

## Mathematical moments: Shape with 3 & 4 year olds

### All aboard our bus!



Nicole, the nursery teacher, had observed the children showing an interest in vehicle play. The children started to make their own bus and a discussion about 'what the bus needs to work?' emerged.

C: *I make a bus.*

O: *Can I be the driver?*

C: *You need wheels first.*

We started to talk about how many wheels a bus needs.

C: *Same as a car.*

C picked up a car and said *lots*. We began to count together, making sure that we said the number as we touched each wheel (tagging).

C: *Got 4! We need 4.*

We talked about the shape of the wheels and the boys began to gather different objects to represent the wheels. Soon we had a collection of materials and we then decided which would work best for our bus.

O: *They need to be circle shapes.*

J: *Yes, so the wheels on the bus can go round and round.*

C: *This can be the steering wheel, it's like mine at home.*

J: *The wheels all need to be the same size or it won't work, it won't balance.*

O: 1, 2, 3, 4.

J: *2 at the front and 2 at the back. This bit is the engine, it goes inside.*

C: *All aboard...Let's go!*

The children used a variety of mathematical concepts in their play. They constructed with a purpose in mind and adapted their design as they shared ideas. As more children joined in, they decided that the bus *needs to be longer* adding more and more bricks. We used books, photographs and the internet to develop our knowledge further.

### **Our local community**

The children's play continued to develop but this time, on a smaller scale. As the children shared their own experiences of going on a bus they began to talk about their locality. We used simple maps and aerial views of our local area to begin exploring position and direction. The children used tape and pens to draw their own routes to nursery. Over the next week, we created a miniature map of our local area, which included recognisable landmarks, including shops and schools.



The children used the small world

The children used figures to represent themselves and family members and used the characters to go on journeys, developing their vocabulary related to direction and position.

This small world play had a wealth of opportunities but Nicole was aware that the scale of the play could lead to possible misconceptions for children who have not been on a bus as the buses in their play are small and for obvious reasons, not to scale. So she had an idea...

Nicole contacted

Stagecoach, sharing the children's interests and experiences.

Stagecoach very kindly provided a real double decker bus to visit our nursery. This allowed the children to see the real, huge scale of a bus and provided a learning experience filled with awe and wonder!



Acknowledgement: Nicole Hunt, the team and children at Pennywell Early Years Centre