National Numeracy Day

MATHS APPEAL

# Summer Fete
# LESSON PLAN

By Bobby Seagull & Susan Okereke
from the Maths Appeal podcast

KS1
5-7

# Ages 5-7 Key Stage 1 Lesson Plan

## School Summer Fete Challenge

## Lesson content

This lesson focuses on financial literacy through number bonds, addition and logical problem-solving through the fun, real-world context of planning a school summer fete. It can be extended to explore basic probability and creative game design.

## Key skills

Children will develop their understanding of addition and subtraction, identifying odd and even numbers, working with money, logical reasoning, understanding "greater than" concepts and problem-solving by working within a budget. The creative design task also encourages children to apply maths rules in an inventive context.

### Oracy links

Encourage children to discuss what a fete is and share experiences. Ask children to justify their purchasing choices and give reasons. Prompt children to explain the rules of their designed game to a partner.

### Concrete resources

Consider using physical coins or play money to represent budgets. Use hoops, beanbags or number cards to act out the Hoopla game physically. Design sheets or colouring pens might help.

## Setting the scene

Introduce the scenario: the school is holding a summer fete and the class is helping to organise it. Open a discussion with the following questions:

- What is a fete? Have you ever been to one?
- Why put on a fete?
- Who might be coming to the fete?
- How do we let people know about it?
- What activities and stalls might you find at a fete?

## Developing it further

**Task 1 - Fete Activity Ideas**

Present children with a list of fete activities and their costs. In small groups, children can spend a maximum of **£100** on a combination of activities from the list on the next page.

**Note:** This can be a 'think, pair, share' activity where students think individually, then share their ideas with a partner, then share with the whole class.

| Item | Cost |
|---|---|
| Bouncy Castle | £50 |
| Ice Cream Van | £30 |
| Face Painting | £15 |
| Hoopla Game | £10 |
| Music/DJ | £25 |
| Raffle Prizes | £20 |

Each group must choose a combination that adds up to a **maximum of £100**. Groups should give reasons for their choices. Encourage children to share their selections and compare strategies.

## Enabling Prompts

- **Provide** physical coins/cash or a number line to support addition.
- Start by **identifying** the most expensive items first.
- **Ask:** 'If we choose the bouncy castle for £50, how much have we got left?'

## Challenge

Challenge can be introduced with more complex prices for the activities e.g. £52, £34, £9.

## Task 2 - Hoopla Game

Explain that the class is in charge of the games stall at the fete. One activity will be a Hoopla game.

### Hoopla Game Rules

- Place 6 poles on a table, each worth different points: 1, 2, 5 or 10 points.
- Each player gets 4 hoops per turn (they do not have to use all 4 throws).
- Players aim to score enough points to win a prize.

| Points | Prize |
|---|---|
| 40 points | Large cuddly stuffed toy |
| 20 points | Stationery set |
| 15 points | Fun pen |
| 10 points | Keyring |
| 6 points | Bookmark |

Maths questions for children:

- What is the highest score you can get?
- What is the lowest score you can get?
- How many different ways can you get 10 points?
- How many different ways can you get 20 points?
- You want the bookmark. You threw a 2 on your first throw. What are the different ways to get the remaining points you need?
- You want the fun pen. You threw a 5 on your first throw. List the different ways to get the remaining points you need.
- Can you find all the different ways to win each prize?

## Enabling Prompts

Write out the points values on cards and allow children to physically arrange them.

- **Use** a number line or hundred square to support addition.
- Start by **asking**: 'What is the fewest points you need to win any prize?'
- **Give** a table template to support students setting out their calculations

## Challenge

Introduce complexity by considering making children think why certain point scores might not be able to be achieved using the current game.

Ask students to think about whether the points allocation reflects the quality of prizes.

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## Extending Prompt

Consider what would happen if you changed the points required to win each of the prizes by 5 points.

Would it still be possible to win all prizes?

Discuss what other prizes could be offered that reflect the current structure of points.

## Task 3 - Design Your Own Summer Fete Game

Challenge children to design their own mathematical fete game. Their game should be fun to play, involve maths, and offer the chance to win prizes.

**Step 1: Choose a Game Idea**

Think of a game where players throw, catch or move something. Examples:

- **Beanbag Toss:** throw beanbags into numbered buckets.
- **Hook-a-Duck:** pick ducks with numbers hidden on the bottom.

**Step 2: Add the Maths!**

- **Adding Up:** do players add scores of two throws? (e.g. 5 + 3 = 8)
- **Target Numbers:** must they hit an even or odd number to win?
- **Greater Than:** must their score be higher than 10 to get a prize?

**Step 3: Pick the Prizes**

- **Small prize:** a sticker for a score between 1 and 5.
- **Big prize:** a sweet or small toy for a score over 10

**Children complete the Design Sheet, including:**

- Name of the game.
- How to play (3 simple steps).
- The maths rule used to calculate the score.
- Equipment needed.

Encourage children to make their design colourful and exciting to attract players.

## Extending Prompt

- **Ask:** 'Is your game fair? Could every player have an equal chance of winning?'
- **Challenge** children to calculate the probability of winning their top prize.
- Could you **add** a second level to make the game harder?

## Summary

Invite groups to share their game designs and explain the maths rules. Ask the class to evaluate whether each game is fair and fun. If time allows, groups could trial each other's games and reflect on what went well or what they would change.