



## Introduction

Use Smovie to deeply ingrain a whole range of concepts from symmetrical shapes and time, through angles, money, fractions, percentages, coordinates and algebra. With some imagination any one of these topics can be portrayed using stop motion animation, and in the process of creating their animations children think deeply about the topic in question, have fun explaining it and are more likely to retain the information. Here are three examples aimed at different age groups. Children can work individually or in groups.

## Idea 1 - Fibonacci Numbers

The pupils create a stop motion animation based on a sequence of Fibonacci Numbers.

1. Learn the story of Fibonacci - who he was and how the famous 'Fibonacci Numbers' first came about i.e. the story of the rabbit puzzle which asked "how many pairs of rabbits are created by one pair in one year"?
2. Get the children to plan how they are going to portray the story as a stop motion animation e.g. they may want to include the figure of Fibonacci himself in their animation, or just explore the rabbit story.
3. Get the children to create a range of props to use to portray their story. How are they going to portray the numbers of rabbits? Are they going to create 377 individual rabbits?!?
4. The children can now create their animations, spending time thinking about the numbers of the Fibonacci sequence and how they are calculated.
5. Review the animations and discuss how the Fibonacci sequence works. Explore what will happen next in the sequence. Discuss the appearance of Fibonacci numbers in nature.



## Idea 2 - Animating Fractions

The pupils create a stop motion animation on the topic of fractions.

1. Teach the pupils the basics on fractions, including how to add and subtract fractions.
2. Split the class into pairs, and provide each pair with a worksheet with multiple fraction equations (or project the problems on a white board for all to see).
3. Provide the pupils with paper and pens which they can use to create pizzas/cakes or whatever they want to use for the animation of the fraction problems.
4. Get the pupils to work out and animate the fraction problems using the paper and pens supplied.
5. While the pupils are working through their maths problems, spend time going round the class to make sure that the pupils are understanding the task, and be on hand to help if any problems arises.
6. Once the math problems have been completed, you can get the pupils to share their solutions with the class and discuss their answers.
7. Using stop motion animation will help encourage deeper learning within the classroom.

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*Tip! Instead of getting the pupils to create things using paper, you could use LEGO bricks. As they come in lots of different sizes this can be useful for helping the pupils understand the method of adding and subtracting fractions in a visual way.*

*Instead of getting the pupils to solve fraction problems, why not ask them to create an simple and easy animation which clearly demonstrates the basics of fractions. This might perhaps be an easier way for you to consolidate the students learning and a simpler way to introduce animation into the classroom.*

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## Idea 3 - A Study of the 12 Hour Clock

The pupils create a stop motion animation of time progressing round the 12 hour clock face and what they themselves do at different times of the day.

1. Each child should create a time plan of their typical day, showing what activities they normally do at particular times e.g. get up at 7.30am, go to school at 9am and so on.
2. Get each child to create their own clock face showing the hours and individual minutes, ensuring that the hands of the clock can move independently around the face.
3. Get each child to assemble a range of props to use to portray their activities at different times of the day e.g. a LEGO mini figure or small doll for themselves, paper-cut outs for their bed, eating breakfast, playing in the playground, watching TV etc. It can be useful to create a sign on a sheet of paper for each activity, or particular time, which can then be incorporated into the animation at the correct times.
4. Each child, or group of children, can make a stop motion animation showing the hands of the clock moving round the clock face and, beside the clock, what they do at key times.
5. The children can then review their animations and discuss how the 12 hour clock face works.



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*Tip! Keep the animation simple by portraying only a small number of key activities during the day. Include a sun or moon in the animations to portray daytime or nighttime.*

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