Playing IT Safe

Activity: GPS, navigation and tracking

Helping children learn that the internet is a part of their lives involves being able to connect different concepts covered by the resource pack. This activity is best introduced once children have demonstrated an understanding of what the internet is and how it works, i.e. send messages from phone to computer, or that messages are sent to a satellite.

Helping children understand the purpose and role of technology in their daily lives is foundational learning in being safe and responsible digital citizens. GPS and navigational technology are types of networked technology we often forget but is very present in the lives of children.

Readiness

Children are ready for this activity when they have an understanding that devices can be connected to other devices and networks. This activity builds on this understanding to help children discover how the connectedness of digital devices makes them useful.

If this activity is too difficult for children you could provide pretend play with digital devices and engage them in other Playing IT Safe activities that explore the uses of connected digital devices such as:

- Connected home corner.

Description

Anytime children engage in an activity where they build a vehicle or a car, you can introduce the idea of GPS and tracking. The key message to explain to child is that the internet is not just on a screen, but can be used to help us get around with maps and directions. You can ask children if they have ever been in a car when a computer is giving directions. As you hear their perspective on it you can explain that GPS is part of a network of satellites very high up in the sky. You can begin these conversations through modelled play such as:

- If children build a car out of cardboard or chairs, you can use tap and a printout of Google Maps or a GPS screen to add to the car and encourage roleplay with the GPS.
- When children play with cars in the sandpit or in the block play area, you could introduce the ideas of satellites above them helping them find their way. This could be created with small blocks that you hold up in the air or hang from the ceiling.

As the children play, you can ask questions as outlined in the 'Prompts' section on the next page.

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Resources required

- Any building materials.
- Cardboard or old broken GPS system.
- Printout of Google Maps to use as a GPS (available in 'Downloads').

Modelled play

- Can you use a tablet, paper or other device to type in directions about where a car is going?
- You could use yarn as a car and each time it gets to a corner of a road it "talks" to a satellite and you connect the yarn up to the satellite and back again and so have a big visual representation of all the communication.

Prompts

- How might we track where we are from anywhere on the planet? (Concept of satellites).
- How do cars and satellites "talk" to each other?
- What is useful about people being able to know where to go?
- What might be a problem with people being able to know where you are all the time?

Learning statement

[Child/ren name/s] demonstrated an understanding that cars, phones and other devices communicate with satellites. Children engaged with the idea of being tracked or people knowing where you are all the time. They reflected on what might be useful and what might be a problem with that. Children then responded creatively by further playing and incorporating our discussion and ideas into their play with cars, GPS and tracking.

Alignment

Outcome 2: Children are connected with and contribute to their world

- Identify when or how they have used digital networks to communicate and connect with others.

Outcome 4: Children are confident and involved learners

- Experiment and explore digital technology in an attempt to better understand it.
- Use reflective thinking to consider how they use digital technology and in what situations it might not be a good tool.