



National Day Nurseries Association

## Case study: Maths

### Weighing and measuring

**Name of setting:** Portico Poppets

**Date submitted:** 1 September 2016

**Information supplied by:** Vicki Cardwell

**Title:** Weighing and measuring

#### *Key points of good practice*

- *Observations and careful scrutiny of assessments by the Maths Champion helps the nursery see the difference made in children's progress by introducing new ideas and resources.*
- *Engaging parents with things to do at home contributes to children making good progress in weighing and measuring, especially where a product such as play dough is the outcome.*
- *Embedding maths language and regular use of tools such as rulers and scales has helped staff and children become more confident in weighing and measuring every day.*

#### Background detail

Maths Champions is a programme which supports children and staff by embedding maths into play and activities. Led by a Maths Champion, a designated graduate member of staff, its aim is to build confidence in maths among children and practitioners.

The Maths Champion at Portico Poppets is Vicki Cardwell who is also the nursery manager and Early Years Professional. Vicki decided to focus on weighing and measuring as part of the nursery's engagement in the Maths Champions Project.

Portico Poppets is part of the Portico Day Nurseries Ltd. It is open for 51 weeks a year, weekdays from 7.30am to 6pm. It provides a range of different sessions in the local community, the Thatto Heath area of St Helens. It takes 30 children per session. The nursery provides funded early education for two-, three- and four-year-old children. The nursery supports children who have special educational needs or disabilities and those who speak English as an additional language.

#### **What the setting wanted to achieve**

When completing the initial maths audits for the environment and resources, it became apparent that there were fewer resources for weighing and measuring and it was not well embedded in nursery practice. Children's assessments also showed space, shapes and measures as an area where not all children were making expected progress.

Vicki wanted children to regularly use resources and language connected to weighing and measuring and for this aspect of learning to show all children meeting or exceeding expectations for their age or stage of development.

She wanted children to be able to access and use resources connected to weighing and measuring independently and for practitioners and children to use language connected to weighing and measuring as part of their everyday practice.

### **How the setting planned for change**

All the practitioners watched the NDNA webinar on measuring to get new ideas on what to do. The nursery staff then went away and adapted or added to these implementing throughout the nursery.

The nursery purchased some new resources such as rulers, tape measures and scales but many of the ideas they used did not need additional resources, such as using cups for weighing, making simple height charts or rulers.

Vicki also used the 'Home learning board' in the nursery to give parents information about weighing and measuring and things they could do at home with children such as using tape measures or making play dough.

Vicki acknowledged the enthusiasm of the staff team in making embracing maths and taking ideas forward:

*The staff were brilliant at taking the ideas and using them in different ways or coming up with new ways to embed weighing and measuring including in more active or outdoor play. For example one staff member built an obstacle course where children measured how far they had jumped.*

### **The success of the chosen area of practice focusing on improved outcomes for children and their families**

The nursery made tape measures and rulers readily accessible to children and introduced simple activities like measuring the heights of the children, or measuring the length of their arms. As children began to understand more about measuring they started to measure things in different ways such as using their hands and making their own rulers.

They learned how to make marks in relation to their measuring on simple height charts or when measuring who had jumped the furthest.

Children learned about weighing when helping to make play dough or snacks for the nursery, using scales to weigh but also measuring out quantities using cups. These sessions had an end product and helped children to understand the purpose of weighing – and were also used successfully by parents at home.



Vicki's observations of practitioners and children saw both practitioners and children using much more language connected to weighing and measuring as well as children readily



using rulers and tape measures of their own free will as part of their continuous play, including measuring their play dough snakes.



Vicki noted that practitioners' anxieties about maths decreased as they began to understand how maths could be used in simple everyday activities and they became confident in role modelling how to weigh and measure and use language connected to this.

Assessments of children showed significant progress with every child making progress in space, shapes and measures with all children at least meeting expectations.

At its last Ofsted inspection in May 2016, the nursery received an Ofsted grade of outstanding and the inspection report singled out maths as an area of strength:

*Staff skillfully introduce mathematical concepts and language throughout activities, promoting accelerated progress. For example, as children build an obstacle course they are encouraged to measure how far they have jumped, noting numbers on the tape measure and calculating who has jumped the furthest.*

### **Lessons learned/difficulties encountered**

There were no particular difficulties in increasing the focus on weighing and measuring – but the main difficulty is making sure other areas of learning do not suffer as a result of this increased focus on one aspect.

### **Next steps**

Vicki says the nursery wants to continue to keep weighing and measuring as a high priority, but acknowledges this can be difficult as other areas of learning start to take precedence. In the new term the nursery will focus more on the prime areas of learning as new cohorts of children join.

Current assessments are showing a slight drop in progress compared with the previous term but the nursery has action plans for keeping maths high on the agenda. Boys' progress is not as good as girls and Vicki will make sure that new ideas to engage boys are implemented.

### **National Day Nurseries Association**

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