

## EEF Case study:

### Bright Sparks Day Nursery Ltd



#### *Key points of your Maths Champions improvements*

- Centralized the storage of our Maths resources
- Training for staff
- Maths in all areas of learning
- Maths is more visually apparent within all rooms of the Nursery
- Staff confidence and experience has improved
- Children's learning outcomes in maths have improved

#### Background detail

Bright Sparks Private Day Nursery was opened in September 1994 and is registered to care for children aged 3 months to 5 years. The building, a former farm house, is situated in picturesque, private, rural surroundings, overlooking Coxmoor Golf Course and farm land.

The nursery is open from 7.45am Until 6pm and provides sessional, daily and full time child care. Bright Sparks offers a high staff to child ratio, where children's holistic development is enhanced throughout the day.

We join the programme in order to develop our staffs understanding of foundation stage mathematics and to find new and interesting ways of teaching maths skills to our children. Staff from throughout the nursery joined the programme, baby room (1), tweenies (2) and preschool (2).

#### Section 2 – Champion's section

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

The staff who joined the maths champions programme have a deeper understanding of how to provide a stimulating maths activity for the children in their care and are better equipped to ask open ended questions to further develop the children's understanding and skills. The 2 training courses refreshed their previous learning/gave them new ideas/skills. The webinars were very inspiring and gave us ideas in areas we were feeling less inspired about, such as time. Two staff members are considering retaking their GCSE Maths.

##### *What has been the impact of the training?*

- Maths is visibly prominent in our nursery and the children are benefitting.
- Staff are enhancing provision by asking the correct maths questions.
- Inspiring and engaging activities are being provided.
- Maths is a lot more prominent in the outside area.
- When staff set up an area they are looking for maths opportunities.

##### *From your starting point to today, what have been the changes in the following?*

- **Children outcomes** – maths provision has improved throughout the nursery leading to improved outcomes for the children

- **Staff development** – staffs confidence and skills have developed, along with their knowledge and enthusiasm
- **Parental relationships** – parents have commented on the maths work they have seen happening and the knowledge their children are showing, they appreciate the ideas staff have been able to share with them.
- **Environment indoors** – numbers, positional language, shapes & measures are on display throughout the setting & staff use them enhance understanding. Children do to, a group of preschool children sorted the animals to match the size pictures on display. Staff now ensure maths is in each area whenever possible by adding resources.
- **Environment outdoors** – a maths trolley had been created in back outside area, containing a wide variety of maths resources. Staff now ensure maths is in each area whenever possible by adding resources. Lots of chalk is being used as we write numbers, draw shapes and routes for our bikes and mazes to play in. there are number lines children can manipulate and shapes to match
- **Attitudes towards maths** – maths is a lot more high profile and enjoyed with in the setting both by children and staff. Children smile, laugh and explore as they learn through play.

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

**Loose parts provision** – I was inspired by the loose parts webinar on the maths champs programme, I had heard bits about using loose parts and seen posts but did not realise the extent of the learning they provide, especially for maths. I chose this area for my action research project and liked what I found out so I decided the experiment. I set up an activity and sat back to observe.



The first group were very excited. When comparing the stones they used phrases such as ‘biggest ever’ ‘biggest in the world’ they then set about sorting out which stones and pine cones would go through the hole, deciding only small ones would go through. They also propped one of the planks up on the cupboard to see which would be the fastest/slowest.

The boys then worked together building a wall with towers to stop the pine cones escaping while the little girl quietly built a wall herself at the other side. When they ran out of brocks after a little negotiating they began sharing the parts so they could complete the wall. They then began comparing the height of the towers to themselves, leading to discussions about who was the tallest. After that they took turns jumping over the wall/ towers standing behind, jumping over and landing in front all good positional language.





The second group again sorted the pine cones and stones into big and small and put them in the hole. They then worked together on their problem solving skills to work out how to get the stones back out of the cylinder. Three lifted it up while the other collected the stones and pine cones.



Next they built individual towers to see who could build the tallest. As they built they decided to make one as tall as possible. The girl in pink was shorter than the other girl so I asked her how she could reach higher and she decided to stand on the block. When that was no longer enough she was helped by a friend! We then talked about who was tallest and how that would help. This loose parts activity generated lots of personal safety talk as the activity progressed, especially as the high towers started to fall!



The third group used their problem solving skills to build a more stable tower with the different sized and shaped blocks. As with the previous groups the size talk was evident as they tried to post the stones.



Two of the boys spent time racing different stones down the slopes, using language such as fastest, slowest, first, second. They then put the large hollow block at the bottom to see who could get their stone/pine cone in to/under it.



This group decided to build a wall to stop them getting through. They looked for the matching block for the bottom row. 'There's a big one'. There was also a lot of height talk as they too built tall towers. J made his tower into a rocket, '1 2 3 blast off'.



Once this group had posted the stones and pine cones they worked together to get them back out. They then counted them. They used positional language such as, top, under, inside. The girl holding the cylinder up gave the other girl instructions on where to find the stones/cones as she looked through the hole at the top.



We then made a balance beam and they walked across using different sized steps, counting and comparing the differences. We recorded the results on a chart.



We have started introducing other loose parts activities both large and small. Using coloured match sticks and lolly pop sticks, small pebbles and small gems we made patterns on pre drawn lines and the children also made their own patterns and pictures. A lot of the talk was about shapes. One child completed the spiral pattern using the pebbles and then counted how many he had used – 39 (which was correct).

Our plan is to continue developing this area of learning. We will be collecting larger loose parts for our outside area along with increasing our selection of small loose parts. We plan to centralise the storage so we have easy access.

## **Section 3 – staff**

### ***How has the programme developed your CPD in relation to maths?***

- Training courses
- Webinars
- Running the program with inn nursery
- Disseminating information to other staff members

### ***What has been the impact of the training on your day to day practice?***

- Maths opportunities in all areas of learning recognized and utilized

### ***What resources did you find most useful and why?***

- Face book ideas posted by Jo – great ideas, easy to do
- Core activities were fun for the children

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

- Staff throughout the nursery thinking about their maths provision

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

- *There were problems every time we tried to log on! We had to reset the passwords every time which was frustrating and time consuming*
- *The activities took far longer than they were supposed to*
- *We could not find enough spare time to complete the tasks*
- *The tasks gave you a basic explanation of a concept and then the activities gave you questions that where much harder with no way of finding out how to work out the answer. This left staff frustrated and deflated*

### ***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?***

I did quite a bit of the BKSB activities in the first half of the programme but found I was unable to sustain it. Two reasons 1-the time it took to complete a section and 2 the problem mentioned above about the explanations. I am confident enough in my daily maths

I personally have years of experience and so was already confident in my ability to teach foundation stage maths and have however enjoyed refreshing my skills and gaining lots of new ideas through the programme.

### ***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?***

Our plan is to continue developing our loose part provision. We will be collecting larger loose part for our outside area along with increasing our selection of small loose parts. We plan to centralise the storage so we have easy access.

We will also continue to build on the skills both the staff and the children have gained and ensure that our maths provision continues to develop so children continue to make good progress in maths.

### ***Final thoughts on the programme.....***

We have gained a lot from being on this programme, the support on knowledge of the lead champions was fantastic. Quick responses to questions/queries and great ideas shared through the webinars. A huge bank of ideas in the resources section and lots of face book posts. The courses where useful though some of the question in the quizzes were misleading. Some of my staff were stressed by them because they were open to interpretation or you needed to memorize fact/parts of the EYFS.

Our setting has gained a lot from this experience. Thank you very much.

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