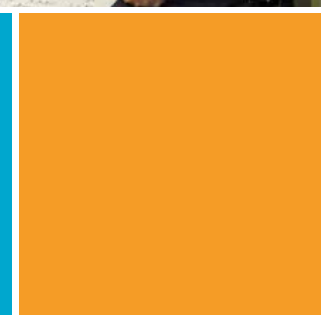
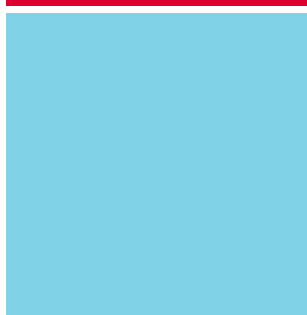
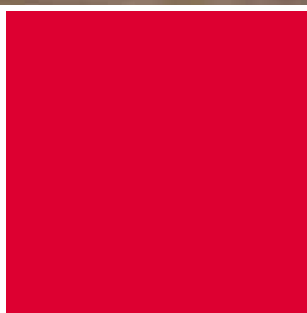
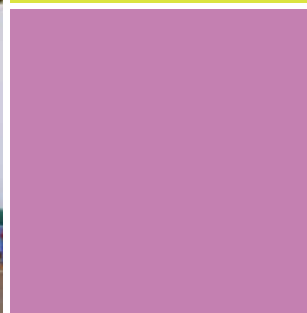


Bright Lights: Maths Illuminations Teaching Resources



Introduction

This new teaching resource forms part of Blackpool Schools Cultural Programme. It contributes to children's understanding of the identity of their local community and town. In this case Blackpool's Illuminations.

Numeracy coordinators from Blackpool schools have been central to the planning and thinking around these new context based resources. The project team consisted of a number of partners. This included Blackpool's School Improvement Team, Cultural Services, Lightworks and twelve local schools.

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The following schools who contributed to project development:

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Contents

1	Using the resources	01
2	History of the Illuminations	03
3	Illuminations Fact Sheet	05
4	Resources: Creative activities and maths problems	07
5	The Archives	47
6	Extra Material: additional images	51

01

Using the resources

Using the Maths Resources

The three aims of the revised National Curriculum in maths are to promote fluency, reasoning and problem solving. The Illumination maths resources have been designed to compliment each of these key outcomes, encompassing areas of the curriculum in a manner to inspire and engage young mathematicians within a problem-solving context.

For each lesson a key Illumination piece is at the core of learning, to inspire teachers and children alike. These pieces have been used to generate a story based context for teaching with rich creative tasks also suggested to support cross curricular learning, an approach designed to support the development of maths across the curriculum. Maths tasks are then provided directly linked to key year group objectives.

The tasks can be utilised in a manner felt to be most beneficial to the individual school or setting, either as part of ongoing maths work to support creative application of skills or as a themed day or week, thereby linking and promoting creative maths. The breadth of the materials ensures different topic areas within the subject can be accessed at various levels to support differentiation and extension of learning.

Conceptual understanding and context-based maths are both outcomes promoted in lessons. Ensuring deep learning linked to a local context ensures children feel ownership of lessons in a meaningful systematic manner.

02

History of the Illuminations

History of the Illuminations

It seems a little strange for us to say that Blackpool's famous Illuminations began with a visit by a princess. But it is true.

In May 1912 Blackpool was very excited. Blackpool, barely more than a large village back in 1851 with just 1,664 permanent residents, had by 1911 grown to an important holiday destination with a population of 58,000. But the town had never had a royal visitor.

Blackpool's first royal visitor was seen as a mark of approval about the town's emerging status. Although Princess Louise was, in one sense, simply the fourth daughter of the late Queen Victoria, she was in the greater scheme of things the face of the royal family in those days; King Edward VII after all was not noted for making royal visits.

In May 1912 Blackpool was looking its smartest for the visit of the Princess to open a new section of the Promenade by the Metropole Hotel, to be named Princess Parade in her honour. And amongst all the decorations festooned over the town to mark the occasion were strings of coloured light bulbs on the new Promenade, and trams decorated with more coloured lamps. It was all a huge success.



Princess Louise visit to Blackpool May 1912

If these coloured lights had looked so nice in the month of May, how nice would they look in the autumn when the nights were shorter? Blackpool Corporation, ever keen to find ways of extending what was in those days a short visitor season, seized on the idea. The annual autumn Illuminations were born.

The early Illuminations seasons in 1912 and 1913 were a great success for the town, attracting visitors in the months of September and October when the town had spare accommodation capacity. The town council allocated a budget of two thousand pounds to erect the 1913 display, with the display extending outwards from Princess Parade. By this time sixty thousand lamps were used.



The first Illuminations display in 1912

The 1914 Illuminations did take place, but there was much controversy over whether it was an appropriate display to have in the shadow of the emerging First World War.

The war took its toll, and the Illuminations did not shine again until 1925. Early Illuminations displays had featured strings of coloured lamps, but had not used themes. The 1920s and 1930s saw the introduction of themed displays, particularly on the cliffs at North Shore. These were usually tableaux, or boards erected to represent subjects such as nursery rhymes or fairy tales with lamps added to highlight the story. Sequential use of lighting could, for example, show a golfer in illumination swinging his arms to hit a golf ball.

Arches, strings of lights, and fancy columns (often referred to as “pylons” by the Illuminations staff), were the main features of the road sections in the interwar period, with the “themes” restricted to the tableaux. A notable exception was the use in the 1930s on the Promenade of lighted cut-outs in the shape of laburnum trees.



North Shore 1928



North Shore cliffs tableau 1928

The Illuminations of 1939 were cancelled due to the outbreak the Second World War. The lights would not shine again until 1949, when the 1939 show was brought out of storage to entertain a country still recovering from the privations of war.

From 1950 the Illuminations entered a period of expansion. For the first time in-house designers were employed by the Council to create artwork for new designs.

In 1951 the famous Walt Disney Ltd wrote to Blackpool Council to ask whether the corporation would be interested in a partnership in which the town could use Disney images in its Illuminations. Blackpool never paid for reproduction rights to use these famous images, and the offer to use them free of reproduction rights was a sign that the Illuminations had reached a wide audience.

The result of the Disney arrangement was Kartoan Kollonade, a road section in which a host of Disney characters were set on pole features along the carriageway. The Disney collaboration continued in Blackpool for many years.

From around 1960 the notion of having themed road sections along the lines of the Disney display was firmly established. For many years the Illuminations department would create four new road sections every year, with the rest of the Promenade display made up of previously designed road sections moved to new sites to refresh the display.

Road sections such as Butterfly Boulevard, Wild West, Comedy Cartoons and Windmill Land were seen in the 1960s and 70s. Some of the most fondly remembered displays of the last four or five decades are Space Age (1970), Robot Revels (1975), Prehistoric Pranks (1978), Diamonds are Forever (1989) and Alien Attack (1998).



Alien Attack (1998)

With three million visitors to the town during the Illuminations Blackpool is often at its busiest in the late season. What started as a good idea for extending the season has become part of the fabric of the town. Blackpool without its Illuminations is as unthinkable as Blackpool without its Tower.

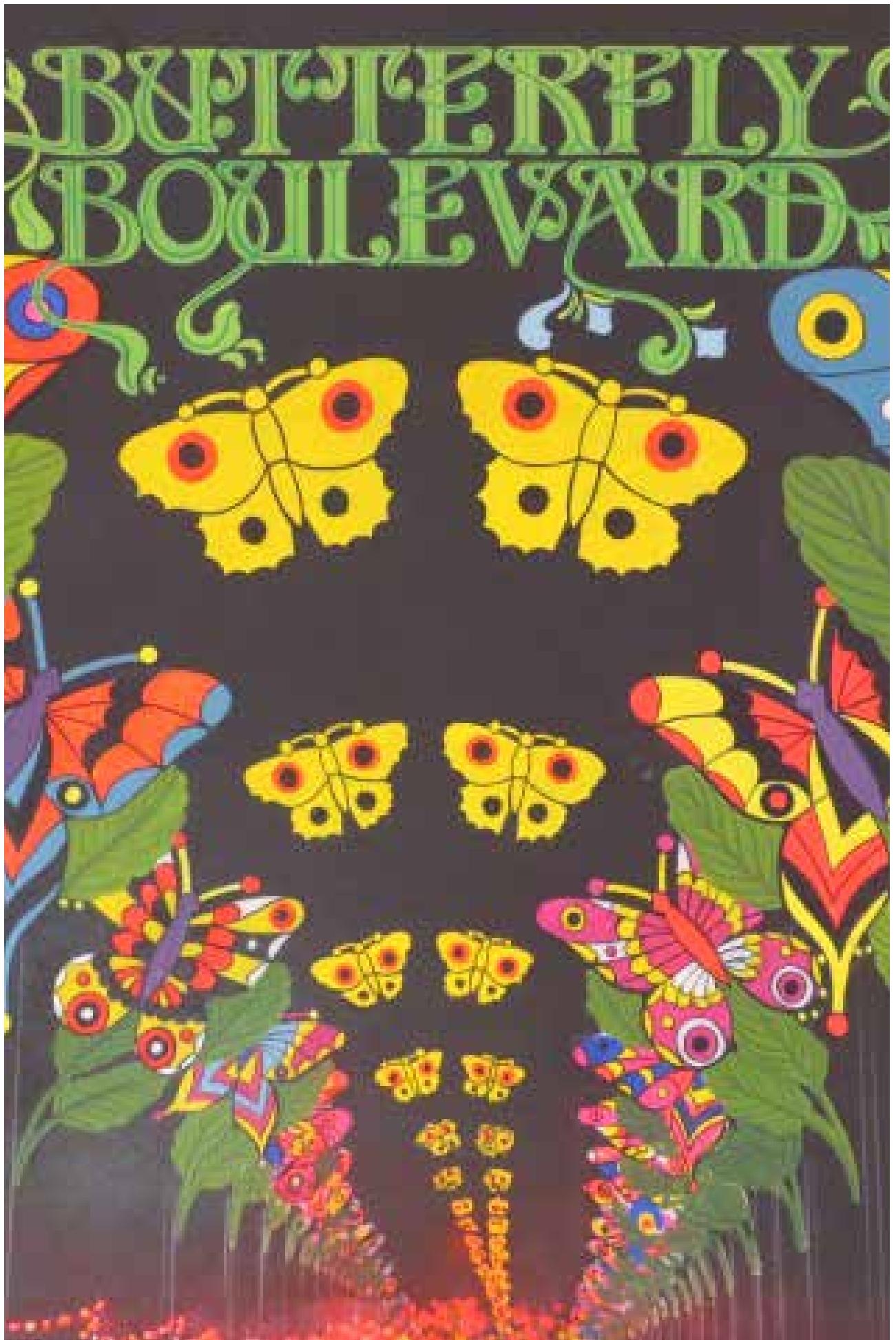
03

Illuminations Fact Sheet

Illuminations Fact Sheet

1879	<ul style="list-style-type: none"> • Start of the use of electricity in Blackpool resort
1912	<ul style="list-style-type: none"> • 10,000 lamps in the Illuminations when Princess Louise visited • Trams decorated with over 3,000 lamps
1913	<ul style="list-style-type: none"> • 60,000 lamps placed along the promenade from Victoria pier to Gynn Square
1925	<ul style="list-style-type: none"> • Lights become an annual feature. 3 miles of lights. Cost of £6,426 • 3,946,382 people rode on trams
1927	<ul style="list-style-type: none"> • 150% increase in the number of lights • Over 5,704,704 tram passengers • For opening night 150 special trains commissioned by London, Midland and Scottish Railway Companies • Estimated that 1 million people came • 150 Boarding houses entered best private lights competition
1930	<ul style="list-style-type: none"> • 6,617,167 tram passengers • Lights stretched to almost 6 miles along the promenade
1934	<ul style="list-style-type: none"> • Lights held over six weeks
1936	<ul style="list-style-type: none"> • Record 900,000 visitors travelled by train, 500,000 by car
1937	<ul style="list-style-type: none"> • First formal switch on attracted 3 million visitors over a 66 day period • 400,000 lamps used. Cabling wire stretched more tht 74 miles (120Km) • Displays extended over 5.5 miles
1938	<ul style="list-style-type: none"> • Lights had a seasonal workforce of over 100 and an annual budget of £20,000. • 27 miles of strip lighting • 40 miles of electric cable • Over 1,000 poles • Over 140 different types of lamps • Some tableaux over 400 feet in height
1950s	<ul style="list-style-type: none"> • £80,000 cost of display. • 100 tableaux • 50 miles of festoons strips
1952	<ul style="list-style-type: none"> • 600,000 units of electricity used • Kartoon Kollonade featuring an estimated 200 Disney characters
1961	<ul style="list-style-type: none"> • Premier of Rocket Tram carried 46 passengers • Decorated with 3,000 flashing lights
1964	<ul style="list-style-type: none"> • 500 scenic designs • 600 promenade lamp standards • Estimated 300,000 vehicles in Blackpool over first two weekends
1980s	<ul style="list-style-type: none"> • £100,000 raised for the Blackpool Illuminations Fund
1991	<ul style="list-style-type: none"> • £3-4 million spent on the Illuminations
1997	<ul style="list-style-type: none"> • 150 (ft) tableau
2010	<ul style="list-style-type: none"> • Over 65,000 hours spent designing, making and building the attractions





04

Resources: Creative activities
and maths problems

Creative Maths

The Blackpool Butterflies: Key Stage 1

The Butterflies emerged from their chrysalis and were excited by all the noise and lights. They flew everywhere with excitement and landed on candyfloss, the sand, children's sunhats, flew into Harry Ramsdens and followed the big one on its first ascent. They only had a day to explore and as they mixed with all the colour and noise each one of them gained a new colour on their wings. They flew up to the Tower and could see the piers with dazzling sunlight sparkling off the sea. Some of the butterflies became blue; others pink like the Blackpool rock.

They were seen by many and it seemed like they twinkled in the Blackpool Lights, the Illuminations. Some people believe that the butterflies never left Blackpool and who can see them at night in the lights down the promenade. Others believe that they became light itself and we can see them now forever twinkling and flying down the Prom.

Activities

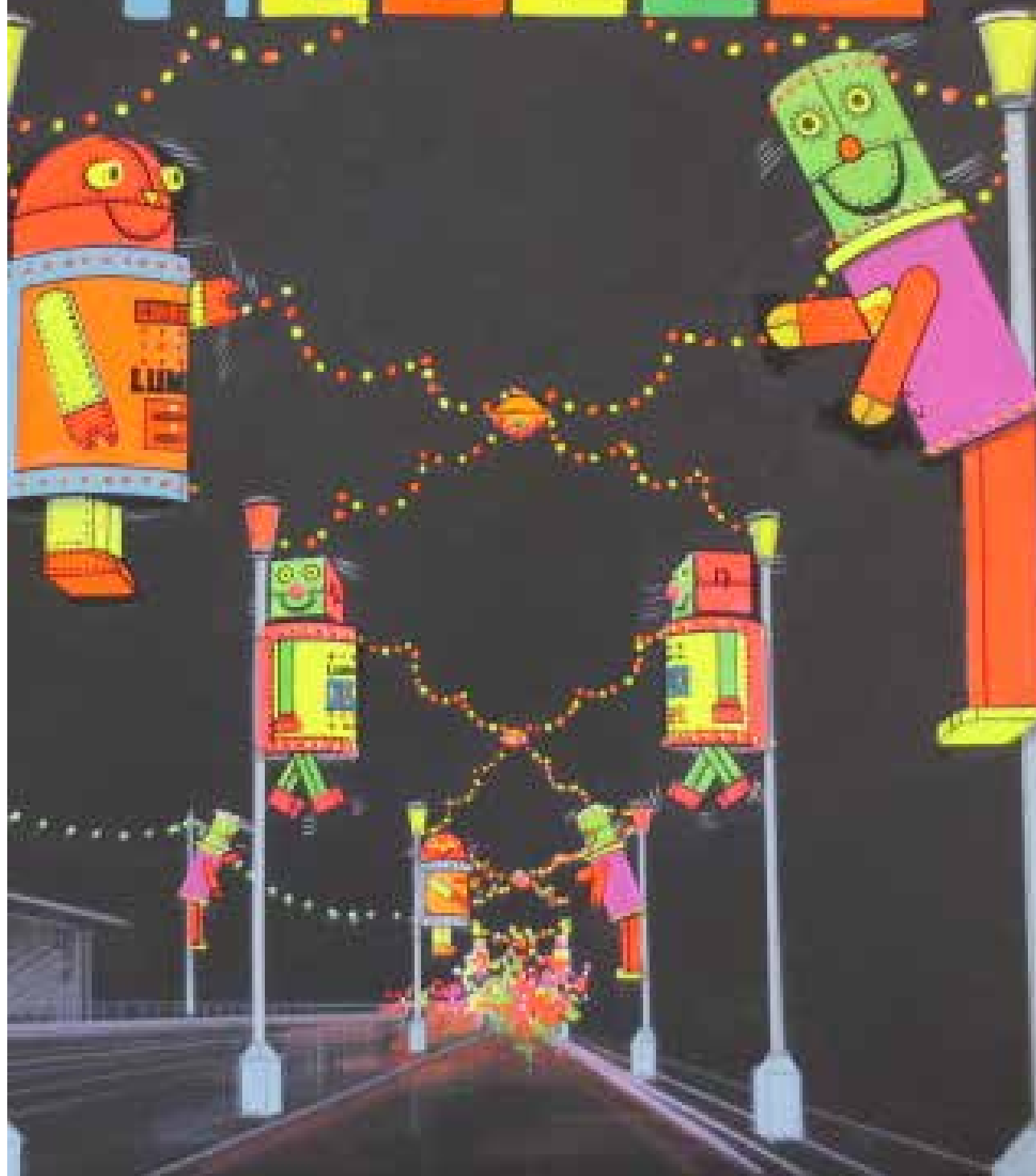
1. Draw a butterfly
2. Paint a butterfly folding paper, cut out and string around the classroom and outside. Fill the hall with butterflies and seem them fly as people go by.
3. Facepaint butterfly faces
4. Be inspired by Blackpool colours and shape to make your own designs
5. Use a mirror to check that your designs are symmetrical
6. Make a giant butterfly that has your names on its wings and pictures of the places that like in Blackpool.

Maths problems

1. Find double and half of given number by painting spots on butterfly wings (Y1 recognise, find and name a half as one or two equal parts of an object, shape or quantity). Begin to find a quarter by splitting wings into four equal pieces and share out numbers of dots between each wing (Y1 recognise, find and name a quarter as one or four equal parts of an object, shape or quantity).
2. Chart life cycle of a butterfly (Y1 sequence events in chronological order using language for example, before, after, first)
3. Sequence butterfly pictures according to numbers of counters on their wings, complete and continue number sequence by drawing in dots. (Y2 count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward)
4. Partition numbers on butterfly wings, use Dienes blocks to represent numbers to support understanding of place value (Y2 recognise the place value of each digit in a two-digit number, tens, ones)
5. Data Handling, sort and compare patterns of butterflies. Which is the most common type of butterfly? <http://www.bigbutterflycount.org/> (Y2 ask and answer questions about totalling and comparing data)
6. Make rotational patterns of butterflies flying in the air by using paper cut outs, describe their flight journey (Y2 use mathematical vocabulary to describe position, direction and movement)



ROBOT REVELS



Creative Maths

Robot Rebels Key Stage 2

It is Blackpool 2099.

It is a very different place. We are in charge; we are the Blackpool Robot Rebels. You can only enjoy what is automated and digital. So please do not go on the sand and make a sandcastle, remember not to go for a paddle in the sea. If you feel like wandering down the pier and just looking out, remember that is not allowed, it is NOT DIGITAL, IT IS NOT ALLOWED. Please do not sit on the old worn Comedy Carpet and laugh at its jokes, or gaze at the Tower, make sure that if you sunbathe you do it digitally. If you want to know about the Illuminations then look at them with your digital memory insert.

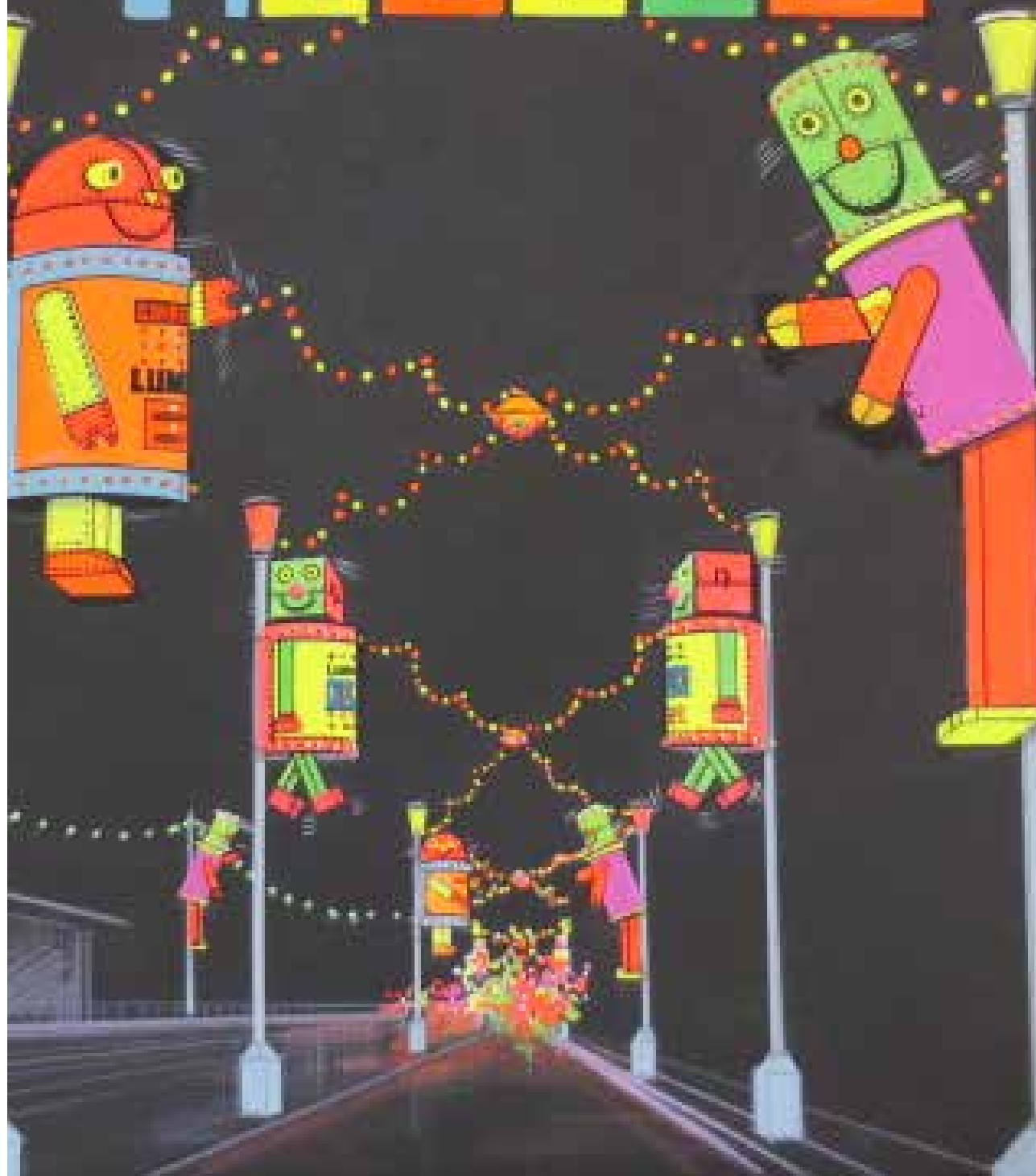
Activities

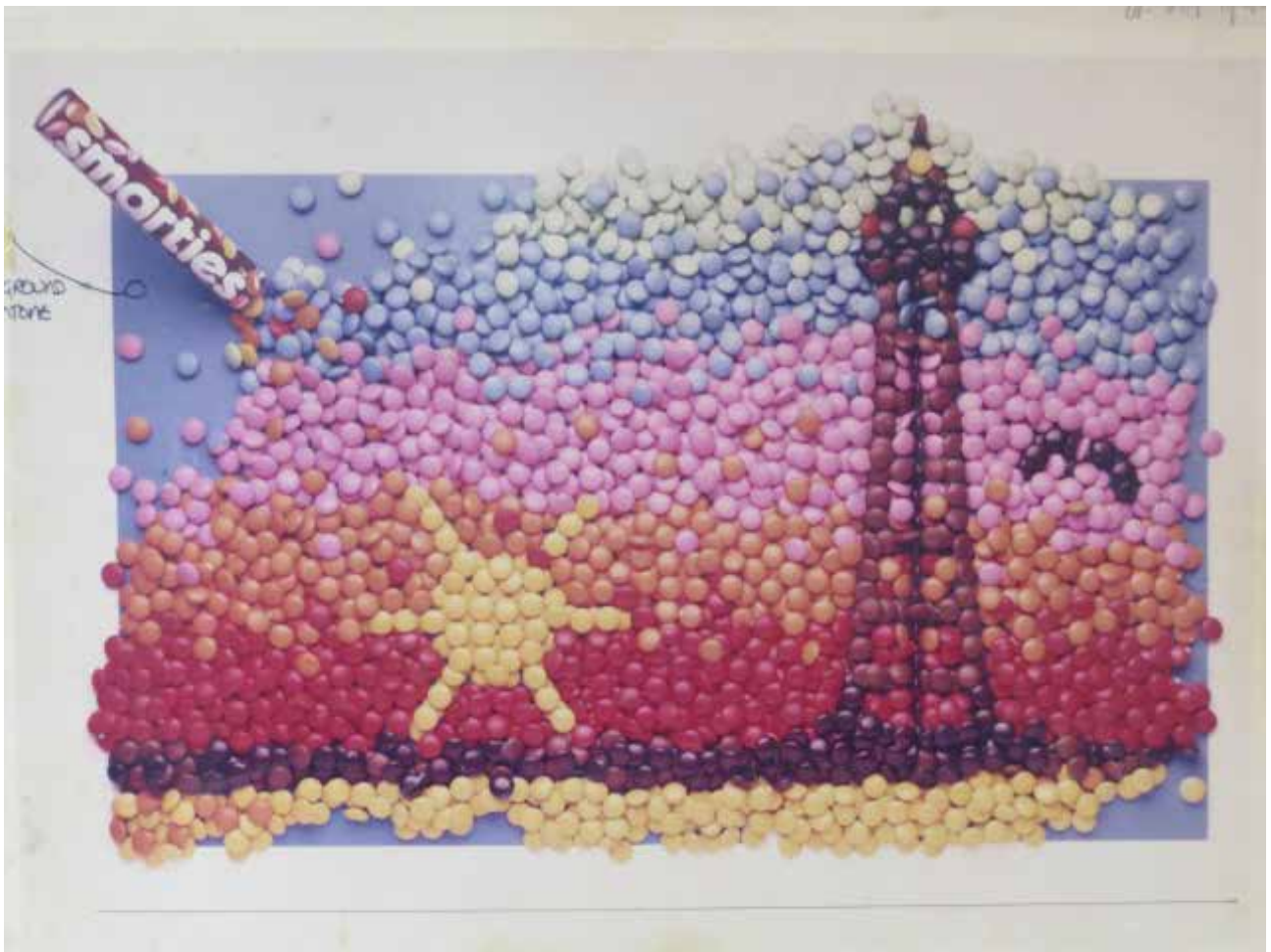
1. Draw Blackpool in 2099.
2. Find images of Blackpool in 1899 and 1999, make a collage.
3. Find interesting facts, in numbers, the population, how many visitors, how many rides on the big one, how many people went to the theatres, how many chips were eaten. Make up your own.
4. Make 3D or computer-generated model of how Blackpool might look in 2099, compare with maps and models of Blackpool in 1899, 1999.
5. Make your own robots and your own digital Blackpool experience.
6. Create models so that you can see and draw from different viewpoints.
4. Plot robots on coordinate grid, children to plan their movement to avoid obstacles in their path like Battleships in pairs. (Y4 describe coordinates on a 2D grid as coordinates in the first quadrant)
5. Convert robot digital time to analogue and vice versa so their systems can be reset (Y4 read, write and convert time between analogue and digital 12 and 24 hour clocks)
6. Identify 3D shapes needed to build robots from 2D plans (Y5 identify 3D shapes including cubes and other cuboids, from 2D representations)
7. Draw robot plans according to specific given measurements including angles (Y5 draw given angles and measure them in degrees)
8. Complete robot number sequences using power of ten to support binary code for their programming (Y5 count forwards or backwards in steps of powers of 10 for any given number to 1 000 000)

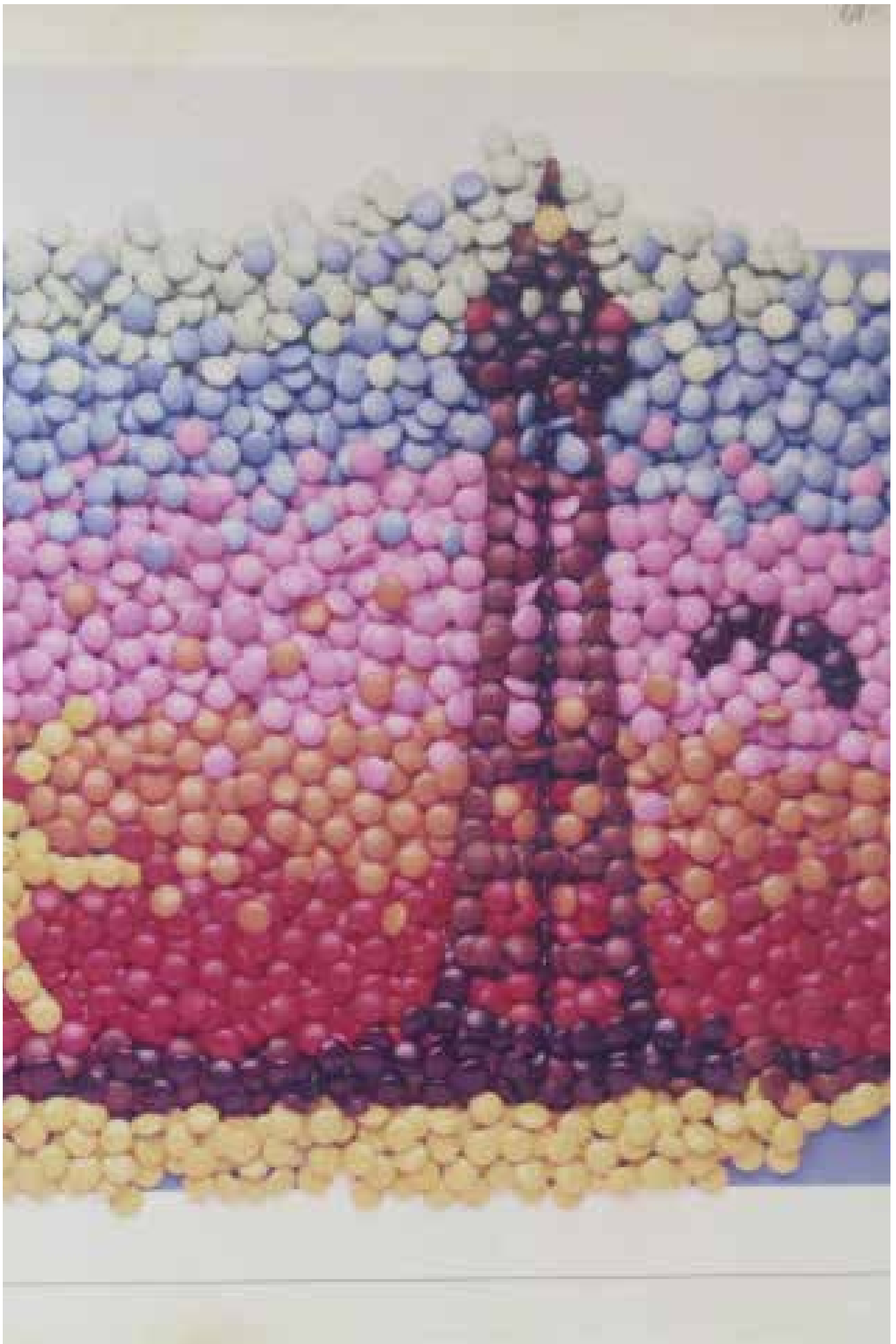
Maths problems

1. Complete problems involving currency from future, can they exchange the units of payment to work out comparison prices today? (Y4 estimate, compare and calculate different measures including pounds and pence)
2. Work out units of time from present day to Robot Rebel time, using leap years, seconds in a minute to convert to today's measurements. (Y3 know the number of seconds in a minute, days in a year and leap year)
3. Make robots using 3D shapes, drawing different viewpoints and calculating number of made faces, edges and vertices (Y3 make 3D shapes using modelling materials)
9. Complete pie chart showing main businesses of Blackpool today and compare to Blackpool of the Robot Rebel's time. Present on data and explain what changes have occurred utilising pie charts (Y6 interpret and construct pie charts)
10. Calculate volume of different robot parts to find combination of parts to add to given target whole robot volume figure. (Y6 calculate, estimate and compare volume of cubes and cuboids using standard units)
11. Solve secret robot code using simple algebra to find corresponding letter of the alphabet, make own code with algebraic formula to trick robots (Y6 use simple formulae)

ROBOT REVELS







Creative Maths

Smarties: Key Stage 1/Key Stage 2

This shop was different.

It smelt of whatever your favourite sweets were as you walked in. It never ran out of sweets and chocolates and you always had enough money to buy what you wanted. No one was ever greedy because you only needed one taste to feel satisfied and then you wanted to share that flavour with everyone. In this shop people bought sweets and chocolates for everyone else, their friends, their families, their teachers. The shop was so full of colour and shapes, stacked up sticks of Blackpool rock, plates of food that were made of sweets, truffles that lit up like the Blackpool Lights as you bit into them, some that made you feel like you were flying down the Big One or standing on top of the Tower. Some sweets were salty, some were sunny. This sweet shop had so many smarties that they looked like waves coming in from the sea. All the children in Blackpool knew how to find this shop, it was for them, it was their secret.

Activities

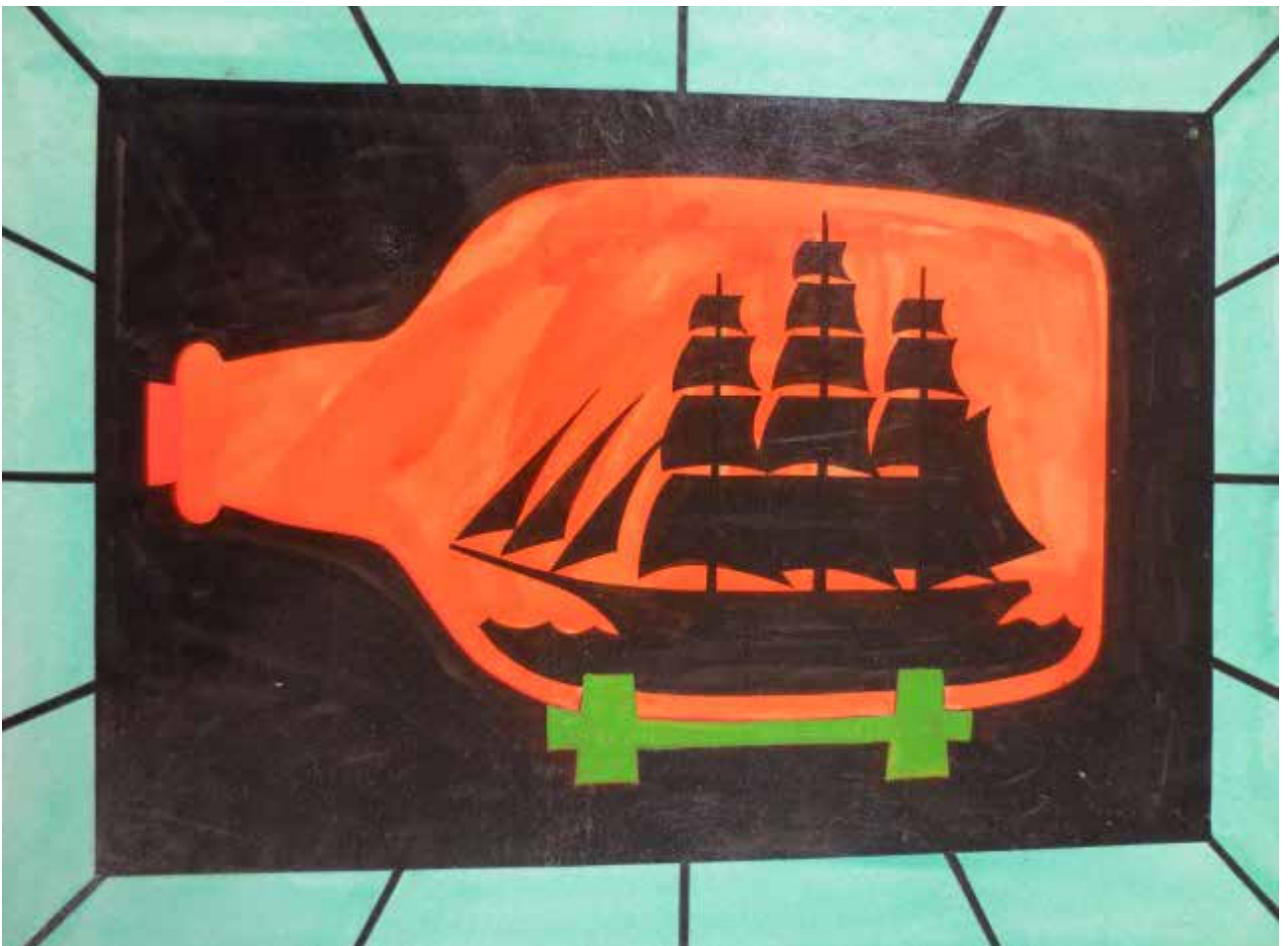
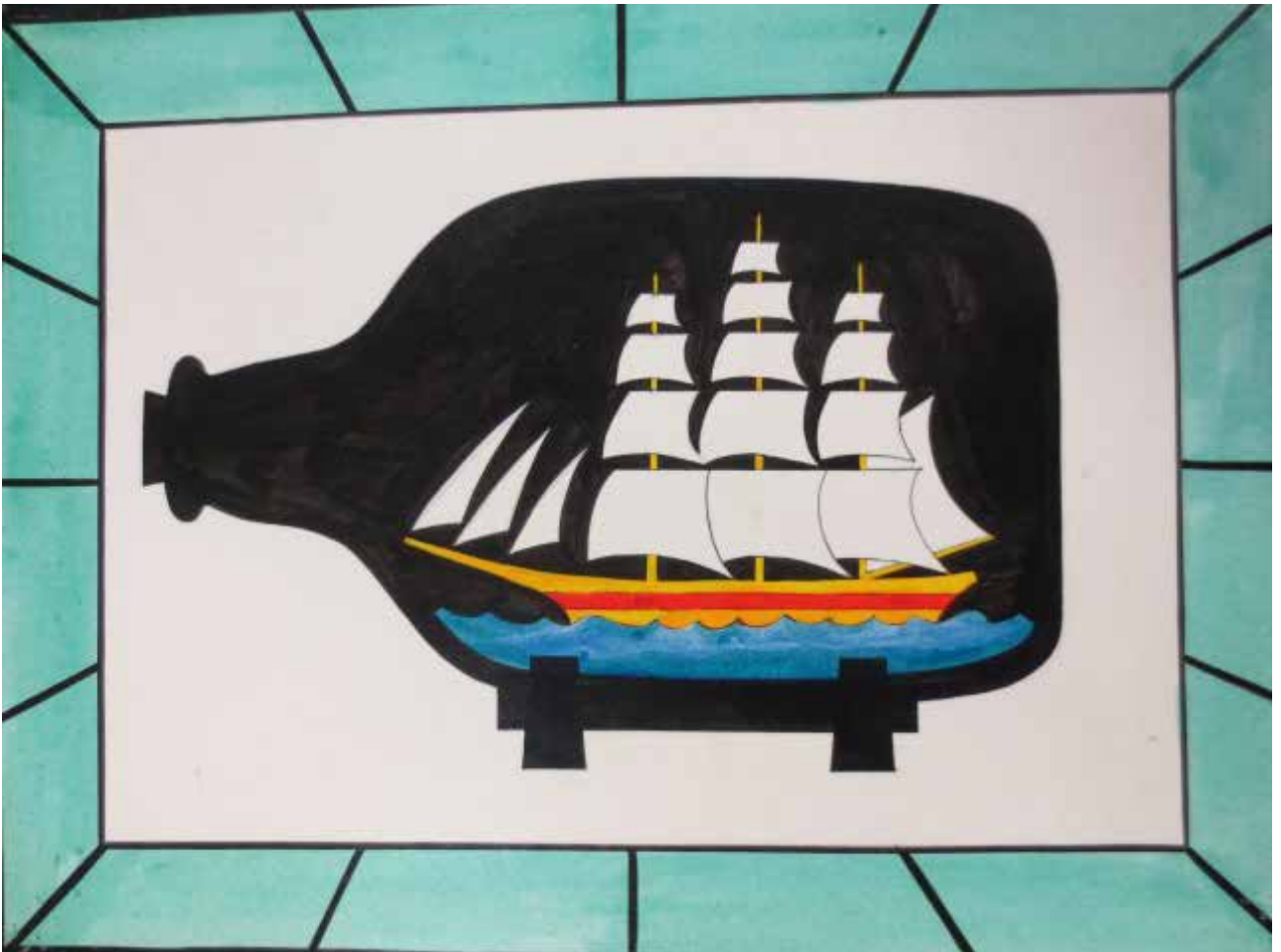
1. Design your own Blackpool sweet shop.
2. Transform your classroom and or hall into a giant sweet shop.
3. Make a sweet shop dance and bring all the contents to life with music and movement.
4. Explore sweets and chocolates in 1899, 1999 and now.
5. Survey in your class and in school what peoples favourite sweets/chocolates are.
6. Invite into school your local community and ask them what their favourites were, invite them into your sweet shop.
7. Come up with a brand new sweet or chocolate and create a campaign to sell this.
8. Plot where all the places are in Blackpool are where you can buy sweets and chocolates.
9. Hold a chocolate fair to raise money for a local charity or your school.

Maths Problems

1. Make role play shop and ask children to weigh out bags of sweets, encouraging them to purchase bags of sweets using correct coinage- are there different ways of making the same price amount? (Y1 measure and record weight, Y1 recognise and know the value of different denominations of coins and notes)
2. Find double and half of given number of sweets by dividing between sweet bags (Y1 recognise, find and name a half as one or two equal parts of an object, shape or quantity). Begin to find a quarter by splitting sweets into four equal bags (Y1 recognise, find and name a quarter as one or four equal parts of an object, shape or quantity).
3. Complete balancing addition and subtraction calculations using sweets and balances to act out finding the answer (Y1 represent and use number bonds and related subtraction facts within 20)
4. Make physical tally using smartie sweet tubes to find most common colour (Y2 interpret and construct simple pictograms, tally charts, block diagrams and simple tables)
5. Act out money problems in role as shopkeeper and customer, completing transactions and giving change (Y2 solve simple problems in a practical context involving addition and subtraction of money)

6. Find fractions of smarties in different tubes and compare (Y2 recognise, name and find fractions)
7. Show equivalent fractions using smarties to represent whole amounts pictorially (Y3 recognise and show equivalent fractions with small denominators)
8. Use findings from favourite sweet survey <http://www.telegraph.co.uk/foodanddrink/foodanddrinknews/6100530/Fizzy-cola-bottle-named-Britains-favourite-sweet-of-all-time.html> and make own questionnaire to test results. Have a voting station for parents and children to select their favourite. Present results and compare with national data, completing their viewpoint to a Willy Wonka representative (Y3 interpret and present data using bar charts, pictograms and tables)
9. Give each child a small box of Smarties. Children tip out their Smarties and count the total number. They fill this in on their sheet. They then count and record the different colours in their box and list what fraction of the box is each colour. Children explore finding fractions of different numbers by eating one Smartie at a time. Make link to decimal equivalent if appropriate (Y3 recognise and use fractions)
10. Complete table showing length and weight of one smartie, ten smarties, 100 smarties, 1000 smarties etc., converting between units of measure (Y5 convert between different units of metric measurement)
11. Convert fractions of smartie colours in a container to percentages, write as a decimal and fraction (Y5 recognise per cent symbol write percentages as fraction with denominator 100 and as a decimal)
12. Use bus timetables to calculate journey times to sweet shop designed from various starting points- calculate time intervals between shopping for sweets, can children identify bus they will need to travel back on to get home before certain time? (Y5 complete, read and interpret information in tables, including timetables)
13. Identify the mean colour from a tube of smarties and compare to a partners, what is the range of the data in each set? Inform Nestle if the mean averages show large differences. What could be the reasons behind this? (Y6 calculate and interpret the mean as an average)
14. Use picture of smarties taken as inspiration for illumination, can they produce a scale drawing that represents the image? (Y6 solve problems involving scale)
15. Convert measurements of smartie tube (weight, length, diameter) from smaller to larger units, exploring relationships between values (Y6 use, read, write and convert between standard units from a smaller unit of measurement to a larger unit)





Creative Maths

Ship in a Bottle

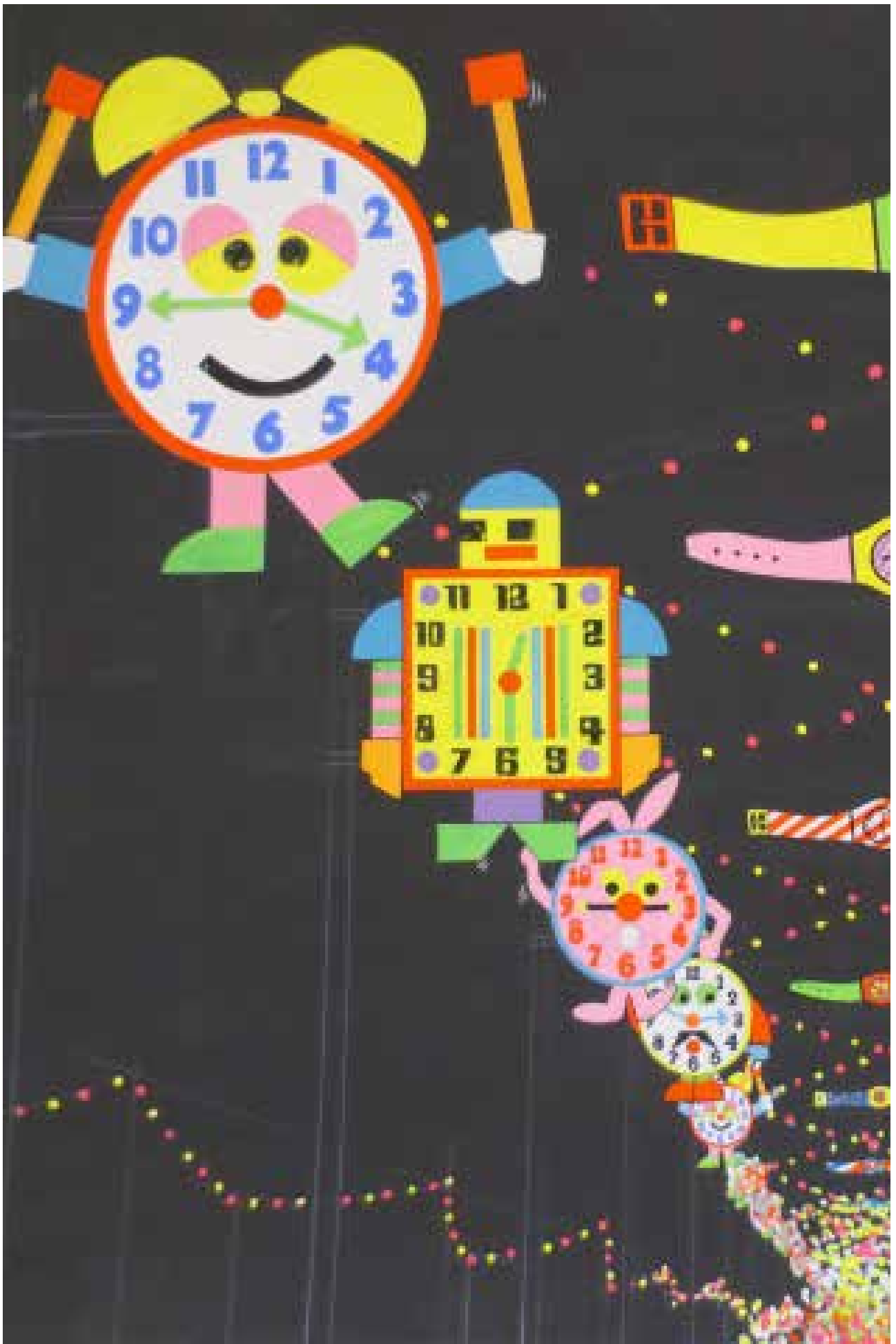
No strings attached. This tiny ship could sail in and out of bottles with its own crew and captain at the helm. Many years ago when it sailed with passengers the ship waited at the end of the piers and full of noise and excitement would venture to other lands. Along with steamers they explored the mountains of the Lakes and Wales. Blackpool's waves were crowded with sails, ships making steam. One of the ships ventured to Wales to the land of tiny villages. People who remember say that there was once magic in the steam. If you got stuck in the steam you became part of the place you were visiting. The ship in the bottle returned from Wales. The bottle kept it safe as it returned to the Blackpool pier. If you look carefully on a sunny day sometimes you can see the sun glinting on the glass and the tiny ship with tiny sailors inside.

Activities

1. Find out how to make a ship in a bottle.
2. Design your own ship, a drawing and a model. What materials make a good model ship and test how it can sail.
3. Look at all the old pictures of Blackpool and re-enact the images.
4. Imagine you are a visitor to Blackpool Write a diary entry of your day out and your steamer visit to other lands.
5. Make a map of the steamers journey
6. Imagine and talk about the conversations that the passengers would have on the journey. Creative a short script to act out
4. Calculate how much of bottle is taken up with ship by finding capacity of bottle with and without ship in, show working and record findings. (Y3 measure, compare add and subtract volume)
5. Record measurements in units of capacity showing conversion (Y4 convert between different units of measure/Y5 convert between metric measure-l to ml)
6. Calculate answer to scaling problem e.g. if model ship is in a 250ml bottle how big would the bottle have to be if the ship was 3 and a half times bigger? How do you know- ask children to record and explain their thinking, test made rules. (Y5 use all four operations to solve problems involving measure)
7. Calculate total journey times of given ship passages, show passage of time and how many kilometres they travelled. How far would ship a travel in two and a half days? How di you know? Prove it. Record answers algebraically. (Y6 solve multi step problems in context)

Maths Problems

1. Children to find capacity of different bottles in order to find correct bottle to put in travellers message. (Y1 measure and begin to record capacity and volume)
2. Find different containers, children to order in terms of capacity just on sight and then measure and compare with predictions using greater/less than signs (Y2 compare and order volume/capacity and record results using greater than and less than signs)
3. Make sailors brew out of different coloured liquid made from juice. Record amounts and decide on an appropriate sailor name for their drink. (Y2 choose and use appropriate units of measurement)
8. Chart speed of ship against time in graph, interpret and discuss predicted journey time for given journeys. (Y6 interpret and construct line graphs and use these to solve problems)
9. Investigate how cartography impacted on civilisation, model use of cartography in scale by plotting map ensure scale reference points are adhered to. (Y6 convert between miles and kilometre)



Creative Maths

Passage of time: Key Stage 1

It was very windy in Blackpool. So windy that the waves were blown up to the tower. The Lights shook and some fell to the ground. When the wind stopped blowing the Illuminations were repaired. If you looked closely you could see that some of the clocks were not in place. These clocks had been blown into Blackpool town. The clocks woke up and realised that they had to get back to the rest of the clocks. These were magic clocks they could read, they could talk to each other, and they could work things out. They knew that if they could travel on a big bus or tram someone would find them and put them back up. One of the clocks knew how to read the bus timetable and they worked out how to get back from Stanley Park into the town centre. They could also make themselves invisible and managed to get on the bus without anyone seeing them. They were soon at the beach but near the big Mirror Ball. They knew they were close, the other clock had learnt how to read a tram timetable and soon they were back with the other clocks, lit up for all to see.

Activities

1. Draw your own clocks, give them face and a name. What is their favourite time?
2. Talk about what you do at what time in the day and draw with the clock at that time.
3. Think about what your favourite times are and why, chat about this to each other and see if there are any times that you all like or dislike!
4. Think about making a new clock dance, times, music and movement.
5. Make some music and sound that is linked to the times on the clock.
4. Record how many things they can do in one second, one minute, one hour on class chart, keep adding activities on post it notes to compare. (Y1 measure and begin to record time)
5. Read 'What's the time Mr Wolf?' <http://www.amazon.com/Whats-Time-Wolf-Debi-Glori/dp/0802734324> children to show given times on clocks, make own book of a typical day in their life with times (Y1 tell the time to the hour and half past the hour and draw the hands on a clock to show these times) (Y2 tell the time to 5 minutes including quarter to/past and draw the hands on a clock face to show these times)

Maths Problems

1. Show class calendar, discuss days, weeks, seasons, months of year and ask questions about order and sequence. Have birthday months up as display (Y1 recognise and use language relating to dates including days of the week, weeks, months and years) (Y2 compare and sequence intervals of time)
2. Have different methods of recording time in role-play, can they experiment and decide which is best? E.g. sand timer, water through container, stopwatch, metronome (Y1 measure and begin to record time)
3. Keep class collection of items, which mention time e.g. TV programme list, bus timetable, and birthday card. Discuss and share how time is recorded (Y1 measure and begin to record time).
6. Make visual timetable of routine of school day using clock faces to sequence events- what time do they wake up? Arrive at school? Have assembly etc. (Y2 tell the time to 5 minutes including quarter to/past and draw the hands on a clock face to show these times)
7. Sequence clocks/times of day or seasons on a timeline to make a whole class display (Y2 compare and sequence intervals of time)
8. Children to make own timeline of main events in their life, share on whole class timeline representing each year since they were born. Discuss events in terms of later, earlier and sequence accordingly (Y2 compare and sequence intervals of time)



Creative Maths

Snakes and Ladders

There used to be a zoo under the Tower. Lions, elephants, snakes and monkeys. Sometimes they were allowed out onto the beach. A secret tunnel from under the tower meant that when they arrived it was as if by magic. Elephants crossing the road, excited to be free, to play with the water and to bathe in the sun. Once when the elephants came out the snakes saw their chance to play too. They knew sand wasn't so far away and wondered about the deserts they once knew. The wind blew and they could smell the sand. When the zookeeper came they slithered from their area, they went un noticed as the big elephants left the tower so did they. They slithered up the tower as if it was a big ladder. Up they went higher and higher until at the top they could see the sand. They smelt it, felt the wind on their skin and watched as the zookeepers climbed the tower to find them.

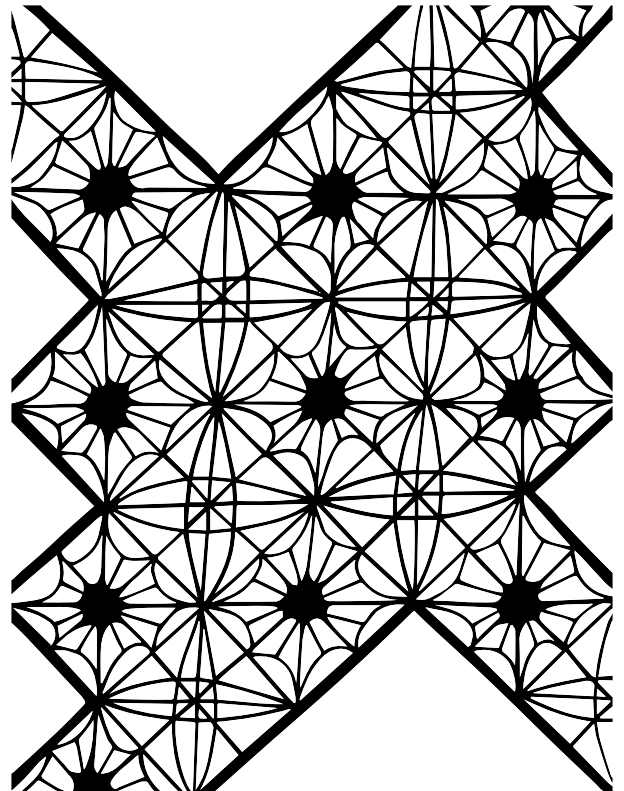
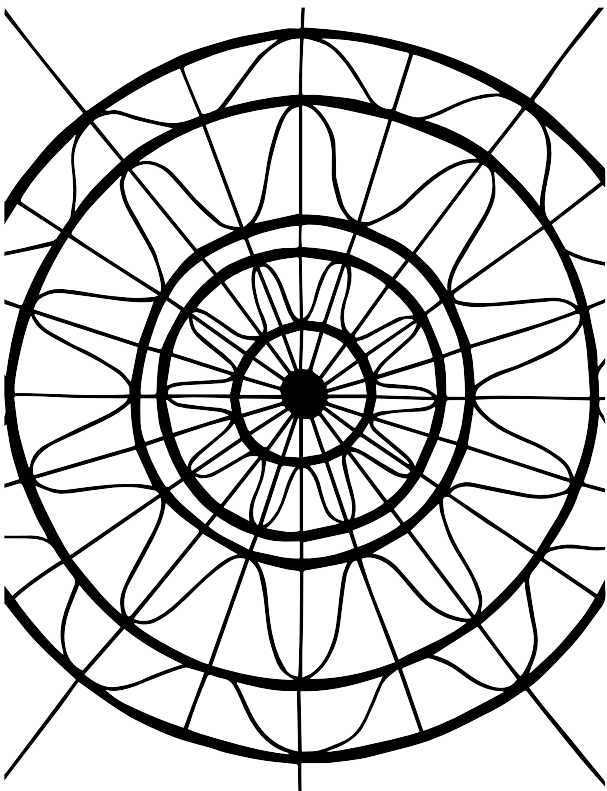
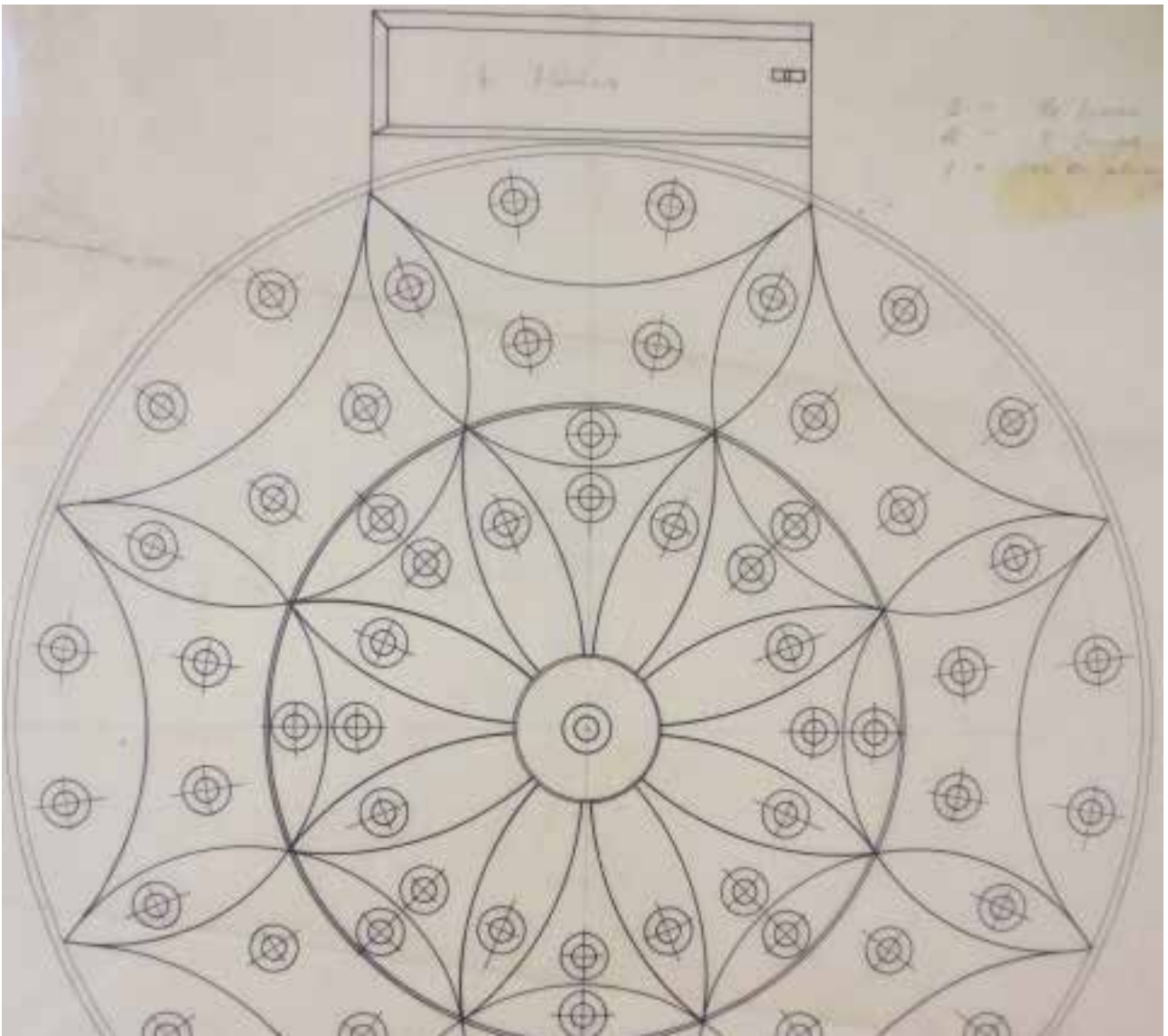
Activities

1. Make a model of Blackpool Tower and with snakes do stop motion film of the snakes escaping and slithering up the tower. What else could be hiding up at the top of the Tower?
2. Research images of the zoo at the Tower and make collages that reflect then and now. Consider adding words about what people think about zoos and how attitudes have changed towards animal conservation.
5. Identify odd and even numbers on board game and identify rules, give examples of odd and even numbers in tens, hundreds, how do they know? (Y2 recognise odd and even numbers)
6. Snakes have eaten some of the numbers for the board and partitioned them into (Y3 hundreds), tens and ones. Ask children to recombine, how many different two (three Y3) digit numbers can they make with a given set of digits? Can they partition their made numbers? (Y2 recognise the place value of each digit in a 2 digit number) (Y3 in a three digit number)

Maths Problems

1. Children to make own board games play and record steps taken on board. (Y1 count to 100, forwards and backwards, beginning with 0 or 1, from any given number)
2. Use giant snake and ladders board to generate missing number problems. Ask children to calculate answer and then check by acting out question (Y1 solve one step problem involving missing numbers)
3. Test reading and writing of numbers by sorting for Number Square for board game. Have mixture of words and numerals for children to match and/or record (Y1 count, read and write numbers to 100 in numerals)
4. On board game square, identify number patterns and ask children to identify, spot and predict number patterns. Will 53 be in the ten pattern? How do you know? (Y1 count in multiples of twos, fives and tens)
7. Children to make own board game including negative numbers, snakes have forced the workmen to take steps back from 0 starting point (Y4 count backwards through zero to negative numbers)





Creative Maths

Kaleidoscope

If you take a Kaleidoscope and look through it then turn it slowly you can see the mosaic moving, shaking and changing into different patterns, diamonds, triangles, squares bumping and shifting. Blackpool magic makes the kaleidoscope see things in a different way,. The Kaleidoscope is passed around Blackpool children. Everytime they twist it they can see Blackpool in the past and Blackpool in the future they see people come alive dancing, walking on the pier, building sandcastles, riding donkeys, eating ice creams.

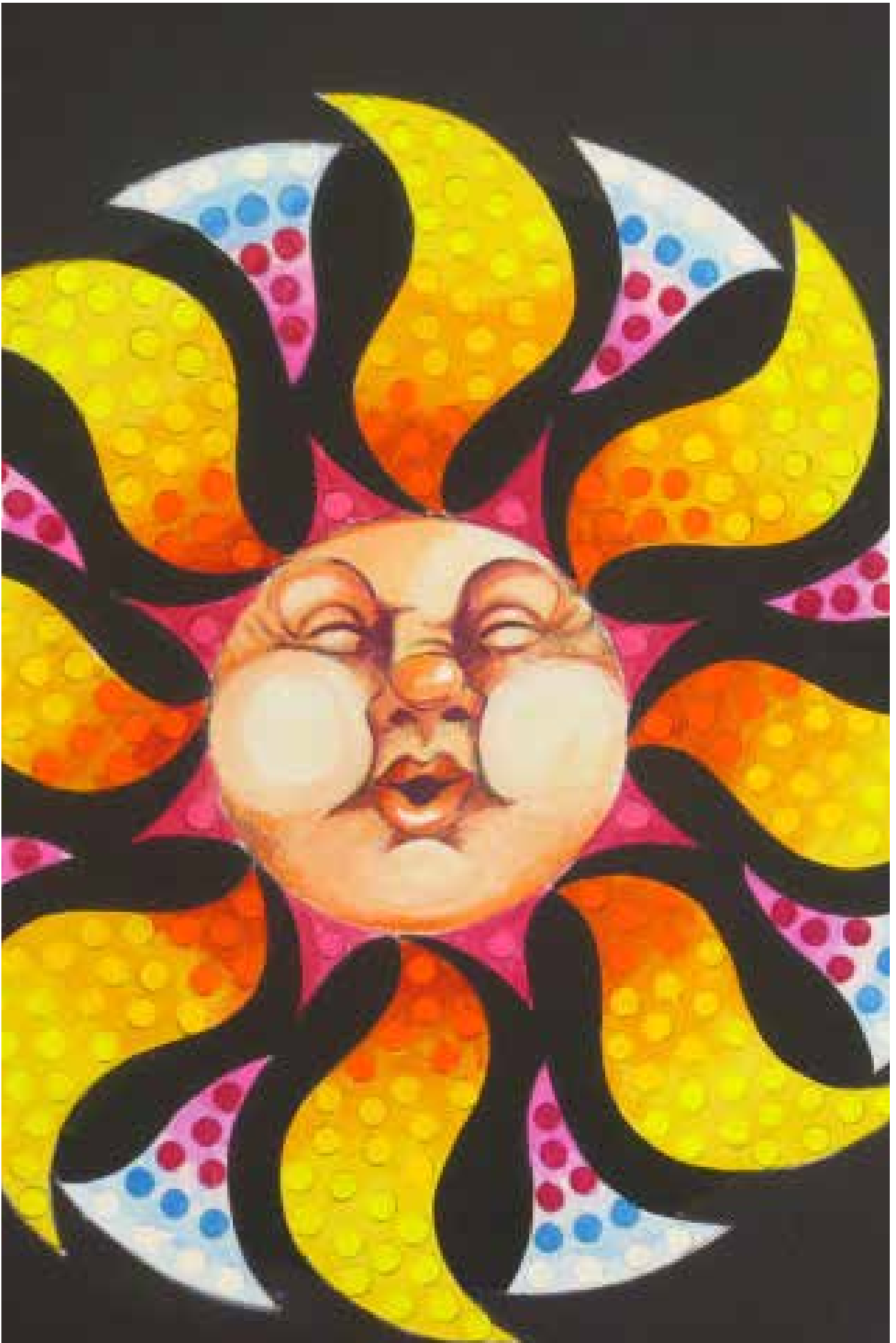
Creative Activities

1. Research mosaics and create a mosaic sample board to explore different designs.
2. Create your own mosaic, using paper, wallpaper, recycled floor tiles, beads.
3. Make a jigsaw mosaic and distribute the pieces across the school, children come together to make a giant mosaic in the hall or in an outdoor space.
4. Make mini mosaics into books with mosaic stories. Where are the mosaics? Whose buildings, homes, who walks over them, what story does the mosaic tell us?
3. Children to describe kaleidoscope patterns in terms of fractions of colour utilised (Y2 write simple fractions)
4. Explain that a given kaleidoscope pattern can only be coloured in a given pattern e.g. $\frac{1}{6}$ red, $\frac{1}{6}$ green etc. Ask children to colour pattern following given parameters. Challenge them to design pattern setting parameters for a friend. (Y3 solve problems involving fractions)
5. Children to complete kaleidoscope shape by reflecting given half using tracing paper (Y4 complete a simple symmetric figure with respect to a specific line of symmetry)

Maths activities

1. Children to use 2D shapes to make own kaleidoscope pattern, discussing and naming shapes in arrangement appropriately. (Y1 recognise 2D shapes for example rectangles including squares circles and triangles)
2. Discuss use of kaleidoscope and movement of made arrangement utilising language of position (Y1 describe position, direction and movement including whole, half, quarter and three-quarter turns) (Y2 use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three quarter turns)
6. Represent given times tables as a kaleidoscope pattern, building on number of shapes to represent tables (Y4 represent number using different representations)
7. Children to record percentages of colour in given kaleidoscope pattern, using percentage symbol to record answers. Describe relationship between percentage and decimal values. (Y5 recognise the per cent symbol and write percentages as a fraction with denominator 100, and as a decimal)
8. Display patterns of increasing complexity. Can children record relationship between sets algebraically, can they predict next pattern in sequence drawing on relationship? (Y6 use simple formulae)





Creative Maths

Seasons

The four suns of Blackpool shine together over the sea, sand and inland.

The green one shines to grow the first snowdrops in Stanley Park and then coax the daffodils to bloom. Soon the blossom in the park starts to turn the lake pink until it looks like floating candyfloss. When the yellow sun comes out summer in Stanley Park the boats, the ice cream the people at the café and children playing in the trees are bathed in light. Relaxing as though in another world, somewhere that eases. The orange sun shimmers on the red and gold leaves down the park blue sun arrives. The ice on the boating lake shimmers and the Stanley swans blend into the landscape as they become Blackpool's Swan lake, our special park.

Creative Activities

1. Design and make suns, recycled suns, painted suns, mini suns, rays of sunshine.
2. Make a season of suns and do all the different shades for the suns in the seasons.
3. Draw, paint, mould, create suns so that for a week the school becomes a Sun School.
4. Make sun masks and puppets.
5. Create a sun dance using ribbons and find music that has sun or sunshine in.
6. Write sun poems thinking about how Blackpool comes to life when the sun shines.
3. Plant beans in classroom and keep diary on progress, record height of beans in cms, link back to seasons and typical events (Y1 measure and begin to record lengths and heights)
4. Make weather station, recording length of shadows in playground, rainfall and temperature as class. Discuss differences between the seasons and note patterns in findings (Y1 measure and begin to record, length/height, capacity and volume) (Y2 choose and use appropriate standard units to estimate and measure)
5. <http://www.amazon.co.uk/Cold-Snap-Eileen-Spinelli/dp/0375857001> Use book to discuss temperatures, order pictures by sequencing events into temperature order from cold to hot events/ activities (Y1 sequence events in chronological order)

Maths activities

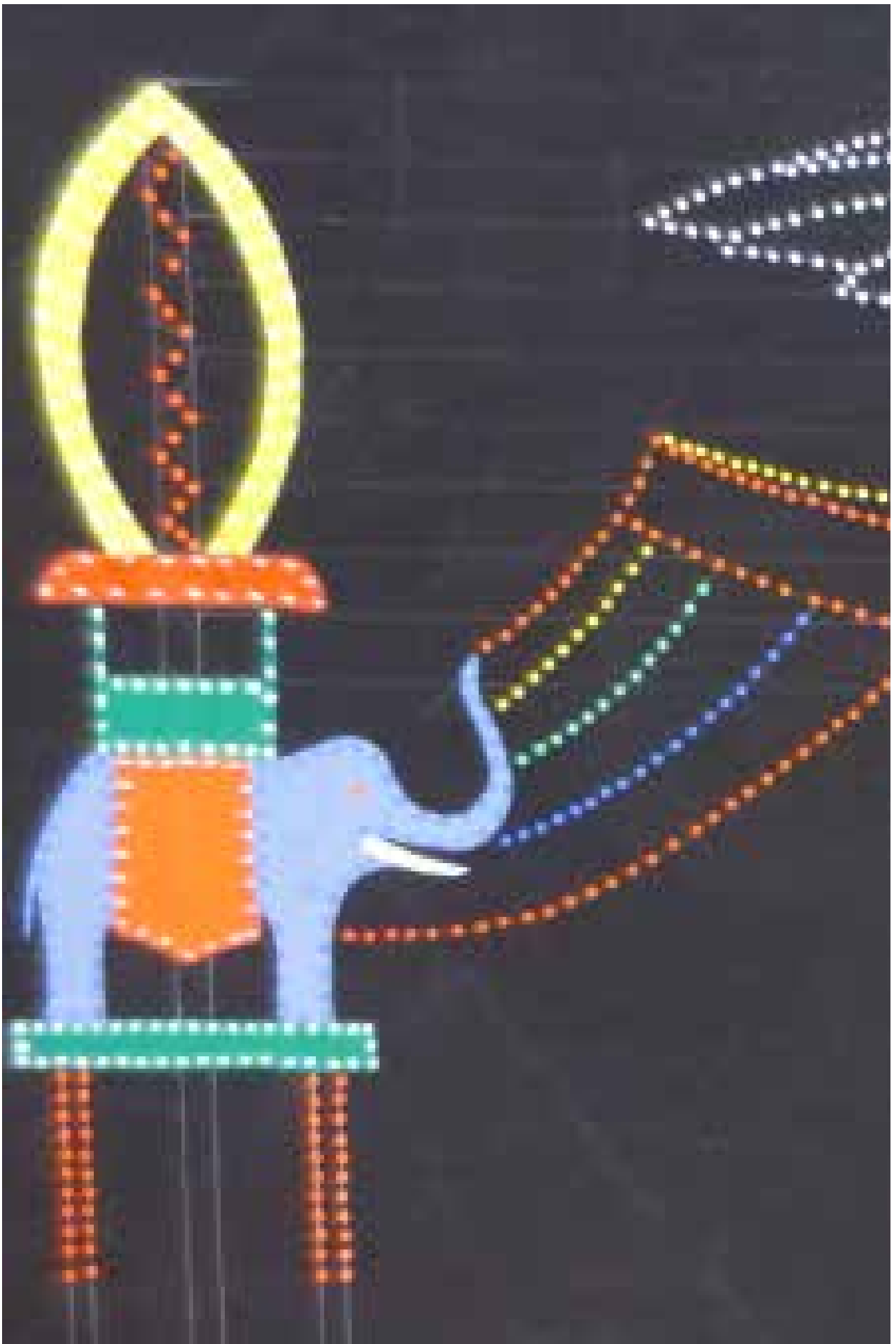
1. Make class calendar, recording seasons as move through the year. Identify children's birthdays and mark on calendar, identifying appropriate season they occur in. (Y1 recognise and use language relating to dates)
2. Make season wheel, children to sort events, which occur during each season and order months of year e.g. <http://www.tes.co.uk/teaching-resource/Seasons-Wheel-6036731/> (Y1 recognise and use language relating to dates). Make a big wheel in the playground using chalk, ask children to listen to given clue on season/month and move to show answer accordingly.
6. http://www.amazon.co.uk/Walters-Windy-Washing-Line-Griffiths/dp/0954535308/?qid=1350208883&ref=sr_1_1&ie=UTF8&sr=8-1 Using book as a basis, have numbered items on washing line, if the wind blows off given items which number sequence is formed? Can they say the next number in sequence? (Y1 count in multiples of twos, fives and tens) (Y2 count in steps of 2, 3, and 5 from 0 and in tens from any number, forward and backward)

more over page...

7. Record people's favourite holiday destinations in a chart, present findings to a local travel agent. (Y2 interpret and construct simple pictograms, tally charts, block diagrams and simple tables) Make school travel survey to find whole school favourite destination (Y2 ask and answer simple questions by counting the number in each category)
8. Answer questions based on simple calendars e.g. how many days in.. how many months are in 2 years... (Y2 compare and sequence intervals of time)
9. Make a class timeline showing different units of time e.g. fortnight, month, decade) (Y2 compare and sequence intervals of time, know the number of minutes in a hour and hours in a day)

Elephant





Creative Maths

Elephant

Elephants everywhere in Blackpool. They live in the zoo, they lived in the zoo under the tower ready to perform in the Tower Circus. The elephants loved the beach. They waited for the hour when the keepers took them under the tunnel and out across the roads. They were slow and stopped traffic, children waved to them as they plodded onto the beach and it was as if time slowed down and waited for them. It became Elephant time, a quiet rest in the midst of the Blackpool noise. Elephant time on the beach when everyone gathered to watch them being hosed and washed with water. A refreshing time when the elephants were luxuriating in the space and enjoying the feeling of the sun's rays and the cool air on their skin.

Creative Activities

1. Make an elephant dance then add animals slowly into the movement collage.
2. Research elephants in artwork in the world and look at elephants in religion and myths. Create your own myth that involves elephants and their long memories.
3. Contact the Grundy art gallery and ask to see their collection of ivory.
4. Make your own Elmer elephant and then create your own colourful elephant model.
5. Find stories with elephants in them and act out the stories. Look at the animal masks in the Lion King and also in Caribbean carnival for inspiration.

Maths activities

1. Look at simple capacity ordering and measuring following on from reading this picture book. Can children order given containers in their likely capacity? http://www.amazon.co.uk/Mr-Archimedes-Bath-Picture-Puffin/dp/0140501622/?ref=pd_ys_qtk_general_recs_4 (Y1 measure and being to record capacity and volume)
2. Children to order objects provided in weight based on feel alone, can they use language of comparison (*lighter than/heavier than*) (Y1 compare and measure weight)
3. Give children weight, can they turn into human balances to predict which object will weigh the same as their given weight? Measure and record differences to their predictions (Y1 measure and begin to record mass/weight)
4. Use information sheet to make own top trumps data cards on different animals (*weight, lifespan etc.*) play and record different values, using greater than/less than symbols to record answers (Y2 compare and order lengths, mass, volume using $>$ $<$ and $=$)
5. Use zoo timetable of feed times for animals to answer questions, using timelines to find solution. (Y2 compare and sequence intervals of time)
6. Ask vet/animal keeper to come and talk about animal welfare. Calculate cost of feeding given animal for period of time. (Y2 solve problems with addition and subtraction)

Italy





Creative Maths

Italy

Pizzas everywhere competing with fish and chips. Romantic Italy with pizzas and the leaning Tower of Pisa, sun every day cant compete with fish and chips on a wet day in Blackpool. Pizzas have so many exotic toppings that tantalise taste buds that can transport people to another world of floating cities in Venice and collesiums in Rome. Fish and chips in Blackpool though, the smell of vinegar the soft white fish with salty chips wrapped in paper as you dodge raindrops to find a spot on the pier. Squashed on a prom bench with your family or friends licking lips as gravy drips with relish and happy memories of seaside family holidays.

Creative Activities

1. Design and make your own pizza.
2. Buy cheap tshirts and transfer the pizza design onto it.
3. Create models of famous Italian landmarks including the collesium, the Leaning Tower of Pisa, Venice gondolas and canals including St Marks.
4. Explore the map of Italy and create a Blackpool map with Blackpool landmarks and UK landmarks.
5. Explore European flags including Italy's and find out what the flags represent. Make a new flag for your school.
4. Look at Italian landmarks and identify parallel and perpendicular lines, predict which landmark has the most of each and then compare to findings (Y3 identify horizontal and vertical lines and pairs of perpendicular and parallel lines)
5. Exchange amount of money in pounds into lira, identify objects they could purchase with given budget (Y4 solve simple money problems involving decimals to two places)
6. Complete given pictures of Italian landmarks using given line of symmetry (Y4 complete a simple symmetric figure with respect to a single line of symmetry)
7. Children to convert given scaled picture of Italian landmarks to real life measurements following given scale (Y5 use all four operations to solve problems involving measure including scaling) (Y6 solve problems where the scale factor is know or can be found)

Maths activities

1. Use menu from Italian restaurant to answer questions on food orders, set up class as restaurant with children as waiters/waitresses (Y3 add and subtract amounts of money to give change)
2. Make simple pizza, children to weigh out ingredients to make final pizza, visit to Pizza Hut/ Pizza Express to see large scale weighing out and measuring of ingredients. Compare two sets of measurements (Y3 measure compare mass kg/g)
3. Make pizza fractions, children to make order of pizza following given restraints e.g. $\frac{1}{2}$ mushrooms, $\frac{1}{3}$ sweetcorn etc. (Y3 recognise and use fractions as numbers)
8. Children to use Roman numerals to make calculations, children to solve ancient Roman calculations to interpret Roman treasure map code (Y5 read Roman numerals to 1000)
9. Children to interpret table of data to find the mean of given visitor numbers to Italian landmarks, present data in a form suitable for Italy's tourist board, use each test of average and assess usefulness in interpretation. (Y6 calculate and interpret the mean as an average)

05

The Archives

The Archives Include images of children at the archives/depot







06

Extra Material

Words Worth



Blackpool Illuminations Historic Collections

Find out more at:

Local and Family History Centre, 1st Floor, Central Library, Queen Street, Blackpool FY1 1PX.

Tel: 01253 478090 or online at: www.blackpool.gov.uk/illuminationscollection

and follow our illuminations collections blog at: www.illuminationscollection.wordpress.com

Fright Lights



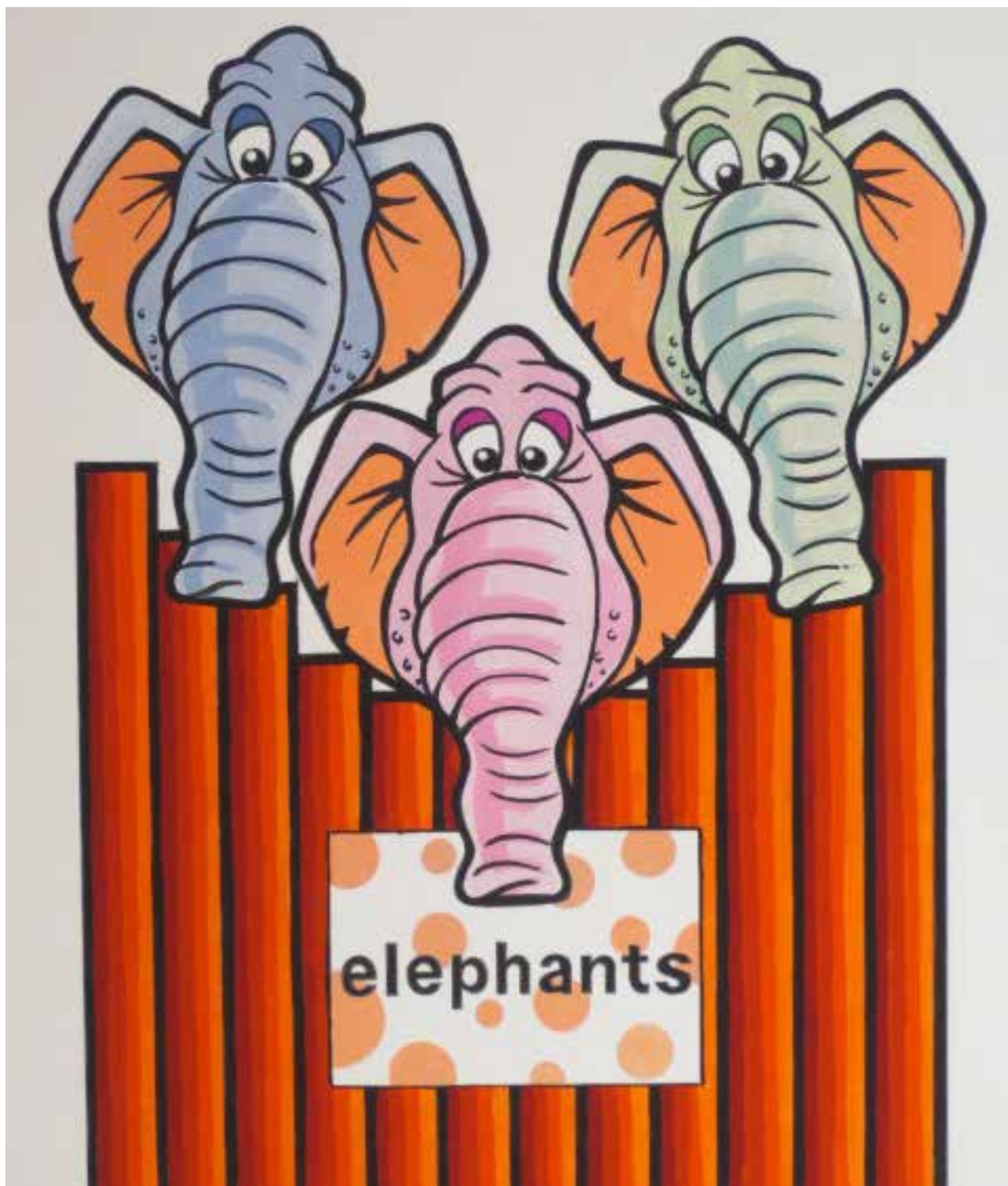
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Zany Elephants



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Beat This



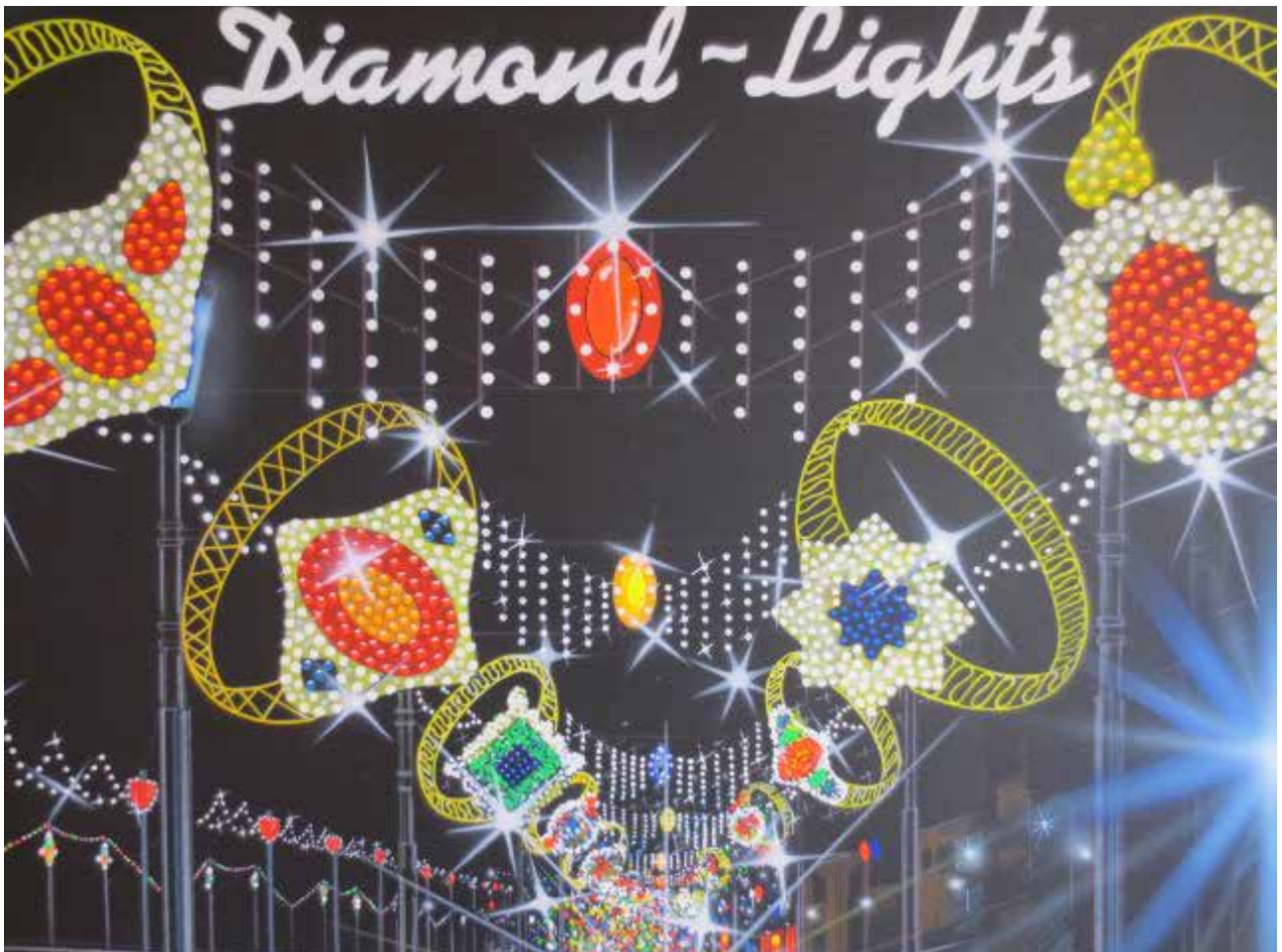
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Diamond Lights



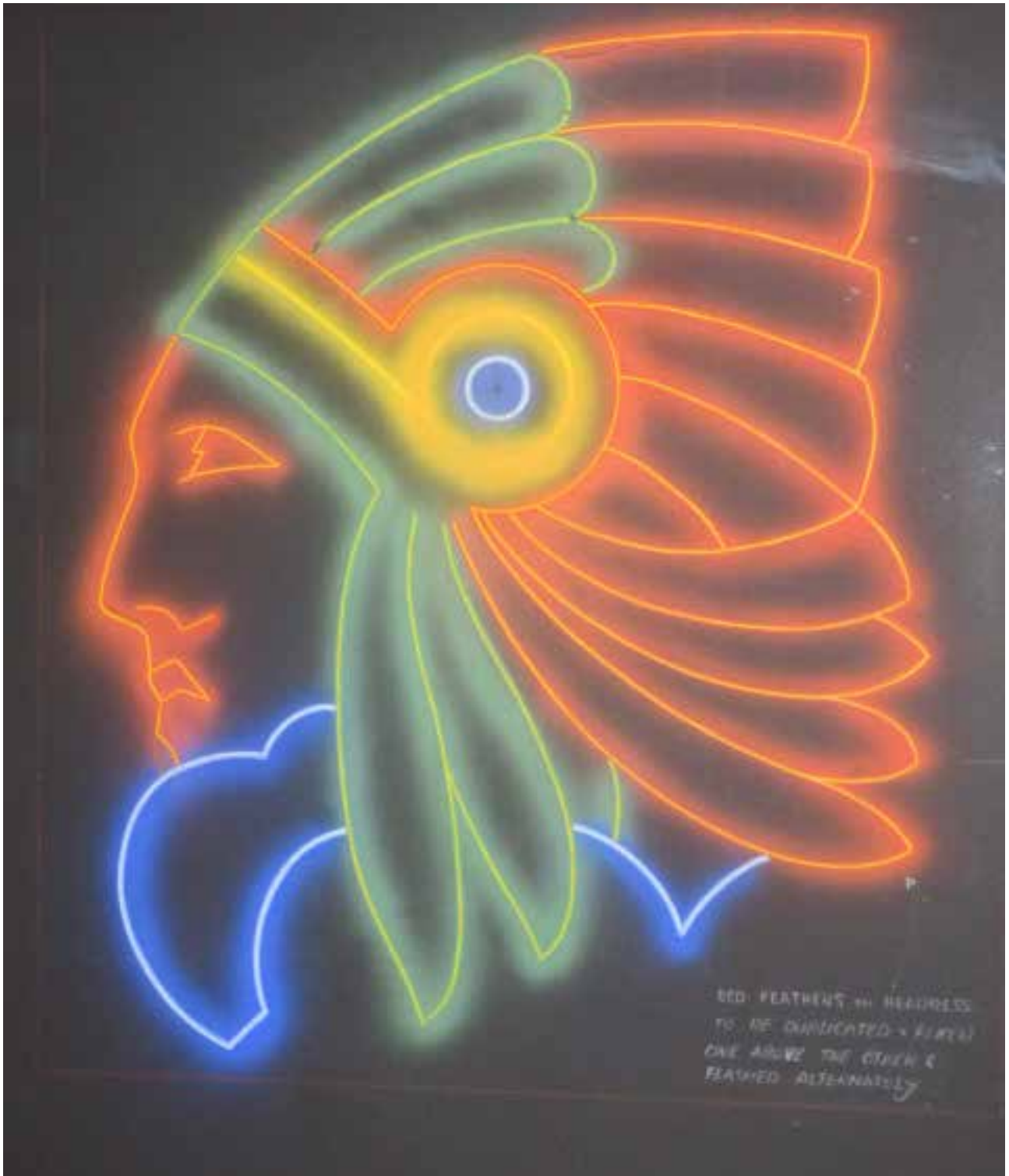
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Boy Named Sioux



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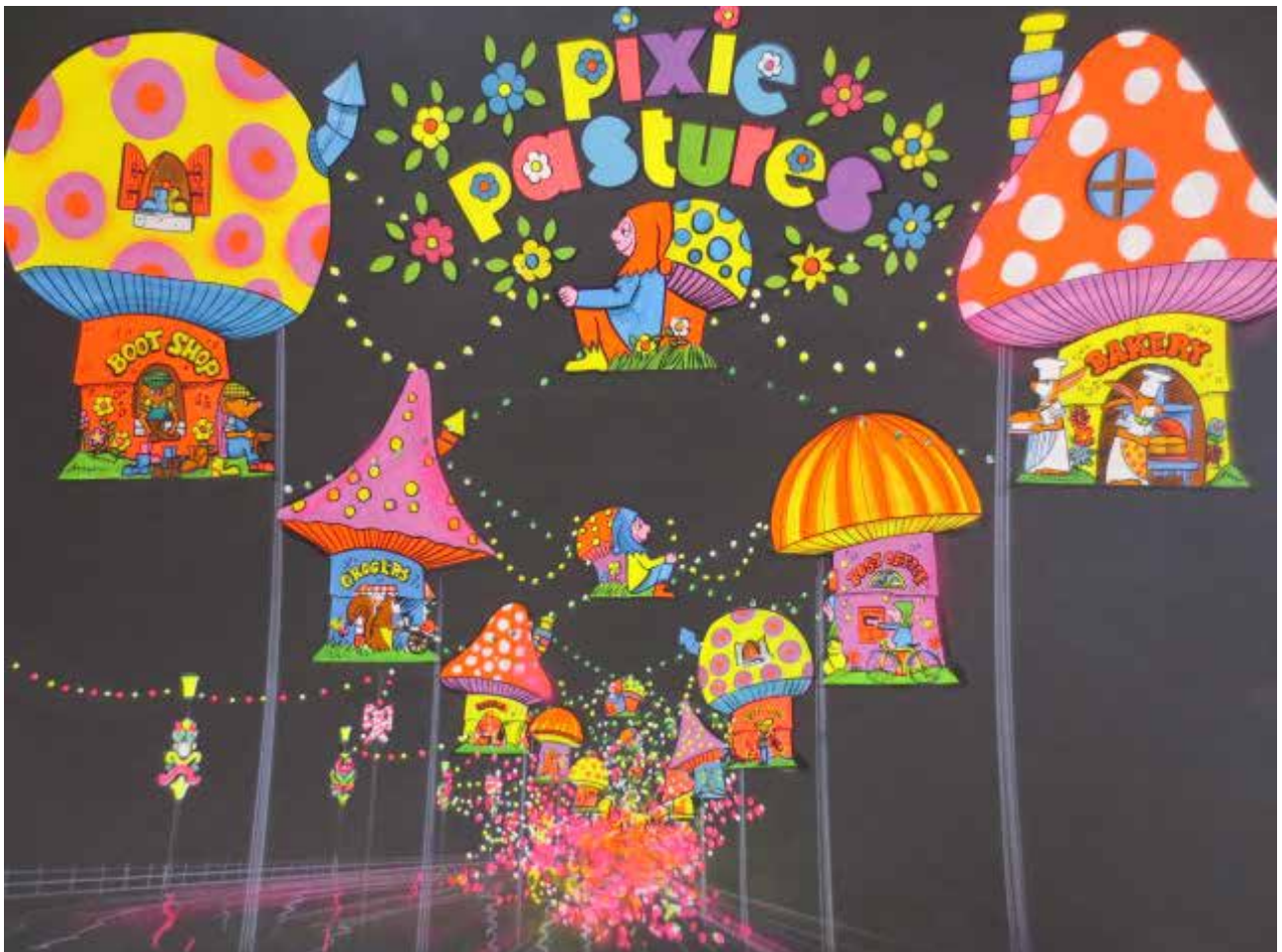
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Pastures New



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Blackpool UFO



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The Green Machine



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Gateway to Space



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