

Access all areas



Continuing her series on ICT, Rachel Ager demonstrates how the use of technology can be applied across the EYFS...

By the end of the Early Years Foundation Stage children should be using 'information and communication technology and programmable toys to support their learning'. So, not only do children need to learn about technology (as outlined in my previous article), they should also be using it to support their development. Technology used well can excite and motivate children, and it offers practitioners the chance to promote skills and observe progress across all six areas of learning and development – in ways that would either be more difficult or impossible without it.

What follows are starting points that almost any setting can try in order to support children's progress in each of the six areas.

1. Personal, Social and Emotional Development

Most nurseries have invested in digital cameras, and they're arguably one of the most powerful resources available to an early

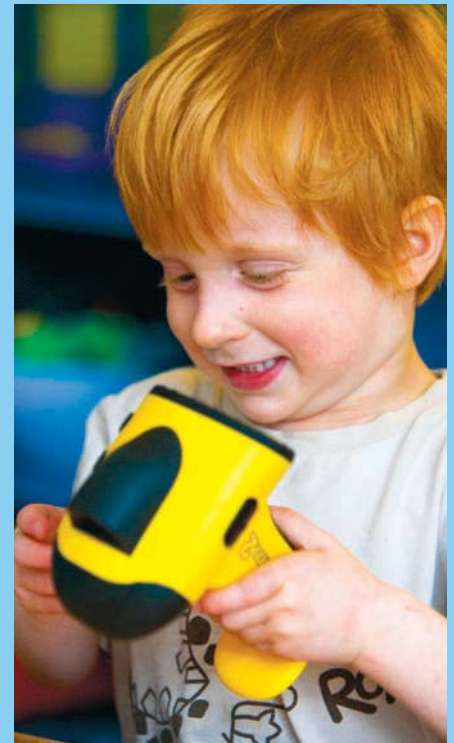
years setting. The use of photography sends a clear message to both children and their parents/carers. When practitioners consistently take photographs of their children's activities it confirms that they value and want to celebrate learning – and if it is recorded over time it also confirms that they value and want to celebrate children's progress.

In addition, if cameras are available as part of your setting's continuous provision and children are proactively encouraged to use them to record their achievements, it will help children understand that they are special, that what they achieve is special, and that practitioners want to remember their achievements and share them with others. If this also becomes a consistent part of the setting's ethos children will 'develop self-confidence and a belief in themselves' and 'continue to be interested, excited and motivated to learn**'.

Tip To ensure that they don't miss anything, practitioners should have a camera permanently about their person, in a bum bag, for instance. Children's cameras should be easily accessible at all times. Children should know where they are kept, how to use them safely, and that they should always return them after use.

Video cameras can be used to film children whilst they are learning – and if this film is reviewed with the children it gives them the opportunity to reflect on their learning and explain their thinking, enabling practitioners to have a clearer understanding of the child. Clicker 5, in particular, features a very child-friendly interface that lets children get involved, and also allows text and/or a recorded commentary to be added to pages, alongside





the videos. These 'books' can be made available for the children to explore whenever they want, thereby encouraging them to 'begin to use talk [to] reflect on past experience, paying attention to sequence and how events lead into one another'*.

Tip Windows Movie Maker can be used to capture still photographs from video and these stills can then be used to document learning journeys.

2. Creative Development

Provide the children with a box of defunct ICT alongside Community Playthings Hollow Blocks and encourage them to construct their own role-play scenarios. This could be anything from an office, to a train, to a spaceship or even mission control. This will certainly encourage them to 'use their imagination in role-play'*.

Tip Defunct ICT should have the batteries removed and any electrical cables cut off as close to the equipment as possible.

3. Knowledge and Understanding of the World

A simple hand-held digital microscope such as an Easi-scope offers children the opportunity to explore objects and living things in microscopic detail. Try using it to talk about and compare different fruits or vegetables such as strawberries and raspberries or mushrooms and broccoli. In this way children can't fail to develop a 'curiosity and interest in features of living things' and will be encouraged to 'describe

and talk about what they see' and 'look closely at similarities [and] differences'*. Alternatively children can look at leaves, bugs and even their own skin. Practitioners might even find that their curiosity is aroused!

Tip The webcam feature in 2Publish+ allows children to input the images they take using the Easi-scope directly into a 2Publish+ document and then add text to caption or describe their images.

Give the children a hand-held metal detector and a range of everyday objects, and encourage them to test which make the detectors buzz. Use open-ended questioning to support their exploration of these objects. This will support the children to develop 'curiosity and interest in features of objects' and will encourage them to 'ask questions about why things happen and how things work'*. Once children know how to use metal detectors they can be integrated into their role-play, for instance, pirates looking for buried treasure or a security officer scanning passengers at the airport.

Tip Test the detectors before you buy – some are easier to calibrate than others. If the children are going to use the metal detectors to look for 'buried treasure' in sand, make sure the sand tray isn't on a metal stand or on a table with metal supports!

4. Communication, Language and Literacy

The use of electronic means of communication can provide children with a wide variety of opportunities to read and write. They could e-mail their favourite story character using a simple interface such as is provided by 2Simple's 2E-mail. This will provide an exciting and meaningful context in which to 'use writing as a means of communicating' and when the replies come in to 'read a range of familiar and common words and simple sentences independently'*. Alternatively, using e-mail can be incorporated into any role-play area, for example, an airport, builders office, estate agents, opticians, dentist or hairdressers in which customers could e-mail orders, enquires or book appointments.

Tip Avoid the constraints and associated e-safety issues that surround the use of real e-mail by using a program such as 2Simple's 2E-mail which simulates the use of e-mail within a safe controlled environment and doesn't require a connection to the Internet.

5. Problem Solving, Reasoning and Numeracy

Children love toys that they can control and thus will inevitably be fascinated by those which are remote-controlled or programmable. Once the children have explored the remote toys and can use them confidently, try providing an environment for the toys to move about in. This could be based on a familiar story, or on their local

environment. The children usually need little encouragement to talk about where their toy is moving and why. Very recently, I observed two three-year-old boys in deep conversation about their remote-controlled bugs as they moved them around a prepared environment. With support they will also begin to 'use positional language' and 'use everyday words to describe position'*

Once the remote-controlled toys become part of your setting's continuous provision, provide resources and stimuli that will encourage children to create their own environments for the toys. These resources can include anything that might be found in the art/workshop area and small world/construction resources such as Playmobil or Duplo. Working together to create the environment will be a challenge in itself.

Tip If children are going to be using more than one remote-controlled toy at once, make sure they operate on different frequencies!

Once children have had a good experience of using remote-controlled toys they can begin to explore programmable toys. Children don't need to work out how to program sequences of instructions, they just need to work out how to make their toy move. It's quite all right at this stage if they make it move by entering one instruction at a time.

The creation of an environment for a programmable toy is significantly more challenging than creating one for a remote controlled toy. The programmable toy can usually only move distances which are multiples of its own length, and can only turn right angles or multiples thereof. Thus, both the creation of its environment and making the programmable toy move will demand the



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use of 'developing mathematical ideas and methods to solve practical problems'*.

Tip Have more than one type of programmable toy available so that children can transfer their learning from one toy to another.

6. Physical Development

Using a computer mouse to navigate around an appropriate piece software requires children to 'engage in activities requiring hand-eye coordination' and 'use a one-handed tool'* whilst having fun! Using an interactive whiteboard instead will develop children's gross motor control and coordination.

Tip Ensure that the mouse is an appropriate size – about half the size of a standard mouse. Smaller mice designed for use with laptops fit perfectly under a child's hand.

If you encourage your children to use Community Playthings Hollow Blocks to build a track for remote-controlled or

find out more

A former primary school teacher, Rachel Ager is an internationally-respected educational consultant who worked to develop the use of ICT in the EYFS. She is currently Chair of Naace, the ICT association. Next issue, Rachel will look at managing ICT resources safely and effectively. Visit rachelager.co.uk

programmable toys, they will have to lift and move the equipment safely and develop and 'show awareness of space, of themselves and of others'*.

Tip Using the Hollow Blocks in this way will enable children to use their remote-controlled and programmable toys outside, as they provide a suitable surface on which the toys can move.

* **Development Matters or Early Learning Goal from Practice Guidance for the Early Years Foundation Stage, DCFS (2008)**

