Going on a treasure hunt!

A treasure hunt is a great opportunity for everyday mathematical exploration. A good way to start this exploration is to investigate maps of familiar places. See if you can find maps online of familiar places such as the zoo, a local recreational area, a shopping centre. You can also look at road maps and public transport networks such as bus, train or tram routes.

What are maps for?
What can we see on a map?
How do we know what the different parts of the map are?
Are the maps a true representation of distances? (hint: many maps represent specific arrangements of landmarks but distances are not necessarily reflected accurately, like a train network map).
What are symbols and why are they used on maps?
Are there any symbols the children recognise?
What makes a symbol easy to understand?

Equipment list

Paper and markers for drawing
Easter eggs or something else to hide, like a small toy or coin.

Method

You could begin this by making a map of your space (inside or outside, or both!) using symbols such as different shapes to identify landmarks. Help the children understand the map by asking them to consider what the different symbols might mean. Hide your treasure and mark out where you've hidden this on your map. Let the children find the treasure!

Extend on this by asking the children to create their own map (or you can begin this way instead, and have your map for them to read as a second activity). Ask the children where the walls, doors and windows on the room are located and need to be drawn (or fences, gates etc if outside). Let the children then start with a particular object such as a table or tree. They can use this then to orientate themselves while drawing everything else.

Observations, conclusions, ideas

Try making a map that is more specific in terms of measurement. How can they keep the distances between the objects on the map? The length of one step in the room could be measured perhaps by using the width of one finger when drawing the map.

What's the STEM?

A map is a reduced image of surroundings and generally consists of essential landmarks needed to recognise surroundings. Representing complex real things using simplified models, symbols and drawings requires a high level of abstraction ability. In mathematics, abstraction is important to extract interesting individual and relevant attributes of objects. This includes the identification of similarities and differences between objects as well as bringing together attributes into a category. For example, different toys could be grouped together due to their use and a ball could symbolise the category of toys.

Extended learning

Maybe for your next birthday party, you organise a treasure hunt in your local park or botanic garden and pick a childhood favourite book as the topic. I vividly remember a wonderful treasure hunt through the Enchanted Forest looking for the Faraway Tree! Enid Blython's book series The Faraway Tree is a wonderful source to let the children's imagination soar.