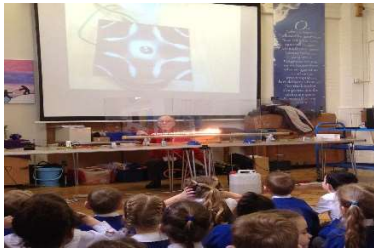


Sensational Science at St John's
STEM DAY – March 2024

This year our theme was "All about time". Sensational Science came and performed a science packed show with many highlights. We saw how many different time-telling devices there are. We tested water, sand, electric and pendulum timers to see how close to a minute they ran. We learnt about the speed of sound and also thought about the speed of light and what would happen if an 8-year-old travelled to space for a picnic. Their 8 year old friend would be 80 when they returned after a picnic (if it were possible to travel through space and time).

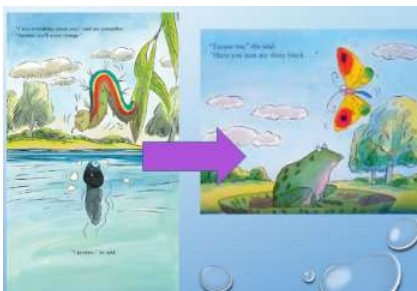


In EYFS and KS1, we had a series of games and challenges that lasted for a minute - stacking metal nuts with tweezers, moving pasta pieces from one bowl to another just using tiny spoons and working as a team to keep a balloon in the air.

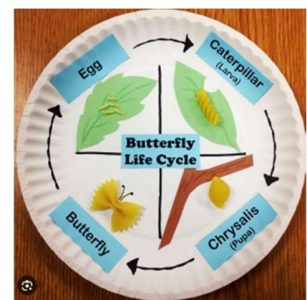


We talked about the fact that sometimes a minute feels like a short amount of time - when it's nearly bedtime and when it feels like a long time - waiting for a McDonalds!

We used junk modelling and drain pipes to make marble runs. The aim was to keep the marble in the run for the longest time possible. We found that when you tilt the run just a small amount the marble moves a lot slower. It was hard to stick the junk modelling together but we worked as a team by holding up different parts!



We learnt about the life cycle of a butterfly and how long it takes to move from one part of the life cycle to the next.





Key Stage 2 travelled around in their houses for the day and participated in 4 workshops.

In the marble run workshop, we tested different sized marbles and different shaped runs. First we tried to make a run that was 5 seconds long, then 10. Then some groups managed to make runs that took over 30 seconds!



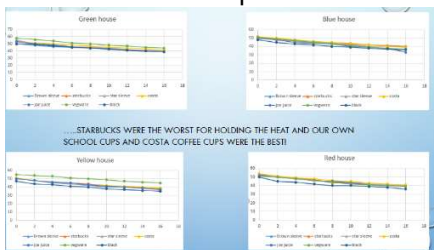
We worked together as mixed year group teams- a bit of a challenge!

We discovered that *a longer, winding run would take the object longer to move through. The lighter bead took longer than the heavier marble to move through the run.*



In the reaction time workshop, we looked at our own reaction times doing the ruler drop test. We were surprised to discover that sometimes our reaction times worsened the more tries we had, and others time it improved with practice. Equally, we were surprised to see that sometimes our non-dominant hand reacts quicker than our dominant one. We looked at reaction times of F1 drivers and some of us tried to complete the tennis ball drop challenge.

This investigation was an observation over time. We wanted to find out which coffee cup would lose less heat over a time period of 16 minutes. We used coffee cups from different coffee shops.



We added 150ml of hot water into each cup and recorded the temperature using a thermometer. We then recorded the temperature every 2 minutes for 16 minutes.

We recorded our results into a table and a line graph.



In this workshop we designed and tested pendulums. We worked in pairs to time the swing of our pendulums. We measured how many swings there were in 10 seconds. We wanted to find out what would happen if we changed the length of the pendulum (string).

We discovered:

The longer the string, the slower the swing.

The shorter the string the faster the swing.

