

Engineering and tools through loose parts play

Overview

This initiative was funded through the MVV Baldovie Environment Challenge Fund, linking with ScrapAntics who had been involved with loose parts play training previously. The professional learning was co-designed with one of the authority's PSDOs Sarah Hynie Klemen.

The aim was to create a more cohesive connection between the skills that children develop in school and the skills that are needed for the workforce.

It was a three-part professional learning opportunity which involved two sessions with ScrapAntics on engineering through loose parts play, followed by a session with the PSDO focussed on woodworking tools and makerspaces in classrooms with pupils.

There was a focus on reimagining the engineering design process through loose parts creativity, promoting engineering language, and using tools.

Rationale

A survey of Dundee teachers identified a need for more engineering-focussed professional learning opportunities.

Many teachers already had an understanding of loose parts play, so this concept was extended to include tools and makerspaces.

This type of learning approach has significantly helped to develop creativity in pupils, which is an important focus within learning.

Process

Engagement with partners and schools in advance of funding being secured helped to establish that there was an appetite for the training.

Resources were purchased for seven schools that had committed to the professional learning. Each school had two teachers take part in each session.

Delivery

The interactive sessions focussed on play to broaden understanding and knowledge of engineering and introduce engineering vocabulary.

The first two sessions explored how loose parts (such as logs, ties, spools, and tubes) can be used for indoor and outdoor learning. The participants familiarised themselves with loose parts and created structures, before aligning these with Engineering Design Process.

Participants then used these designs as prototypes for their classes.

The third session was run in classrooms with the PSDO leading a lesson, which included the use of woodworking tools, alongside the teacher.



Who is this for?

This project was for Dundee City Council Primary teachers. This case study can inspire those keen to explore the links between loose parts and the engineering design process.

What does it cost?

This project, including resources, cost £6900 and was funded through a grant.

As a standalone training option, ScrapAntics is £500 per session.

Where can I find out more?

To find out more email sarahhynie@dundeeshools.scot and visit the ScrapAntics Loose Parts Play website [ScrapAntics | Loose Parts Play](http://ScrapAntics.co.uk/LoosePartsPlay)





Impact

All participants used the knowledge and skills they had gained when they returned to their classrooms after the training.

Teachers shared that their confidence had increased thanks to the professional learning.

Since doing this project and taking part in the learning, teachers have noted how engineering through loose parts play generates ideas which can inform future child led planning.

They have also said that it works well as a basis for other curricular areas including literacy, numeracy, and expressive arts.

One teacher used it to bring her literacy focus to life and linked with drama. The pupils in their class built 'baby bear' a new chair. Another connected in with sustainability, numeracy, and social studies tasking pupils to create something to support their local area.

Dundee City Council will provide funding in 2022/23 to train additional teachers due to the impact outlined by the initial cohort.

Teachers shared the following:

"I am much more confident. Really inspired."

"[It has been] good to work with colleagues and share ideas and consider the ownership element of the activities as well as the practicalities"

"How play and engineering support each other and how play can be purposeful. I feel much more confident about using the container and how to structure a session."

"Excited and inspired to try it. Also, aware that it doesn't need to be a massive project. Keep it child led. Keep ideas simple, encourage creativity and freedom."

"I have learnt to consider bringing in design, principles and vocabulary."

Pupils shared the following:

"It is so much fun, I love using the saws, hammers are my favourite tool and we are always really safe."

"I never thought we could do this in class, it is so much fun and we get to be really creative. I might become an engineer now."

