

EEF Case study:

Teeny Tots Compass



Key points of your Maths Champions improvements

- Developing mathematical opportunities in the outdoor environment
- Developing purposeful mathematical opportunities throughout all areas of provision
- Developing practitioners understanding of mathematics and confidence in order for them to freely support children in their mathematical development
- Extending the mathematical resources within the setting

Background detail

A little bit about your setting and why you joined the programme – what did you want to achieve from Maths Champions

Teeny Tots Compass is a private day nursery within a purpose built building including a primary school, primary special school and Children's Centre. It is situated in a deprived area within Hull and the majority of its capacity provides for children who receive 2, 3 and 4 year old funding, thus a high amount of pupil premium is received (some of which was used to support the implementation of the programme). Developmental overviews are completed at the end of each term and shared with the council and mathematics is always one of the 'low' areas not only in the setting but across Hull. When the advertisement was seen in Nursery World it was felt the programme would be beneficial to the setting as it may offer more guidance/new initiatives on how to promote maths within the setting and therefore close the gap between developmental levels. The setting has recently changed their planning system and has been implementing the 'in the moment' approach which is advocated by Anna Ephgrave. This fitted in with the need for practitioners to understand how they can implement mathematics at any moment.

Section 2 – Champion's section

How has the programme developed your own and your team's CPD?

Staff have really taken on board training from the online courses offered and practical reflections during staff meetings/supervisions. This is evident in daily practice. Tools such as the audits has enabled me to look into more detail the mathematical resources etc that are available and carrying out the action research enabled me to find out how useful staff questionnaires are.

What has been the impact of the training?

(e.g. training courses / staff meetings / in-house training / mentoring / peer observations / key changes / overall practice)

Staff's understanding of how children learn mathematical skills and the way in which they can support this has developed through the online training courses and practical staff meetings. It is evident through their day to day practice that their confidence to use maths with the children has increased and informal conversations have also uncovered positive feelings towards how they are supporting maths more with their key children and others within the setting. Staff have developed their own areas within the setting to include mathematical opportunities and their ideas of how this can be done have developed further to offer more variety. Staff have used group times to support children's mathematical development and many have become more confident using the resources purchased from the audit action plans or the activity ideas from the online resources bank, depending on the children's interests. This has enabled the children to become interested and engaged in mathematical activities on a daily basis which in turn supports their development levels.

From your starting point to today, what have been the changes in the following:

- ***Children outcomes-*** children's developmental overviews for this school cohort compared to the previous year show clear progress in areas of mathematics. Observations (both formal and informal) also show many more children at a higher level of mathematical development
- ***Staff development-*** staff are more aware of how easy it is to include math's in everyday routines or play activities (adult or child led) which supports the quality of the planning system used
- ***Parental relationships-*** staff have commented that they feel more confident to support parents with implementing maths at home and these ideas have been including on the children's focus child sheets (part of planning system)
- ***Environment indoors-*** the audits were a really good tool for assessing where the environment was doing well in maths and not so well. Resources were then bought to provide further mathematical opportunities e.g. time. These resources are well used by the children and staff. Displays have also incorporated maths in a fun and interesting way e.g. number car tracks.
- ***Environment outdoors-*** the outdoor environment has been a huge focus for development. Developments include number lines, large numicon pieces to match to small numicon on bikes etc, extending maths within sand/water areas, mud kitchen and mixing stand, barrels for gross motor play but over/under etc
- ***Attitudes towards maths-*** staff have commented and contribute towards how maths can be included within areas of the setting

Tell us about any new initiatives or projects relating to maths? E.g. parental partnership development

Stay and play sessions are regularly held within the setting but none have covered how we learn maths through play opportunities. Therefore, a stay and play around maths was held to demonstrate to parents how children learn mathematical skills through play.

Section 3 – staff

What resources did you find most useful and why?

Online courses, activities from the resource bank and utilising new resources purchased

Can you tell us the biggest change the Champion has introduced for maths across your setting?

Taking the maths area out of the setting in order to encourage maths to be embedded in all areas of the setting equally

How did you find the BKSB element of the programme? If you did not use this, please tell us why?

Some staff were wary of taking the first test as they felt their maths skills were not very good. Staff felt more at ease taking it again, although most did not use the materials throughout the time of the programme due to interest.

Can you tell us the difference in your confidence and attitudes towards your own maths and teaching children maths since the start of the programme?

Most staff feel that they knew how to teach some maths but did not always understand all of the areas it could be taught and were wary of the word 'maths' due to their own experiences. They now feel more confident teaching maths within different areas of the setting and are aware that they do this.

Next steps

How are you going to develop your practice further and why, what will the impact be? Who will be involved? How will your practice support good outcomes for children?

Although we have come extremely far as a setting we also know that there are lots more aspects of the programme to continue with further. Peer observations with reference to the audits will continue to be carried out to monitor the quality of the delivery of maths between different practitioners as some practitioners came further on their journey than others. This will mean that the quality of maths is the same across the setting and therefore children's outcomes will be better. The outcomes of observations will be filtered to staff during supervisions in which staff will be encouraged to reflect on their own practice.

I also plan to re-visit areas of maths within staff meetings; the action research part of the course highlighted the need for further training on maths outdoors.

Although the gap between achievements in maths is closing within the setting and across Hull, it still remains. The LA have implemented several support meetings/training courses to support this and I believe their next steps will be to look at working more closely with parents. The setting has recently taken on extra space which is going to be utilised for parent workshops. The knowledge learnt from this programme is going to be used in a parent friendly way to support parents understanding of how children learn about maths. This in turn will be likely to work alongside any support given by the LA.

The setting is one of three Teeny Tots, although only the Compass site took part in the programme. However, the maths champion now has the tools needed to disseminate parts of the programme to the other sites which will in turn support better outcomes for those children.

Final thoughts on the programme.....

The programme was easy to follow due to the layout online and the support offered through the individual mentor (Jo Baranek). The course offers flexibility across all areas e.g. time to complete courses, different times for webinars. This enabled me to have more of a chance of completing it due to responsibilities within the setting during a day. The programme was interesting and enjoyable as it has offered relevant tools for assessing what is going on within the setting in terms of maths and ways in which maths can be improved. Staff found the online courses useful, again because they were relevant to their daily practice which helped them to understand how easy it is for them to implement. Not only has the course been beneficial for its period of time, it will continue to have an impact for the future as the tools can be used to re-visit staffs practice and the environment. I have already looked at the Literacy course for the future!

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