Seaview Primary School

Technologies Policy

October 2017

Policy Statement

Scotland has a strong tradition of excellence and innovation in technological research. This is especially true in areas such as engineering, electronics, optoelectronics, biomedical research, genomics and cell engineering. Scotland's people need to be skilled in technologies and to be aware of the impact of technologies on society and the environment, now and in the future. Learning in the technologies provides a strong foundation for the development of skills and knowledge which are, and will continue to be, essential in maintaining Scotland's economic prosperity.'

Technologies Principles and Practice (2009).

Introduction

This Technologies Policy should be read alongside other school policies as the use of digital technology is not stand alone but should be firmly embedded in learning and teaching across the curriculum.

It has been written by the school, building on best practice, and is based on Angus Council Guidance and the Digital Learning and Teaching Strategy for Scotland 2016.

The majority of children in Seaview Primary school are at ease using technology and from an early start they increase their skills to present, communicate, create, share, edit, photograph, find out, explore and research. We encourage the use of digital learning to enhance and supplement learning and teaching experiences. Children are developing skills to manage their own learning now, for future study and into the world of work. We recognise we are living in an ever changing digital world and want to equip our children with transferable skills and allow them to think about digital solutions to existing problems. We want our children to be digital creators rather than mere consumers.

Rationale

Within Curriculum for Excellence, the technologies curriculum area relates particularly to contexts that provide scope for developing technological skills, knowledge, understanding and attributes through creative, practical and work-related activities. For this reason, the framework provides experiences and outcomes which can be applied in business, computing science, food, textiles, craft, design, engineering, graphics and applied technologies. These experiences and outcomes offer a rich context for the development of all of the four capacities and for developing the life skills that are recognised as being important for success in the world of work. They also offer an excellent platform for a range of technology-related careers.

The technologies framework offers challenging activities which involve research, problem solving, exploration of new and unfamiliar concepts, skills and materials, and the rewarding learning which often results from creating products which have real applications. It provides progression in cognitive skills. Children and young people will develop their creativity and entrepreneurial skills and be encouraged to become innovative and critical designers of the future. These attributes are essential if, in the future, our children and young people are to play a major part in the global economy and embrace technological developments in the 21st century.

Principles and Practice

What are the main purposes of learning in the technologies?

Learning in the technologies enables children and young people to be informed, skilled, thoughtful, adaptable and enterprising citizens, and to:

- develop understanding of the role and impact of technologies in changing and influencing societies
- contribute to building a better world by taking responsible ethical actions to improve their lives, the lives of others and the environment
- gain the skills and confidence to embrace and use technologies now and in the future, at home, at work and in the wider community
- become informed consumers and producers who have an appreciation of the merits and impacts of products and services
- be capable of making reasoned choices relating to the environment, to sustainable development and to ethical, economic and cultural issues
- broaden their understanding of the role that information and communications technology (ICT) has in Scotland and in the global community
- broaden their understanding of the applications and concepts behind technological thinking, including the nature of engineering and the links between the technologies and the sciences
- experience work-related learning; establish firm foundations for lifelong learning and, for some, for specialised study and a diverse range of careers.

How are the technologies experiences and outcomes organised?

The technologies framework has been organised to offer opportunities for personalisation and choice using diverse contexts for learning. The technologies framework has six organisers, namely:

- Technological developments in society
- ICT to enhance learning
- Business
- Computing science
- Food and textiles
- Craft, design, engineering and graphics.

The first four organisers are contexts for developing technological skills and knowledge. Teachers in their planning will use the framework to ensure that children and young people develop their understanding of important themes such as the impact of technology, informed attitudes to technology, sustainability, and social, economic and ethical issues. These will underpin and continually reinforce learning within the technologies.

What skills are developed in the technologies?

The technologies provide frequent opportunities for active learning in creative and work-related contexts. Learning in the technologies thus provides opportunities to continually develop, use and extend skills that are essential components for life, work and learning, now and in the future, including planning and organisational skills. Learning in the technologies therefore makes a strong contribution to achieving the aim clearly articulated in Skills for Scotland: a Lifelong Learning Strategy, ensuring that Curriculum for Excellence provides vocational learning and the employability skills needed for the world of work and is the foundation for skills development throughout life'.

Well-designed practical activities in the technologies offer children and young people opportunities to develop:

- curiosity and problem solving skills, a capacity to work with others and take initiative
- planning and organisational skills in a range of contexts
- creativity and innovation, for example though ICT and computer aided design and manufacturing approaches
- skills in using tools, equipment, software and materials
- skills in collaborating, leading and interacting with others Technologies: principles and practice 2
- critical thinking through enquiry and discovery within a range of learning contexts
- discussion and debate
- searching and retrieving information to inform thinking within diverse learning contexts
- making connections between specialist skills developed within learning and skills for work
- evaluating products, systems and services
- presentation skills.

Technologies Experiences and outcomes

The refreshed technologies framework provides a range of different contexts for learning that draw on important aspects of everyday life and work. It includes creative, practical and work-related experiences and outcomes in business, computing science, food, textiles, craft, design, engineering, graphics and applied technologies.

Learning in the technologies enables pupils to:

- develop an understanding of the role and impact of technologies in changing and influencing societies
- contribute to building a better world by taking responsible, ethical actions to improve my life, the lives of others and the environment
- gain the confidence and skills to embrace and use technologies now and in the future, at home, at work and in the wider community
- become an informed consumer and producer who has an appreciation of the merits and impacts of products and services
- be capable of making reasoned choices relating to the environment, sustainable development and ethical, economic and cultural issues
- broaden my understanding of the role that information and communications technology (ICT) has in Scotland and in the global community
- broaden my awareness of how ideas in mathematics and science are used in engineering and the technologies
- experience work-related learning, and establish firm foundations for lifelong learning, and specialised study and careers.

It is important to remember that as children and young people play and learn they will develop an interest, confidence and enjoyment in ICT skills that can be transferred and applied in different learning contexts.

Aims

We aim to deliver a technologies programme which offers pupils a progressive pathway, building on prior experiences and is flexible to provide a wide range of experiences to enable pupils to develop knowledge, skills and attitudes required for life-long learning.

Through our programmes we hope to develop:

Children who are successful learners in the technologies:

- show enthusiasm and enjoyment in a range of practical, task-based activities;
- learn independently and think creatively;
- apply critical thinking through research, enquiry and discovery;
- learn to make learning links across different curriculum areas through inter-disciplinary learning;
- are inquisitive and have the capacity to evaluate everyday items which may include assembling and disassembling;
- use a wide range of technologies well, showing a growing awareness of technologies in common use;
- evaluate those technologies which form part of their daily lives.

Children who are confident in technologies:

- respond well to new challenges, needs or opportunities and make informed decisions;
- evaluate and make reasoned choices relating to the environment and to sustainable development;
- use design processes to go beyond their first idea and seek alternatives; and
- produce solutions from an initial idea, seeking alternatives where necessary and going outwith their existing skills and knowledge.

Children who are effective contributors in technologies:

- work well as individuals and collectively within teams;
- use trial and error to change approaches, reach solutions and solve problems
- develop their entrepreneurial and presentation skills;
- confidently evaluate commercially-produced products for their purpose, **r**eliability, durability and appearance; and
- evaluate their own work and that of others.

Children who are responsible citizens in technologies:

- make informed choices which reflect an understanding of their responsibilities towards and ethical actions on the environment;
- have a well-developed knowledge and understanding of technologies and their effects on society;
- are well informed about local, national and international use of technologies to meet individual needs; and
- become informed consumers who are environmentally aware of sustainability.

Security and Maintenance

ICT and technology equipment is expensive and care and attention should be given to the security and maintenance of all equipment.
Pupils should be taught safe ways of using, transporting and charging the portable equipment and staff should ensure these procedures are always carried out.

All equipment should be:

- handled with care
- returned at the end of the school day to a secure location
- returned in full working order
- if there is an issue, it should be reported to a teacher immediately

Cameras

Staff will ensure:

- cameras are charged, ready for the next user
- images are downloaded and saved.
- all images are cleared after download ready for the next user

I-pads

Staff will ensure:

- i-pads are stored securely at the end of the day
- i-pads are regularly downloaded and content stored on school server or within GLOW
- i-pads are charged and ready for daily use

Computers

Staff will ensure:

- each computer is kept in working order
- faulty equipment is reported to the Mrs Elder to report for repair

Laptops

Staff will ensure:

- all laptops should be connected to the designated charger in the trolley
- teachers will ensure the charging station is secure at the end of the day and ensure the charger is on appropriately

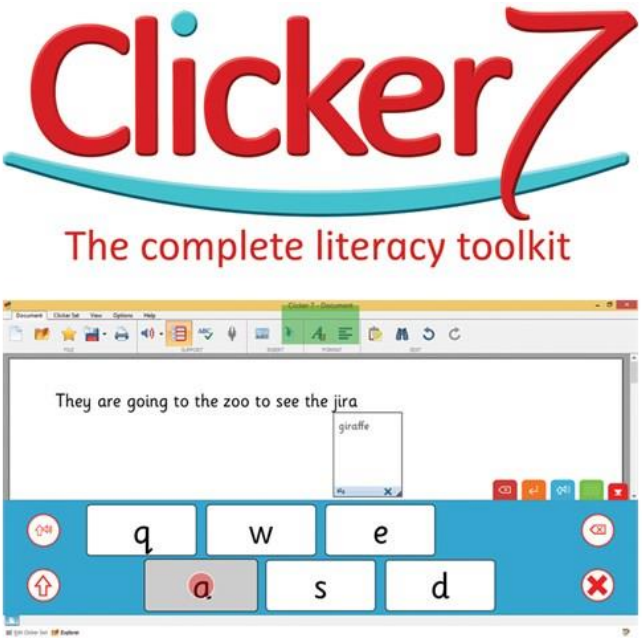
Staff and pupils will make reference to the 'Technology Expectations' (Appendix 1) created by the Digital Leaders in 2017.

Ensuring Equality of Opportunity

We will ensure every child has access to technology and the benefits it may bring regardless of gender, ethnicity, disability and family circumstances. Laptops are available to pupils during the day.

Assistive Technology

Technology will be used to increase access to the curriculum for pupils with additional support needs. The school has a range of hardware and software which can enable pupils with specific learning needs to produce quality work e.g. Clicker 7.



Learning and Teaching

The refreshed outcomes and benchmarks support staff in planning challenging, engaging and enjoyable learning and teaching activities which will stimulate and motivate children. A range of GLOW tools will be used across the curriculum. Safety online is taught throughout the school by staff who make use of a range of materials. Appropriate use of the internet is encouraged for research purposes but children should be taught how to do this safely and responsibly and also how to discern materials which are biased or not factually correct. When recreating a text, as children progress through the school, they should be taught about plagiarism, making simple references and how to source license free images.

Effective learning and teaching using digital technologies draws upon a range of approaches including:

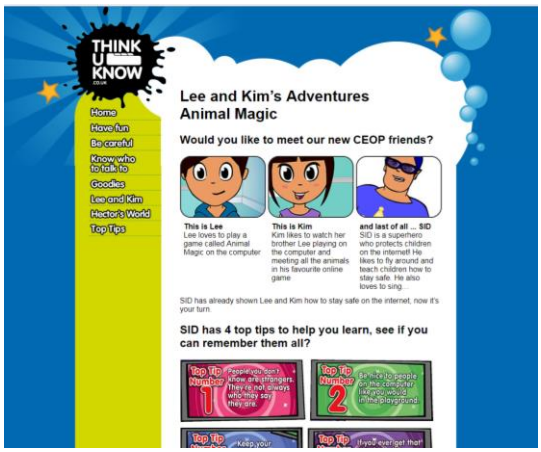
- active learning which provides opportunities to observe, explore, experiment and play
- use of relevant contexts and experiences familiar to children
- both collaborative and independent learning
- interdisciplinary learning experiences
- learning outdoors, field trips, visits and input from external contributors
- working alongside STEM Ambassador to make natural links with the World of Work
- instilling an awareness of the ever-changing landscape of the digital arena and the implications for future employment

CLPL

All staff will be supported in delivering the high quality digital learning programme by attending regular CPD training which can be a mixture of Angus Council CPD, external sources e.g. Barefoot Computing, peer-to-peer support, Teach Meets or online training (Microsoft/MIEE). Teachers are encouraged to keep abreast of changes in digital learning within Angus Council and at national level. Twitter can be a source of professional development with many links to research papers and ongoing work or cutting edge projects in other schools.

Internet Safety

E-safety issues should be discussed throughout the school at the appropriate level for their age. Appendix Two 'Internet Progression' offers staff guidance and suggested resources for e-safety progression from Early to Second Level. There are a variety of resources to do this including ThinkUKnow, Espresso and Childsnet. Parents will be invited to attend annual e-safety workshops in school and can bring along personal devices if they wish advice on activating security settings. Letters will be sent to parents yearly reminding them of e-safety responsibilities in the home along with e-safety tips. All staff, pupils and parents will be reminded of the ICT code of conduct in line with the Acceptable Use Policy annually. Cyber bullying is included within the Anti-bullying Policy.



Reviewing this Policy

This policy will be reviewed every year with a working party including parents, staff and pupils.
October 2017

Appendix One

Expectations when using TECHNOLOGY in the classroom

1. Hold the device with **two** hands.
2. Make sure the lid is **closed** when carrying a device.

3. Use clean and dry hands.
4. Keep food and drinks away from the device.
5. **Share** the device and take turns.
6. Never leave the device alone and on the floor.
7. Always ask **permission** before recording a video or taking a picture.
8. No hitting, banging or slamming the device.

9. Shut down the computer **properly** before closing the screen.

Digital Literacy – Cyber Resilience and Internet Safety Progression			
Experiences & Outcomes	**Early**	**First**	**Second**
I can explore, play and communicate using digital technologies safely and securely. **TCH 0-03a** I can extend my knowledge of how to use digital technology to communicate with others and I am aware of ways to keep safe and secure. **TCH 1-03a** I can explore online communities demonstrating an understanding of responsible digital behaviour and I'm aware of how to keep myself safe and secure. **TCH 2-03a**	Demonstrates an understanding of appropriate behaviour and language in the digital environment. Demonstrates an understanding of the importance of passwords and passcodes for example access to school building	Demonstrates understanding of my rights and responsibilities as a digital citizen. Demonstrates understanding of the potential dangers online and who to go to for advice and who to report a concern to. Demonstrates an understanding for the need for strong passwords. Explains the need to get a person's permission before taking a picture or video of them.	Demonstrates an understanding of the content they should include in an online profile. Discusses the importance of being a responsible digital citizen, giving examples of appropriate online behaviours and actions. Identifies appropriate ways to report concerns. Uses strong passwords. Has an understanding of the law as it relates to inappropriate or illegal online behaviours, for example, the sharing of inappropriate images.
Learning and Teaching Suggestions	• ThinkUKnow: Hector's World • Safer Internet Day Resources • Childnet.com – Smartie the Penguin & Digiduck's Big Decision	• Espresso – First Level – Computing – Online Safety • ThinkUKnow: Lee and Kim's World, Hector's World • Safer Internet Day Resources • Childnet.com – SMART crew.	• Espresso – Second Level – Computing – Online Safety • ThinkUKnow – Play Like Share, CyberCafe • Safer Internet Day Resources • Google – Be Internet Awesome: https://beinternetawesome.withgoogle.com/interland/ • Childnet.com