

## Numbers Game Workshop

*The Numbers Game* offers parents and carers examples of games, puzzles and activities that can encourage both adults and children to see maths as something that is both fun and useful.

Most schools and Children's Centres will organize a Maths Evening every so often as part of their programme for parents. This might be a time to talk about specifics, such as the maths curriculum in Year 4 and how parents can support their children at home. However, you might want to think about organizing an event that will simply show that maths can be enjoyable and doesn't have to be scary! Since that is the way many parents view the subject, such a workshop might be a good starting point for many parents.

Rather than just giving out the booklets to each household you are in contact with we would suggest you support the recipients with an introductory workshop – and these notes are to help you do just that.

### Are you ready for The Numbers Game?

First of all, before you decide to run a workshop try to quickly answer these sums:

What is 7 times 8?  
How many centimetres in a foot?  
How many sides does a dodecahedron have?

Did you have a 'maths panic'? How would you have felt if someone was watching you, or even testing you? Most people have at some time in their life felt that 'fear of maths' – even people who work as mathematicians.

If you want to run an effective Numbers Game workshop then it's important that you are aware that the people attending might be a little bit concerned about maths. You should do everything to avoid them having a 'maths panic!'

Here are a few tips for making the environment welcoming and helping them feel relaxed in the presence of numbers! You may not be able to do them all but working through them will help you think about ways you can make the workshop as fun and inviting as possible.

- Make sure that there is someone to welcome everyone and that the venue is clearly signposted.
- Make sure that there are enough people to explain the activities and that they understand the maths.
- Don't try and show off your own knowledge!
- Be as patient as you can and prepare a number of different ways to explain each of the activities.
- If possible have refreshments and at least water.
- Try to have a 'no maths' zone where people can go to chat so they don't have to be doing maths all the time!

- Try and decorate the workshop space so it looks friendly and fun
- Try to avoid a 'classroom' set up.
- Have toys for younger children with a maths theme so that they can join in and play.
- If possible have a messy play area; (sand and water measuring is maths too!)

### **Themes**

Don't try to cover all the examples in the Numbers Game booklet. Think of a theme and choose a few ideas from the booklet to turn into workshop activities. Use the theme to advertise your workshop. Send invitations and use posters and balloons etc to direct people to the workshop venue. Whilst you can host a workshop just for parents and carers it is much more fun if you have a family workshop where the whole family come.

### **The Human Body**

The theme of the Human body helps to link a number of different activities together. The Leonardo Da Vinci exercise, for example, suggests families measure one another to see if a person is as long as they are wide. Ask families to measure one another and record measurements on a picture of the human body. This could be a stick drawing version of the famous Da Vinci picture. You could put a poster of the Da Vinci image on the wall and if you have Internet access make links to some of his other studies about the human body.

Another activity using the body is to first estimate how many steps you would need to get across the room. Ask people to make their estimate and put it on a chart. Now see how many steps it really does take. Compare people's answers and perhaps give a prize to the closest. Now look at who took the largest number of steps and measure their feet and then find the person who took the smallest number of steps. Ask families what they think this tells us. Compare the different sizes of the feet in the room to the measurement on a ruler we call a 'foot'. Does anyone in the workshop have a 12-inch foot?

You could even draw round everyone's shoes, cut them out and make a display of all the feet in the room. A Family Feet Feat!

It's also important to show how our bodies can help us with maths.

Demonstrate the trick of doing the nine times tables on their fingers! Count how many times nine you are looking for and bend that finger down. On one side of the bent finger is units the other side is tens. Try it! Sadly it only works for the nine times table.

There are a range of other themes in the book that could be developed such as a football theme, a shopping or food theme or a code-breaking theme.

## **Maths topic**

Rather than a theme you could choose to focus on a particular area of maths. For example you could choose a theme of shapes and set up the room with different areas for doing different shape activities. You could make large copies of the colour puzzle for people to complete, play shape I-spy with a variety of objects or play a shape game to get people running around. You don't have to be limited to the activities in the booklet. Gather a few people together and identify other activities for families that will help them investigate shapes.

## **Puzzles and Games**

A drop-in workshop is often less threatening and therefore less likely to cause 'Maths Panic'. By creating different activities on tables around a room the workshop can offer a range of different puzzles and games as tasters of what the book contains. Set up a selection of puzzles and challenges around the room with a number of helpers to explain each challenge. Prizes can be fun but they need to be small and frequently given so as to ensure people stay engaged.

Set families the Billy Goats challenge and offer a prize for the least number of trips, the silliest answer, (Dads always say one or more of the animals will eat each other or swim across the river!) and the most inventive way of working it out.

Challenge people to choose the 1pence or a million pounds and collect the names of people who answer either way. Do make sure you demonstrate how this works when you tell them the answer at the end of the workshop. (It can be done on a spread sheet or calculator).

Ask people to estimate the sweets in the jar and give the jar of sweets to the person who is closest in their estimating. *TIP – count the sweets as you put them in the jar and keep it a secret. Trying to count the sweets at the end of a workshop is impossible because children shout out their number and confuse you!*

On other tables you can have Perfect Times, number hangman and a range of other puzzles and games. *TIP – play with the games beforehand so you can have some fun but also so you know how they work and how to explain them.*

Keep people interested by keeping your workshop fairly short. 90 minutes is about the right length. Make sure you save something fun for the end, like a silly game, or a prize competition, or even a team quiz, but remember to keep it fun and light-hearted.

Families will also like to take things away with them, such as copies of the Numbers Game, or a goody bag. Let people know what you are planning next and give out invitations to your next workshop. Set up a bookstall to sell parents and children other books and materials to help them enjoy maths or to

swap books they have read or their children have grown out of. It is also really important to have information available for everyone on how they can improve their maths or do more with the maths skills they have.

Finally enjoy your workshop. It should be fun for the organisers as well as the families and don't try to make everything about Maths. It's ok to have junk modelling or a game of five-a-side football as long as people are having fun.

Good luck!

To order Perfect Times, go to [www.southgatepublishers.co.uk](http://www.southgatepublishers.co.uk) and click on the maths section.