EYFS, KS1 and KS2

Creating Fibonacci spirals

TEACHER NOTES

Learning opportunities:

In this activity, children will explore the Fibonacci sequence by connecting a series of measurements. Teachers can use the activity to support children's understanding of a sequence. It could be adapted for different year groups by using a range of standard and non-standard measuring units. For example, KS2 children can use rulers while in KS1 children could use blocks.

This activity works best in an outdoor environment (weather and space permitting!). However, it would also work inside a classroom using large sheets of paper.

How to raise money:

Pupils can be sponsored for taking part.

What you'll need:

- Fibonacci numbers activity sheet
- Chalk
- Rulers
- Blocks

How to play:

1. Make sure children have completed the Fibonacci numbers activity sheet and have worked out the initial numbers in the sequence.
2. Explain how these numbers can be used to make squares. Explain that these squares will be used as a guide to create an exciting shape (a spiral).
3. Demonstrate how to create the squares from the adding up of numbers on square paper.
4. Model drawing a curve from one corner of the square to its opposite diagonal corner to create a spiral.
5. Using chalk and the measuring equipment, children are to draw squares to create their own spirals outside by accurately measuring and drawing on the playground. Alternatively, large square shapes could be used as templates.

Extension ideas:

- Children can make predictions about how many steps it would take to walk from the beginning to the end of their spiral and record the data in a table. They can then 'walk the spiral' to find out how accurate their initial predictions were.
- Invite a younger or older year group to 'walk the spiral.' Again, making predictions and recording their findings – can they find an exciting way to present their data?

This activity was created by Maths on Toast, the family maths charity. To find more activities online go to: mathsontoast.org.uk

NSPCC

*Supported by

Man Charitable Trust

maths on toast the family maths charity

*Number Day is supported by Man AHL and Maths on Toast, led by NSPCC.

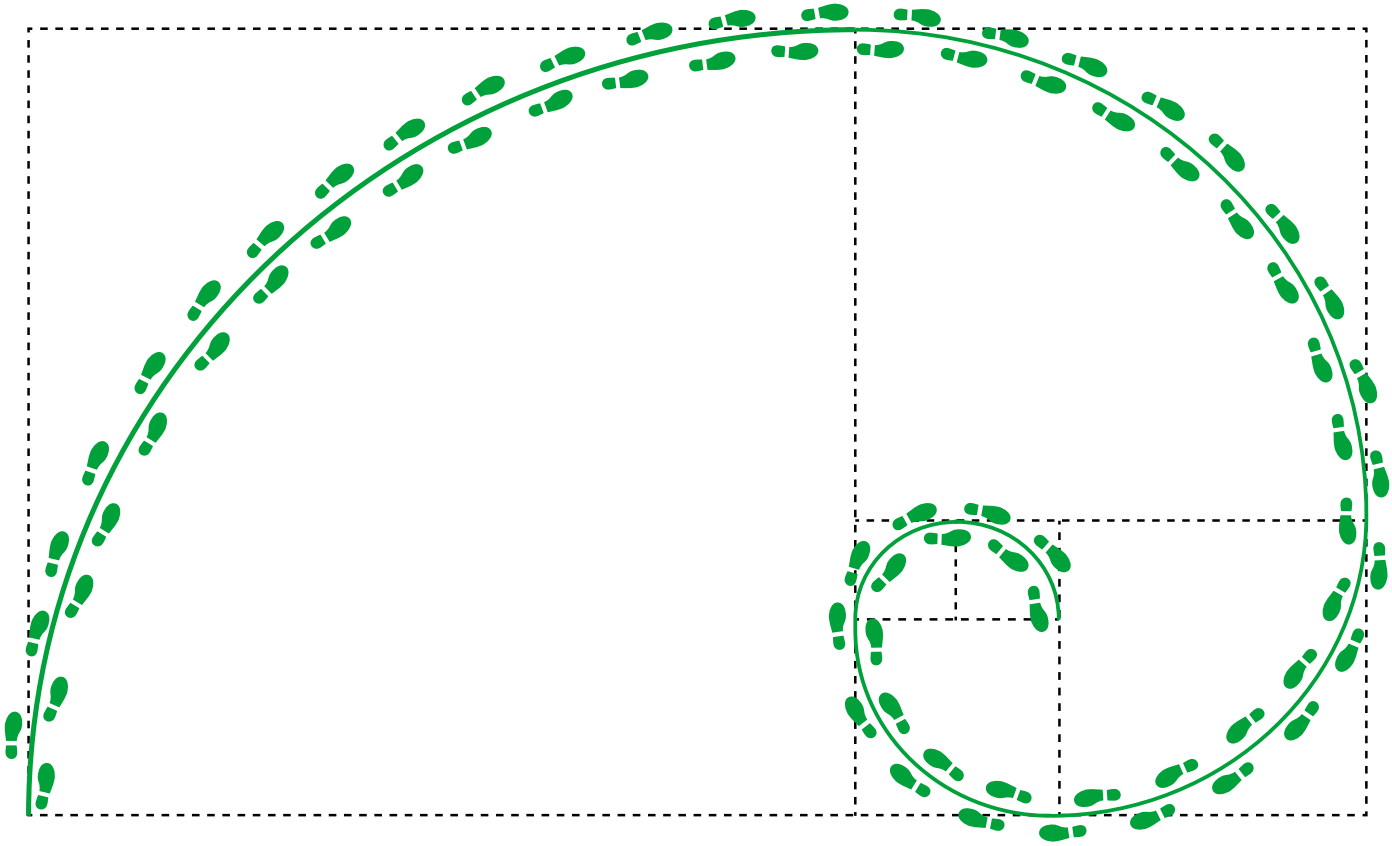
EYFS, KS1 and KS2

Creating Fibonacci spirals

PUPIL WORKSHEET

Playground activity

1. Use chalk and measuring equipment to draw squares in order to create a Fibonacci spiral on the playground. Alternatively, large square shapes could be used as templates.
2. Stand in a line along the spiral. How many children are there from beginning to end?



3. Predict the number of steps it would take to walk from the beginning to the end of the spiral.
4. Record and compare findings.
5. Does it make a difference if an adult/younger child 'walks the spiral'?

This activity was created by Maths on Toast, the family maths charity. To find more activities online go to: mathsontoast.org.uk

NSPCC

*Supported by

Man Charitable Trust

maths on toast
the family maths charity

*Number Day is supported by Man AHL and Maths on Toast, led by NSPCC.