Steven Howard: Welcome back to our series about what high quality interactions and experiences look like in the context of digital technologies. We aren't looking to simply replace what we already do with digital alternatives.

Nor do we advocate using technology just because it's available. Instead, we are interested in the things that technology enables that are not otherwise possible, and how to integrate and leverage these opportunities within the learning experiences we create for children. We're interested in how we can use technologies intentionally and purposefully for the benefit of children's learning and development.

And we're equally interested in the interactions and conversations before, and after. during and after the use of digital technologies. In short, we view digital technologies as a tool for learning and play, a powerful and flexible one. But like any tool, whether and how children benefit from using digital technologies depends on us, our intentional practices to support their learning, and the high quality interactions that we have even while we are using technology.

In this episode of our podcast series, we're going to talk about how we can use digital technologies to support our children's curiosity and their natural exploration to add to learning experiences.

More than learning about technology, like how to use it, or learning through technology, like researching online, we see unique opportunity for digital technologies. It can take us places we couldn't otherwise go. Exploring different parts of the world through Google Earth, virtually visiting aquariums or museums around the world, or immersing in a new environment using augmented reality.

It can allow us to see things in ways we couldn't otherwise see them. Exploring the depths of the ocean using a digital microscope to see things the eye can't detect. Or slow motion video to deconstruct a short or quick event. And we can connect with people we couldn't otherwise reach. Children's families, experts in our communities, or with virtual tourists that can take us on an excursion with them.

Lisa Kervin: We know that children learn best through play. It is through their play that they really show us what they understand, what they're interested in, and how they're making sense of the world. Play can also be a scientific process, as children engage in an inquiry, where they ask questions, solve problems, and learn new things.

Let's explore this some more. A child may have a question, a what if, or why something works. You might work with the child to discover what it is that they already know about their question, to establish their knowledge and help them make predictions. The child, or perhaps even a group of children, may then seek ways to find out about that what if or why by playing with it.

They might experiment. Explore. Try to do different things with it. They might ask lots of questions as they build their knowledge and understandings. Once they feel they have the information and data to begin to answer their what if or why, they make changes and tweaks and try again. This trying again can happen over and over and over.

They might revisit their initial understandings and predictions to build their knowledge. The data they gather then propels them to find out something else. Now, what if? Or another why? And with more questions to find out the answers, and so the cycle starts again.

Steven Howard: This process of experimentation is inherently playful and exploratory, and it lends itself really well to helping children to think about the questions to ask, learn where and how to find answers to their questions and share and talk about how they find out. This all supports their curiosity and interests, their autonomy, their critical thinking, and their developing language skills. In an example from our own digital play, we used the camera app on the iPad and attached a digital microscope to investigate nature.

Bark, flowers, leaves, rocks, even our old carpet. Which, let me tell you, you do at your own peril. We use the zoom function on the camera to zoom in to see details our eyes couldn't detect on their own. One child even managed to capture an ant, close up, at play on a piece of bark. You can imagine her excitement.

The child wanted to share this and encouraged other children and the adults in the space to come and look. Think about what questions the child might have. If you were the educator in the space, how might you extend this interest and investigation further, through your questions and interactions? Why do you think, what if, and more than just this learning through digital technologies, how might other digital resources allow us to answer these questions and continue our exploration?

Perhaps connecting with a local expert, from whom we can ask and have answered some of our questions. Or connecting to a live stream of an ant colony. Or an augmented reality app that take us there ourselves. The options and opportunities are many, but again, to reiterate a point from last week,

Which options we choose should depend on what we are aiming to achieve for children's learning and play.

Is it peer interaction? Questioning? Problem solving, building knowledge and early science concepts like habitats and life cycles, or something else entirely.

Lisa Kervin: Digital technologies can really help with the inquiry process. Technology can be used to find out information. But what about if you use technology to capture the process of inquiry in ways that will really help develop new understandings and new ways of looking that would otherwise not be possible?

Have you ever considered what happens to the water when we jump in a puddle? Or what happens to a dandelion when we blow it? The slow mo recording function on the iPad camera enables you to film things slowly. Filming in slow motion focuses the attention on a moment in time. It adds emphasis and ramps up anticipation.

It adds a whole new dimension to simple science experiments and new possibilities for incorporating digital technologies into play experiences. These moments, these slow moments, can lead to so much discussion as they're captured and viewed. So many opportunities for talk between children and with educators.

All too often we see conversation reduce or stop entirely when digital technologies become the focus for the moment. But we wouldn't stop talking when we're reading a book or playing with blocks. In the same way, we see the digital aspects of experiences as opportunities to ask and answer questions, to pursue the children's interests, and to create things that just did not exist moments ago.

That is to say, we argue that there shouldn't be a drop in talk when digital technologies are in use. It would be difficult to get full benefit of our explorations if there was.

Steven Howard: There are so many ways that we can use digital technologies. But when they're based on the child's interests and curiosity, we can harness them to not only extend and learning, but also to design environments to engage our children in open ended exploration, discovery, excitement, creation, and wonder. Think of all the experiences and learning that are now at our fingertips.

Thanks for listening.