11] of the lessons observed and very good or outstanding in 56%. The progression in the key concepts and skills in science and technology was evaluated as good or better in 77% of the schools visited and very good or outstanding in 43%.

Quality of science and technology in each of the key stages



4.1 The children enjoy and are motivated in science and technology-based lessons. In discussions, a majority of the children referred to liking the more practical and active nature of the learning and feeling empowered to take greater responsibility for key aspects such as testing out their theories. Also, the voice of the child is enhanced through the increasingly widespread involvement of primary schools in the Eco-Schools NI programme[12], which enables the children to develop and act upon their increased awareness of sustainable living through, for example, implementing energy saving initiatives and recycling and reusing materials. Where these programmes are incorporated explicitly within the school's planned programme, there is a greater and more lasting impact on the children's learning.

11 While participating schools were identified randomly, the findings may not reflect fully the current position in all primary schools.

12 Approximately 98% of all primary schools are currently registered with Eco-Schools Northern Ireland.

4.2 When children are introduced early to science and technology based learning experiences which are active and designed to generate enquiry, this develops their natural curiosity and builds the foundations for their skills as *science thinkers and doers*. In the best practice, where teachers also understand the role and significance of art and design, within and alongside science and technology (including STEM), in promoting and extending the children's creative thinking and encouraging them to pose questions, the children think more freely about how to express their ideas and take risks in producing a variety of solutions to solve problems.

4.3 From early in the foundation stage, a majority of children are aware of some simple aspects and applications of science and technology in their everyday lives and the world around them. For example, most children know how cooking food causes it to change and can sequence simple life cycles of plants and animals. By the end of KS2, based on the evidence of discussions held with groups of year seven children in all 35 survey visit schools, most children can give examples of careers involving science and technology skills and knowledge and know that various job opportunities may depend on continuing to learn science in post-primary school.

4.4 In primary schools where the science and technology strand is more highly developed, there is effective leadership through the co-ordinator (and/or principal) who prioritises and drives systematically the development of science-based learning through the school development plan[13]. In the most effective practice, the teachers have a shared understanding of the school's rationale for the place and role of science and technology in the children's learning and lives; the staff plan for and monitor the progression in the children's scientific skills, concepts, learning experiences and behaviours; and, there is greater evidence of the teachers having accessed continuing professional development through a range of external professional bodies[14], for example, NSLC, ASE, PSTTNI, ELB CASS support and various independent consultants).

13 Ref: ETI online questionnaire-approximately two-thirds of 288 responding schools have prioritised WAU in the School Development Plan within the last 3 years.

14 Ref: ETI online questionnaire-approximately 37% of 288 responding schools have a teacher(s) who has completed STEM training.

4.5 Most schools are developing good or better links and partnerships to extend the quality and breadth of the children's learning experiences and their understanding of the importance of science and technology in their daily lives and the wider world, including the world of work. A minority of schools report benefitting from well-planned links with neighbouring post-primary schools[15], for example, to extend the children's learning through access to specialist equipment and classroom facilities.

4.6 The science and technology strand of WAU is still underdeveloped in a majority (54%) of primary schools. In these instances, the provision is often too narrowly focused on low-level factual learning within isolated topics and lacks purposeful practical and investigative experiences for the children. In addition, the learning does not connect meaningfully to the children's own interests and life experiences; the teachers are less familiar with the scientific skills and concepts and the planning takes little account of how these skills are being built upon. As a consequence, there is a risk of repetition of learning experiences across the key stages and insufficient progression in the children's learning.

4.7 The overall importance of science and technology (including STEM) was highlighted in a significant minority of the comments in the web-survey. For example, principals and teachers raised appropriately the concern that within the current arrangements for WAU, there is no statutory obligation to teach science overtly, as teachers are not required to make links across all three contributory subjects in the topics they cover. Some comments noted that the science strand may be diluted or reduced within thematic based approaches and that important practical and investigative aspects may be limited or not take place at all. This

15 Ref: ETI online questionnaire-approximately 39% of 288 responding schools report learning links with a post-primary school.

risk is particularly acute where teachers are less secure about the progression in the discrete scientific skills and content resulting in the greater development of the children's learning through the other contributory strands.

Only 46% of web-survey schools agreed that their current WAU programme ensures sufficient emphasis is placed on science and technology learning and teaching and 52% agree that they have included the progression of the relevant practical and experiential (science and technology) skills within their WAU planning.

Where the science and technology aspect of WAU is less well-developed, some of the reasons given by schools include:

- the continued focus on raising standards in literacy and numeracy;
- the current emphasis on assessment, in particular, familiarising with the revised levels of progression; and
- lack of access to relevant training and continuing professional development opportunities and insufficient access to necessary resources to facilitate the children's practical learning.



CASE STUDY 3

LOUGHVIEW INTEGRATED PRIMARY SCHOOL, CASTLEREAGH, BELFAST

Developing Environmental Science: The Outdoor Classroom

Lough View Integrated Primary School and Nursery School is situated on an extensive green field site in the Castlereagh Hills, overlooking Belfast. There are 400 children enrolled in the primary school with a further 26 children in the nursery unit.

The World Around Us is delivered through topics which have been developed over many years, are well resourced and are fully embedded across the curriculum. For example, the year 6 classes conclude their topic on the Vikings with a drama presentation for parents. Drawing on their learning, the children design the costumes and props and write and perform a drama, portraying a Viking raid on an Irish village. The teachers also take the opportunity to provide additional detail of the topic to parents, highlighting the extensive cross curricular learning. In a similar approach, studies of the school pond are initially linked to science: pond-dipping; observation of and research into pond life; ecosystems; and, food chains. This learning is extended to provide the basis for writing narratives. Key stage (KS) 2 children write specifically for year 2 children, using their knowledge of the pond life and modelling their writing on stories that focus on the authorial technique of personifying animals.



The school is a Royal Horticultural Society 5 Star Gardening School and has a strong focus on Environmental Science. The school grounds have been well developed to support WAU topics. Areas are allocated to different year groups which are entered via arches that highlight the names of different Beatrix Potter animals. The arches were designed and painted by the children and offer opportunities for research into wildlife, literature and Victorians. The school grounds contain a large poly-tunnel, twenty-nine raised beds and a school pond containing a variety of wildlife. The poly-tunnel, nine of the raised beds and available areas around the grounds are used by the children. Finance for these facilities has been obtained through PTA fund raising, various grants and sponsorship from local firms. The children have been involved in fund raising, for example, through writing to gardening companies for resources and through growing and selling plants.

The vice-principal has a strong interest in horticulture and cross-curricular learning and has been a driving force in encouraging the staff to use the grounds as an outdoor classroom. He teaches a group of 20 year 5 'Nature detectives' in an after school club which runs for the full school year; the children learn to grow plants from seed and to use the produce to cook healthy meals. Additionally, the year 6 children who require additional support in aspects of their learning are taught to apply their literacy and numeracy through environmental activities. Across all key stages, the children cultivate plants throughout the year and sell them at the end of the summer term as a mini enterprise. With the aim of strengthening the school community involvement, the school provides 20 raised beds as family allotments. This has been a very successful initiative, given the shortage of allotments in the Belfast area. The raised beds are fully utilised throughout the year, particularly at weekends, and some of the KS 2 children are passing on their gardening skills to their families.

Staff are encouraged to use the grounds as an outdoor classroom on a regular basis. In the past this was targeted through Performance Review and Staff Development scheme (PRSD) objectives, but a strong motivation is the interest and enjoyment of the children and the benefits to their learning.

The key stage 1 and 2 children express a strong support for activity-based learning approaches. They talk confidently, with enthusiasm and with awareness of the cross-curricular nature of the topics they study and recognise the connections with literacy and numeracy. The children self-assess and peer-assess the outcomes of their work and are very aware of the skills they are developing through the active approaches; for example: note-taking; study skills; presentation of information in a variety of forms; and, ICT skills. Additionally, with the freedom of presenting outcomes in a form that suits their preferred learning style, they recognise that they are learning to manage their own learning.

Appendix 1

Schools visited

All Saints Primary School	WELB
Ballyclare Primary School	NEELB
Ballymena Primary School	NEELB
Broadbridge Primary School	WELB
Campbell College Junior School	BELB
Castlewellan Primary School	SEELB
Culmore Primary School	WELB
Dunseverick Primary School	NEELB
Earlview Primary School	NEELB
Erganagh Primary School	WELB
Good Shepherd Primary School and Nursery Unit	WELB
Harding Memorial Primary School	BELB
Harmony Hill Primary School	SEELB
Killylea Primary School	SELB
Linn Primary School	NEELB
Loughview Integrated Primary School	SEELB
Newtownards Model Primary School	SEELB
Our Lady Queen of Peace Primary School	SEELB
Saints and Scholars Integrated Primary School	SELB
Seagoe Primary School	SELB



St Anne's Primary School (Corkey)	NEELB
St Canice's Primary School	WELB
St Comgall's Primary School	SEELB
St James' Primary School	NEELB
St Joseph's Primary School	SEELB
St Joseph's Primary School	SELB
St Joseph's Primary School	WELB
St Mary's Primary School	SELB
St Mary's Primary School	WELB
St Michael's Primary School (Finnis)	SELB
St Patrick's Primary School	SELB
Strabane Controlled Primary School	WELB
Victoria College Preparatory School	BELB
Victoria Park Primary School	BELB
Whiteabbey Primary School	NEELB

Appendix 2

The World Around Us (WAU)

SUMMARY OF AREAS FOR DISCUSSION WITH
PRINCIPALS and/or CO-ORDINATORS

LEADERSHIP AND MANAGEMENT

1. How does the school organise the leadership and management of the World Around Us (WAU)?

   - Is there a WAU co-ordinator? If so, have they any specialist qualifications or particular expertise?
   - Is there a WAU team?
   - Does the school allocate a promotional allowance for this?
   - What is their role and how are they enabled to carry it out?

2. Why and how do you develop WAU (rationale, content) within the school? Why and how do you develop WAU amongst the teachers, the children, parents, the board of governors, community, local industries?

3. How has the whole-school programme for WAU been developed? Action/ development plans? Links to SDP? How are priorities identified? Who was involved?

4. How are staff development needs identified and addressed? Who provides the staff development?

5. How does the school make use of links and partnerships to extend the children's learning in WAU?
Please provide examples – local manufacturers/ industries/ CASS/ CCEA/ other?

6. What resources do you use to support the delivery of WAU and how effective are they?

7. How are the quality and extent of the WAU provision and learning within the school monitored, evaluated and reported? How do teachers evaluate what they do? For example, through the scrutiny of planning, children's written work, classroom observations, staff discussions, discussions with children and analysis of data and school reports?

QUALITY OF PROVISION

1. How does the school plan for WAU?

Is it by?...or a combination of?

Topics	
Themes	
Availability of resources	
Progression of thinking skills	
Progression of conceptual skills	

2. How does the planning support the children's learning and progression in WAU?

How are the key strands developed across the contributory areas? How is progress ensured/duplication avoided? How does the school try to ensure an appropriate balance of the skills and strands across the teaching of WAU? For example, how much emphasis is placed on STEM learning and teaching? Is the school using the CCEA progression guidance? What opportunities do the children have to be involved in decision making in areas that affect them?

3. How does the school timetable for the provision of WAU?

On a weekly basis?	
On a monthly or termly basis?	
On a yearly basis?	
Other? Please outline.	
Swopping staff? Rotating timetables?	

4. How does the teaching develop high quality learning in WAU?

- Do the teachers have a shared understanding of the learning and teaching?
- To what extent is it active, open-ended and experiential?
- What impact have the resources had on learning and teaching across the three strands of WAU?
- How does the school make use of ICT to support and extend learning and teaching in WAU?

5. How does assessment promote learning in WAU?

How is assessment in WAU carried out? How is assessment information used?

6. How do you ensure that the needs of all the children are met?

7. How does learning in WAU contribute to other aspects of the children's development?
E.g. The extent to which the children have opportunities to write meaningfully across the curriculum. Please sample WAU books and folders.

ACHIEVEMENTS AND STANDARDS

1. How do you know the children are enjoying and are engaged with the WAU?

2. How do you know the children are acquiring knowledge, skills and understanding in WAU in FS/KS1/KS2?

How well do the children demonstrate their developing knowledge, skills and understanding in relation to key WAU concepts in:

History – chronology, cause and consequence, using evidence;

Geography – sense of place, range of scale etc; and

Science and Technology (STEM where applicable) – e.g. making hypotheses, design and carry out fair tests, make prediction, analyse and interpret findings, make decisions that improve future outcomes.

3. **What can the children do and what concepts do they show understanding of in the lessons observed in each key stage?**

Please record some examples.



Appendix 3

Evaluation of the World Around Us

YEAR 7 CHILDREN DISCUSSION PROMPTS

- What sort of topics have you been learning about in WAU recently (in year 6 and 7)? Can you remember any others in primary school so far? When you were younger?

- Do you like your work in the World Around Us? Are there different aspects to your WAU work?

- When you were learning about e.g. VOLCANOES was this History? Geography? Science? – Is there a difference?

- What sort of things do/did you do in.....*(refer to topics they have mentioned in previous answer)*? Did you enjoy this? Why?

- How often do you do your work in WAU?

- How would find out about something which happened in the past? *(e.g. How the Vikings came to Ireland/ What it was like to live during the famine/ Evacuation in WWII?)*

- Do you ever use maps? What do you use them for? What other resources do you use? How do you use them? *(e.g. ICT/ reference books/ school and class library/ artefacts/ models)*

- Do you get opportunities to do research or projects? How do you do this? How do you share what you have found out?



- How do you think what you do and are learning in the WAU links to the other aspects of your learning? How does it link to what is happening where you live or the wider world? (use the examples the children give to help you phrase the question)

- Do you to take part in projects/visits/trips or do visitors come to your school to support your work in the WAU etc? (Draw upon the children's responses to help them expand their answers – what was that like? What did you learn?)

- Do you make decisions about what you want / need to find out about in the topics you are learning in WAU? How do you do this?

- What do scientists do? What kind of science do you know about/ have you learned about/ carried out in school? Do you do experiments? What were you trying to find out? What did you do? Is the work that scientists do important? Why do you think it is?

- Do you know how well you are doing in your work in the WAU and what you need to do to improve your work?

- What skills are you developing and what do you know as a result of your work in WAU? How do you think this might help you …

  - understand why and how things happen in the WAU? Is this important? Why?

  - prepare you for life, learning and work in the future/ influence the kind of job you might want to do when you grow up?

Appendix 4

The Web-Survey Questionnaire

LEADERSHIP AND MANAGEMENT

		Base	Yes	No
1.1.1	The school has an agreed vision and rationale for learning and teaching WAU.	287	93%	7%
1.1.2	The school has prioritised the development of WAU within the last 3 years.	288	67%	33%
1.1.3	The school has had an action plan for WAU within the last three years.	288	80%	20%
1.1.4	The school has agreed and operates a WAU policy.	287	80%	20%
1.1.5	The school has a WAU co-ordinator.	287	91%	9%
1.1.6	The school has a WAU team.	289	36%	64%
1.1.7	The school allocates a promotional allowance for WAU.	290	36%	64%
1.1.8	The governors and parents are informed about the place and importance of WAU in the primary curriculum.	287	78%	22%
1.1.9	The school has member(s) of staff with specific knowledge and experience in key aspects of WAU.	289	87%	13%
1.1.10	The school has member(s) of staff with qualifications in key aspects of WAU.	288	68%	32%
1.1.11	Has a member of staff availed of the STEM training from the NSLC or ASE?	284	37%	63%



		Base	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
1.2.12	There is an agreed whole school programme for WAU.	288	41%	51%	8%	0%	0%
1.2.13	The school has developed links and partnerships to extend the children's learning in WAU.	286	35%	59%	5%	<1%	<1%
1.2.14	The school has appropriate resources to support the delivery of WAU.	286	14%	68%	16%	1%	<1%
1.2.15	There are effective procedures in place to monitor and evaluate the quality of the school's provision in WAU.	280	16%	58%	23%	1%	1%
1.2.16	Staff development needs in WAU are identified and addressed.	284	13%	64%	21%	<1%	1%
1.2.17	The staff believe they have sufficient knowledge and skills to teach the science and technology strand of WAU.	272	9%	58%	27%	1%	5%

1.2.18	The staff believe they have sufficient knowledge and skills to teach the history strand of WAU.	280	21%	73%	5%	0%	2%
1.2.19	The staff believe they have sufficient knowledge and skills to teach the geography strand of WAU.	282	19%	76%	4%	0%	1%

PROVISION

		Base	Less than 10%	10-20%	20-30%	Over 30%	Don't Know
2.1.1	Approximately what percentage of the curriculum is allocated to teaching of the WAU.	277	5%	52%	34%	8%	<1%

		Base	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
2.2.2	The school has developed its WAU planning based on topics or themes.	284	70%	30%	0%	0%	0%
2.2.3	A similar amount of learning and teaching time is allocated to each of the contributory strands of history, geography, science and technology within WAU.	281	15%	50%	29%	3%	3%

2.2.4	The school has included the progression of the relevant thinking skills and personal capabilities (TSPC) within its WAU planning.	280	23%	56%	19%	<1%	<1%
2.2.5	The planning for WAU takes account of building progression in the children's learning of key concepts and skills in each of the contributory strands of history, geography, science and technology.	279	21%	66%	12%	<1%	1%
2.2.6	The planning for WAU ensures that unnecessary repetition or duplication of key knowledge, concepts and skills is avoided.	279	29%	60%	9%	0%	1%
2.2.7	The school WAU programme ensures an emphasis is placed on STEM learning and teaching.	280	6%	40%	47%	2%	5%



2.2.8	The school has included the progression of the relevant practical and experiential (science and technology) skills within its WAU planning.	277	8%	46%	37%	3%	6%
2.2.9	The children benefit from a range of educational visits related to each of the contributory strands of history, geography, science and technology within WAU.	281	42%	51%	6%	<1%	0%
2.2.10	The school has made use of specialist accommodation and equipment in post-primary school(s) to support the children's learning experiences within WAU (in particular, in science and technology).	280	9%	30%	46%	12%	3%

2.2.11	The school's WAU programme ensures that an emphasis is placed on raising awareness of STEM related careers.	279	3%	28%	56%	7%	7%
2.2.12	The school makes use of the CCEA progression guidance to inform the planning.	279	30%	62%	6%	0%	<1%
2.2.13	The school makes use of the CCEA thematic units within its programme for learning in WAU.	278	27%	68%	5%	<1%	<1%
2.2.14	The children have meaningful opportunities to be involved in planning and identifying lines of enquiry within their WAU learning.	279	37%	58%	4%	0%	<1%
2.2.15	The learning and teaching in WAU provides opportunities for the children to be creative and innovative.	279	35%	63%	1%	0%	1%



2.2.16	The teachers have developed a shared understanding of high quality learning and teaching in WAU.	276	18%	66%	11%	<1%	4%
2.2.17	The learning and teaching in WAU is active, open-ended and experiential.	277	21%	70%	7%	<1%	2%
2.2.18	The school uses ICT to support and extended learning and teaching in WAU.	278	36%	63%	<1%	0%	0%
2.2.19	The school ensures that the needs of the children, including the most able and those who require additional help with aspects of their learning, are met in their learning in WAU.	278	27%	68%	3%	0%	1%



ACHIEVEMENTS AND STANDARDS

		Base	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
3.1.1	The children enjoy and are engaged in their work in WAU.	275	65%	35%	0%	0%	0%
3.1.2	The teachers know that the children are acquiring progressive knowledge, skills and understanding in WAU in the FS.	275	31%	66%	2%	0%	1%
3.1.3	The teachers know that the children are acquiring progressive knowledge, skills and understanding in WAU in the KS1.	275	29%	67%	3%	0%	1%
3.1.4	The teachers know that the children are acquiring progressive knowledge, skills and understanding in WAU in the KS2.	275	28%	66%	3%	0%	3%
3.1.5	The children are acquiring key knowledge, skills and understanding in the history strand of WAU - e.g. chronology, cause and consequence, using evidence.	275	27%	67%	3%	0%	3%
3.1.6	The children are acquiring key knowledge, skills and understanding in the geography strand of WAU - e.g. sense of place, understanding of scale, what and why here.	274	24%	70%	3%	0%	3%



3.1.7	The children are acquiring key knowledge, skills and understanding in the science and technology strand (and STEM, where applicable) of WAU - e.g. making hypotheses, designing and carrying out fair tests, making predictions, analysing and interpreting findings.	272	10%	66%	19%	<1%	4%
3.1.8	The school monitors and assesses the children's development and achievements in WAU to inform and individualise the reports on children's progress.	274	12%	67%	19%	1%	<1%
3.1.9	The children's learning in WAU contributes to other aspects of their development - e.g. use of maths and writing across the curriculum, recording in a variety of formats, including the use of ICT, talking and listening, art and design, financial capability.	274	44%	55%	<1%	<1%	0%

Providing Inspection Services for

Department of Education
Department for Employment and Learning
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