

G A M E R S  
@ H A R T 



**POKÉMON**<sup>TM</sup>

# Holiday Club

**Leaders' Manual**

4 days of game-based maths activities



[www.gamersathart.co.uk](http://www.gamersathart.co.uk)

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# WELCOME TO OUR HOLIDAY CLUBS

We started these holiday clubs in the Easter of 2021 - with lockdowns mere weeks earlier, we had experience of running game-based online literacy activities during the pandemic and thought we could do something similar for maths as part of the Holiday Activities and Food programme.

That led to a week of 'virtual activities' with fifty children, where we provided three games to over 30 households, along with Hello Fresh-style healthy cook-at-home meals.

By summer, with the beginning of in-person events, we threw together a holiday club programme for over 300 Hartlepool children per day, with a focus on using Pokémon and other games to practise maths skills. This manual is the beginning of turning our experience into something replicable.

## Acknowledgements:

We're indebted to Hartlepool Borough Council and the Department for Education for the funding for these clubs.

We would also like to thank the 50+ staff who have worked with us, particularly those 36 who joined us in the Summer of 2021, mid-pandemic, with no idea who we were or what we were trying to do! And, of course, the hundreds of children!

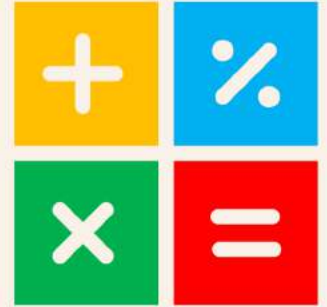
We couldn't do it without you,  
Peter & Jeni

**The research, testing, and production of this book was funded indirectly through the DfE's Holiday Activities and Food (HAF) provision. Therefore, we have made these materials available for free use for any non-commercial activity, including home use, use by charities, use by community organisations, and use for not-for-profit HAF activities. If you are a private business (including CICs), or operating in a location that Gamers@Hart already operate, please speak to us to gain permission for use. We would be happy to provide training, information, and ready-made resource packs for running these holiday clubs. Please email us at [Pokémonclubs@gamersathart.co.uk](mailto:Pokémonclubs@gamersathart.co.uk) for more.**

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# WHY MATHS?



**The ‘summer learning loss’ is a well documented effect, with children losing up to a month’s progress in maths – a larger dip than reading[1]. To a lesser extent, we see this across all holidays, with children from more deprived areas being worst affected.**

It’s essential for children that maths, alongside literacy, is prioritised. Children’s attainment in maths at 11 largely predicts their ability at 16. And it’s more than just numbers and calculations – maths offers a specialised set of vocabulary to understand the world; in an increasingly digital and data-driven environment, maths provides the foundation for logic and problem solving. Maths provides the tools to recognise and describe patterns in the world of misinformation.

We’ve designed this club in response to the need for children, particularly those from disadvantaged backgrounds, to practise maths over the holidays - not to teach anything new, but to follow a distributed practise approach, to touch on many areas of maths that allow children to recall those skills during the holidays and prevent such a sharp learning loss.

If children from disadvantaged backgrounds can return to school with a similar 'learning loss' to their more advantaged peers, it's reasonable to assume the gap in attainment would narrow too.

# OUR AIMS

**We believe gaming has powerful educational and social benefits.**

## **REDUCE THE LEARNING LOSS GAP**

We aim to ensure children from disadvantaged backgrounds have the opportunity to practise valuable maths skills to ensure the holiday 'learning loss' is minimised.

## **INCREASE CONFIDENCE WITH NUMERACY**

Gaming is said to 'decomplexify the complex'. Through learning games, such as the Pokémon Trading Card Game, the motivation to learn complex mathematical concepts increases, and the rules for the game inherently scaffold multi-level calculations.



## **DEVELOP SOCIAL SKILLS**

The 'soft' skills developed whilst gaming include: patience, speaking and listening, cooperation, sitting still, and learning new skills. Children from disadvantaged areas don't only face a larger 'learning loss' than other children, but it can take longer settle to the routine and expectations of the school than peers after holidays.

And by using games some children may already know, we offer opportunities for peer leadership skills to develop.

## **DEVELOP PROBLEM SOLVING SKILLS**

Playing games isn't necessarily enough to improve any particular skills - but having teachers and tutors on hand to encourage reflection can develop reasoning and problem solving too.

# WHY GAMES?

WE HAVE A FEW REASONS FOR BASING A MATHS-BASED CLUB ON GAMES (OTHER THAN THE FACT WE LOVE GAMES).

## MOTIVATION

# 1

Although many children enjoy the satisfaction of working out abstract maths problems by themselves, the gentle competition in games provides greater engagement with maths problems for longer.

## INVOLVEMENT AND IMMERSION

# 2

The maths in games usually isn't abstract, but thematic - there's a logical reason for engaging in these activities that children may find helpful. It doesn't feel like you're 'doing maths' in Sushi Go, it feels like you're collecting food and scoring points.

## CHILD-LED DIFFERENTIATION

# 3

Not all children have the same aptitude for maths, and games offer the opportunity for some children to plan multiple turns ahead, while others may take one calculation at a time when they're confronted with it.

## COMBINING AREAS OF THE CURRICULUM

# 4

Literacy and new vocabulary are often embedded within games, and they invite children to develop their problem solving, strategic thinking, and creativity. It also develops social skills including patience, understanding and following instructions, turn taking, cooperation, and communication.



# HOW TO GET THE BEST FROM GAMES

We love games, but by themselves, games wouldn't be effective for maths education. We know that effective maths teaching and practise relies on children choosing a specific strategy for solving a problem or calculation, then deliberately engaging in it. Thinking about the maths before committing to playing the card or taking the action is key. That's why our clubs make use of experienced educators with the presence of mind and training to spot 'teachable moments' in the middle of a game.



Games have maths embedded in them, but like many activities, it takes an educator to model curiosity and the strategies that children can use. A well timed question, or encouraging an alternative strategy for solving the problem, can open up new perspectives for the child.

Here's some ideas for how to help children get the most out of gaming:

- Ask a child to be intentional about their decisions: "Why are you doing that?"
- Ask a child what they think will happen if they make a decision
- Ask a child to tell you 2-3 different options, and what the outcome could be
- Play the game too, and verbalise your own decisions in a game – explain why you are doing something, and why you hope it will be successful.



# DAY ONE

Intro Activity Badge Making  
Upfront Game Pin the Flame on Charizard  
Pokémon TCG Learn to Play  
Games Relay races  
Lunch  
Board Games Sushi Go  
Maths Venn Diagrams  
Craft Pokémon Bags  
Circle Games



# INTRO ACTIVITY

Find out about your new Pokémon Trainers

## Badge Making

### You will need:

Conference badges  
Colouring pens or pencils

Ask children to create a badge with their name on it.

They could design their own Pokémon, or draw their favourite Pokémon, on the badge too.

At the end of the day, you could ask children to keep their badge in their bag (see craft) so they have it available every day.



Some children might be nervous - this is a perfect time to talk to everyone, show you're interested, and learn some names.

# UPFRONT GAME

Use an assembly-type game to mark an official 'start' & generate some energy

## Pin the Flame on Charizard

### You will need:

A3 Image of Charizard (without flame)  
10 cut out flames  
Sticky dots  
Blindfold

Invite all the children to sit together 'assembly style' in one room or at the front of the hall.

Depending on the size of the club, split into teams of around 10-15, and ask the children to move so there's clear space between each group. If the club has fewer than 10, you could run this as a game where every individual child gets a turn rather than as a team.

Ask for one volunteer per team.

Explain Charizard has lost his flame and they need to help him find it by sticking a new flame as closely as they can to his tail.

Blindfold the first volunteer, write their name on a flame, add a sticky dot, spin them round, and give them the flame. Move them to arms-length of the Charizard print.

Repeat an equal number of times for each team (2 teams of 15, you may choose 5 people from each team).

The person who is closest wins everyone on their team a Pokémon card (reassure children there'll be many opportunities to win cards this week!)



## After the game:

You can use this time to introduce the activities for the day, and reinforce any rules of the club, or any housekeeping rules.

You could do this by asking them:

- How will we make this club fun for everyone?
- How will we keep people safe?
- If someone isn't behaving safely, what should we do?

If there are any venue-specific rules (e.g. toilets, hand washing facilities, avoiding certain rooms, etc), you could introduce these now too.

# POKÉMON TCG

Many of your Pokémon Trainers will be coming specifically to learn to play!

### You will need:

A deck for each child  
A playmat for each child  
A dice or coin for flipping  
Damage counters

**In Pokémon, two Pokémon trainers battle against each other, using a deck of cards that represents Pokémon, energy cards, and special cards that provide particular powers or effects. Pokémon can be made more powerful by 'evolving' them throughout the game.**



Every day pupils will have two games of the Pokémon TCG, limited to 30 minutes.

When a Pokémon is knocked out, the player receives a prize card. At the end of 15 minutes, the child with the fewest prize-cards left will win. Then, to keep the pace up, swap opponents (for more experienced players it may be appropriate to have one longer game).

Search Youtube for 'How to Play Pokémon TCG' videos to get a head start. You could show children these videos as an introduction to the game. There's currently an official three minute video here: <https://www.youtube.com/watch?v=FDqDwJyY2w>

### Peer Leaders

When children are new to the club and we have a mix of children who have played, pair up more experienced with less experienced children. Explain that the aim is to teach, not to win – the more experienced child is successful if the other person understands how to play, whatever the outcome of the game.

This should still be done with supervision from a leader to make sure the child being taught doesn't become frustrated.

# GAMES

Energy, fun, and helping to meet the  
DfE Physical Activity targets

## Relay Races

### You will need:

Approx. 60 table tennis balls  
10x Pokémon Balloons  
4x Pokémon small cups  
4x Morpeho images  
2x empty boxes with Pikachu on the inside lid  
2 sheets of A0 paper  
Small box of 'packing peanuts'

Sit children in roughly equal teams, with a mix of ages. Ask them to arrange themselves in height order (to avoid smaller and larger children directly competing).

Sit the teams in lines at one end of a field/hall.

Set up different tasks for the teams, as they compete by running, one at a time as in a relay, to complete the task. Depending on the size of the teams, you may want to ask the whole team to complete each relay once or twice.



All quantities are working on a club that accepts around 30 children.

## Relay 1 - Gotta Catch a Pikachu

Set up a chair, bench, or table at the opposite end of the hall/field to the children. Set up an equal number of table tennis balls for each team on those chairs/benches. Set up a box, with the lid open to display Pikachu, around 3 meters from the table tennis balls.

The first child of each team runs to the balls, picks one up and (without moving forward) tries to throw the ball into the box. The child runs back to the back of the line on their team and sits down.

To avoid accidents, the next child can only stand up and run when the previous child has ran all the way past them. Repeat until all the balls have been thrown.

Award 1 point per ball in the box to each team, with a bonus 10 points for finishing first and 5 points for finishing second.



## Relay 2 - Pass Pikachu

Ask the child at the front of the line to take two large steps forward, and then ask all children to stand and make a little more space to fill in the gap.

Give the front child a balloon (check for latex allergies).

The front child passes the balloon over their head to the next child, who passes it through their legs. Continue this 'over and under' pattern until the balloon gets to the very end of the line, that child brings Pikachu back to the front and the pattern continues. The game ends when the original starting child is back to the front.

You could give 10 points to the fastest team, 5 points to the second fastest, and 3 bonus points to any team that doesn't burst a balloon.

## Relay 3 - Island Hop

Give each team 2 'Islands' (large pieces of paper).

Children are to 'hop' islands to get from one Pokémon region to another.

2 children stand on one piece of paper, then place the second 'island' in front of them. They both jump onto that island, and the island behind is picked up and transferred in front of them – so they are moving across the hall.

When both children get to the far end, one of the children uses both pieces of paper and the same pattern of picking up and moving islands to take themselves back to the rest of the team. They pick up another child, and repeat the process to take the third child to the new region.

Repeat until all children have got to the new region and sat in their line.

You could give 10 points to the winning team, 5 points to the second, and a bonus 3 points to the team with the best communication and team work.

## Relay 4 - Feed Morpeko

Set up the boxes from Game 1, this time where children can reach them directly. Put the 'Morpeko' image in front of Pikachu. Put a box of 'seeds' (packing peanuts) in front of the first person on each team. Children will be feeding Morpeko seeds by transferring seeds from their box, to Morpeko.

As every good Pokémon trainer knows, Morpeko has an insatiable appetite. All the other Pokémon are helping to feed him.

Children take their Pokémon cup, fill it with 'seed' (packing peanuts), and run to Morpeko to fill his box. Each dropped seed will lose the team 1 point – accuracy is better than speed. You cannot pick up seeds that have fallen.

## End of the Relays

Winning teams can be given Pokémon cards to add to their bag at the end. You could also give out cards for sportsmanship, most enthusiastic supporters, and effort.

# BOARD GAMES

## Sushi Go

Understand about sets, ratios, and practise addition, subtraction and multiplication

### You will need:

5 copies of Sushi Go  
Sushi Go Scoresheets



We have score sheets for several games on our website, free to download.  
[www.gamersathart.co.uk/maths](http://www.gamersathart.co.uk/maths)



### Who are you, what are you doing?

You're a customer in a restaurant, collecting sushi from a conveyor belt of yum.

### How do you win?

Collect food that gives you the most points

### What do you do on your turn?

Pick a card, then pass the cards to the next person

### How does this relate to maths?

The cards at the end all score differently. Some are about scoring the points on the card, some involve collecting sets, others involve having the highest number compared to other players to gain a set number of points. At the end, scores are added together.

### Draw out the maths by:

- Commenting on which sections of the score sheet scored the most points for people. Why?
- For the more experienced, consider the averages that each type of card gets you (e.g. Tempura is 2.5 points per card, but Sashimi is 3.33). How many Dumplings do you need to score better than collecting Nigiri?
- Using the score cards so children can complete their own scoring.

### How can we make the game shorter?

Play two rounds, instead of three.

### How can we make the game easier?

Take out the 'chop stick' cards

# MATHS

How can we categorise data?

## Pokémon Venn Diagrams

### You will need:

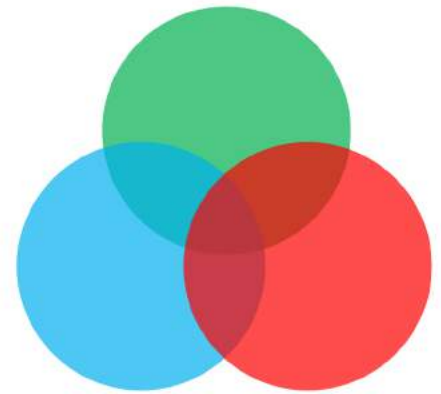
3 Hoola hoops per group of 8  
8 Pokémon cards per child  
Labels for the hoops

Venn diagrams are a way to categorise and sort data, and introduce children to Boolean logic. They present a clear way to express simple relationships between different pieces of data. They allow children to identify similarities, differences, and concepts of inclusion and exclusion.

Using circles to categorise data similar to Venn diagrams are often introduced in key stage 1, all children are likely to have encountered them by the end of year 4.



Remember: it's ok to practise maths activities familiar to children - our aim is to prevent learning loss rather than develop new skills.



### Step 1

Separate children into groups of no more than 8.

Place one hoola hoop on the ground, and add one of the labels.

Give each child 8 Pokémon cards and ask them to stand around the hoop. Ask the children, one at a time, to place 1 card they have that matches the category. Go around the circle until all possible cards have been placed.

Ask children to pick up cards from the middle until they have 8 again (they don't have to be the cards they put down)

### Step 2

Place a second hoola hoop next to the first (but not overlapping yet).

Put a new label on both hoops – ideally two that are likely to include Pokémon that will also match both categories.

Ask one child at a time to place a card in either one of the hoops. If a child noticed their Pokémon could go in one of two hoops, ask them how we could change our diagram to reflect Pokémon from category 1 & category 2? Then, overlap the hoops and continue.

If your children are new to Venn diagrams, it may be appropriate to do several more like this.

### Step 3

Place a third hoola hoop creating the classic Venn diagram shape. Add labels and repeat.

When children are adept at this, they could place their cards simultaneously, and you could then ask them to check each circle for any mistakes.



Looking for the labels?  
They're on our website -  
[www.gamersathart.co.uk/maths](http://www.gamersathart.co.uk/maths)

# CRAFT

Providing a personalised place to store prizes, crafts and rewards.

## Pokémon Bag

### You will need:

30x 10cm x 15cm fabric bags  
 30x Fabric pens  
 15x A5 transfer paper (cut in half)  
 Iron  
 Ironing mat/board

Pokémon trainers will design their own bags using fabric pens and transfer paper that will be used to store all their other crafts and prizes during the week.



This craft is part of a rewards system and incentivising attendance across multiple days.

### Step 1

Hand out a drawstring bag to each child. Put fabric pens on the table, and ask children to write their name at the bottom of the bag (only taking up the bottom 3cm)

### Step 2

Hand out the squares of transfer paper.

Ask children to draw their Pokémon designs on the paper. Explain this will be mirrored when it sticks on the back, so any writing will be backwards.

### Step 3

In most cases, it will be appropriate for an adult to iron on the transfer paper to the bag. However, it may be appropriate for older or more mature children to help, as a learning experience on how to safely handle an iron. This must always be supervised one to one.

First, iron the bag to make sure it's free from creases.

Then place the transfer paper on the bag (drawn side touching the bag). **Turn off the steam.** Hold the iron down for 20 seconds. Lift, and press again on any of the image that hasn't been touched. Pay special attention to the edges to ensure they're fully stuck. Wait 2-3 minutes before removing the backing. The paper should be completely cool before trying to remove it.

# CIRCLE GAMES

Fun games that get everyone moving

These are ideas for games at the end of each session, or when you need to fill some time. You may recognise them - most we've given a Pokémon theme to existing games



## GoDuck, GoDuck, Yungoos

Based on Duck, Duck, Goose. One person is chosen to walk around the circle tapping people's head or shoulder saying 'GoDuck'. When they say 'Yungoos' the chooser, and the person just chosen, race around the circle to try and get to back to their space. The last person is now the chooser.

Additional rules: If someone says 'Ditto', instead of chasing around the circle the same direction, they run in opposite directions.

## Don't wake Snorlax

A retheme of 'Bear and the Honey Pot'. One child will try to steal keys from underneath a blindfolded 'Snorlax'.

Put one child in a chair in the centre of the circle with a blindfold.

Place keys, or something else that could make a noise, under the chair. Choose a second child to sneak up to the chair and take the keys without making a noise.

The person in the chair has to catch the other person sneaking up by pointing towards them. They get three guesses.

If they point directly at the person sneaking up, that person goes back to their space and a new volunteer is picked to steal the keys.

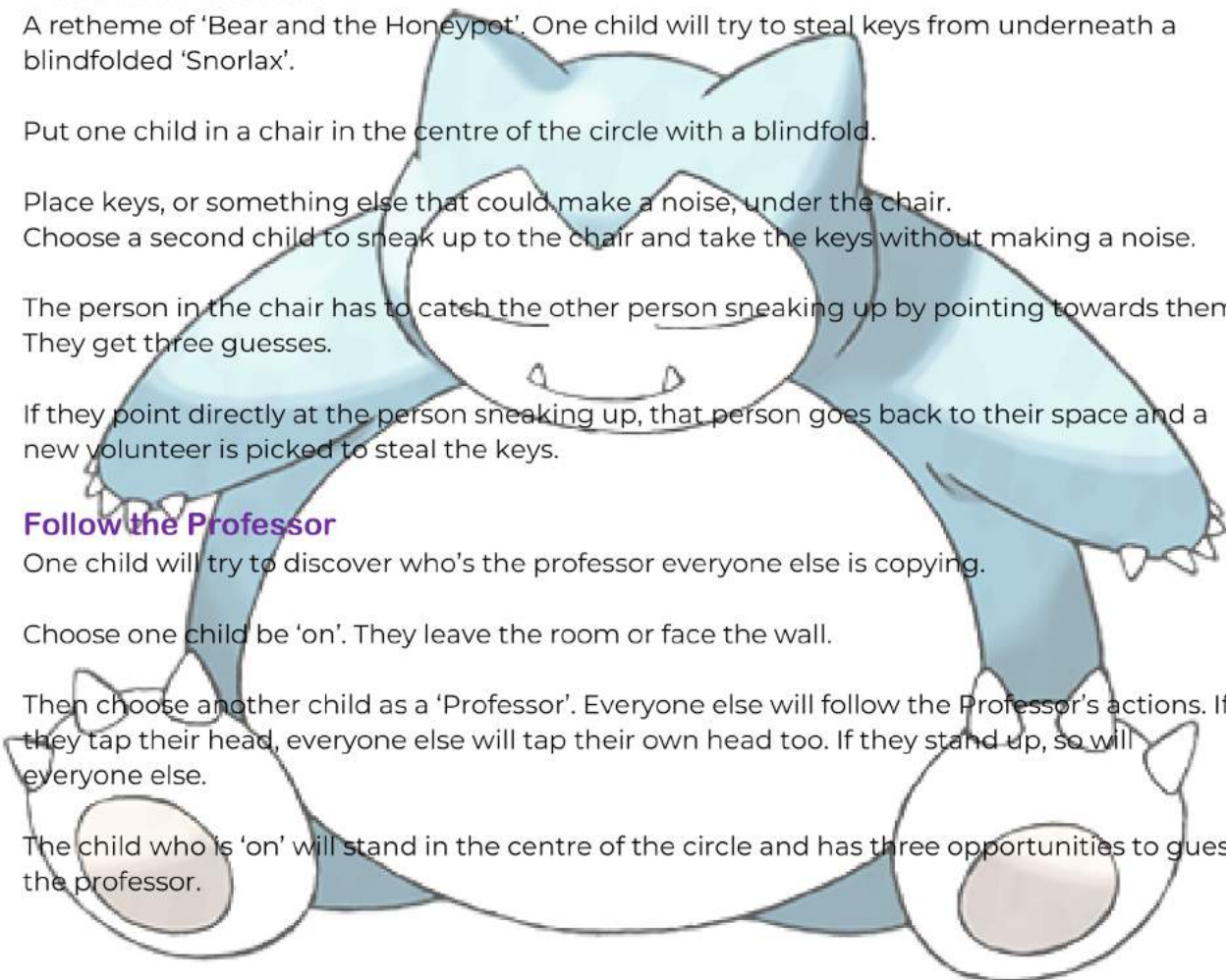
## Follow the Professor

One child will try to discover who's the professor everyone else is copying.

Choose one child to be 'on'. They leave the room or face the wall.

Then choose another child as a 'Professor'. Everyone else will follow the Professor's actions. If they tap their head, everyone else will tap their own head too. If they stand up, so will everyone else.

The child who is 'on' will stand in the centre of the circle and has three opportunities to guess the professor.







# DAY TWO

Intro Activity Colouring and Drawing  
Upfront Game Pokémon Balance Training  
Pokémon TCG  
Games Team Games  
Lunch  
Board Games Zombie Dice  
Maths Pokémon Knockouts  
Craft Perler Bead Pokémon  
Circle Games

# INTRO ACTIVITY

What's everyone's favourite Pokémon?

## Colouring and Drawing

### You will need:

Colouring and Activity Sheets  
Colouring pens or pencils

There's many colouring sheets online, we have some special maths themed activity sheets at [www.gamersathart.co.uk/maths](http://www.gamersathart.co.uk/maths) too.



Anyone who is new to the club could do a badge and put their names on a bag instead.

# UPFRONT GAME

Use an assembly-type game to mark an official 'start' & generate some energy

## Pokémon Balance Challenge

### You will need:

10 dice per child taking part (you could use them from Zombie Dice)  
1 Lollipop stick per child

Invite all the children to sit together 'assembly style' in one room or at the front of the hall.

Depending on the size of the club, split into teams of around 10-15, and ask the children to move so there's clear space between each group. If the club has fewer than 10, you could run this as a game where every individual child gets a turn rather than as a team.

Ask for two volunteers per team. Explain balancing is a key part of being a good Pokémon trainer – especially for trying to catch Pokémon.

Give one large lollipop stick per child to hold in their mouth, sticking out like a tongue (this should be thrown out and never reused). The second volunteer has 60 seconds to stack as many dice as they can on the stick.

The person who is has the highest stack at the end of the time wins everyone on their team a Pokémon card to put in their bag. If the dice fall during the 60 seconds, they can be replaced by the stacker.

You could tell Pokémon jokes to make it more difficult. Repeat as often as you have time, and lollipop sticks for, with new volunteers.



# GAMES

Energy, fun, and helping to meet the DfE Physical Activity targets

## Team Games

### You will need:

1 fishing rod per team  
100 Pokémon to 'fish'  
1 Pokémon skittle  
4 Beanbags  
4 Balloons

To begin with, split children into at least 2 teams. Put children in lines, in height order, in opposite sides of the hall/room. If there's 2 teams, smaller children should be at opposite ends of the row. If there's more than 2 teams, place each team in a line forming one side of a triangle/square.



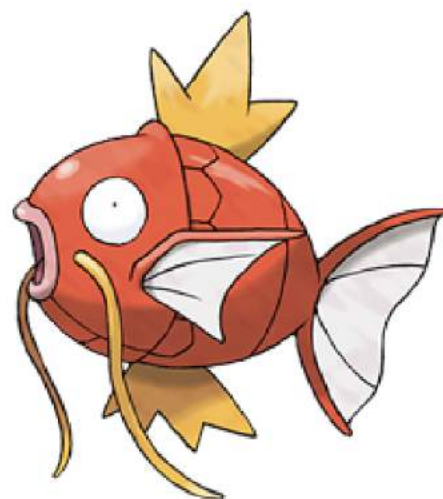
## Game 1 - Fishing for Pokémon

Place the Pokémon in the middle on the floor, with one chair per team in the middle too.

Ask the smallest child from each team to sit on the chair. They have to get one Pokémon from the centre (if they get multiple at once, they can choose which one to keep and throw the others back).

To prevent injury, each chair must have a leader behind the chair. The child should always pass the fishing rod to the leader before they stand up. If they stand up with the fishing rod they must put the Pokémon back and try again. Once they have collected the Pokémon, and the rod is passed to the leader, they go back to their place and the next child takes a turn.

The game ends when all Pokémon have been caught. Each Pokémon has a different value. At the end of the game it's the value of the Pokémon, not the number of Pokémon, that determines the winner. The group could put the Pokémon in bundles of 100 points to make adding up a collective effort.



## Game 2 - Catch the Pokémon

Have the teams sit as in the previous game.

Give each child a number, starting with the smallest child (some children may have more than one number if there's an uneven number of children on each team). Place a 'Pokéball' (beanbag) near each team. Put a Pokémon (skittle) in the middle of all the teams.

Shout one of the numbers. That child from each team races to 'catch' the Pokémon by hitting the skittle with the beanbag.

Children should stand a challenging distance away from the skittle (around 10m) If children throw the beanbag and miss then they can immediately run to collect the beanbag, return to their spot, and try again.

Repeat until someone hits the Pokémon, that team gets a point, then shout another number.

## Games 3 - Pokémon Netball

Have teams sit as in the previous game, with their numbers.

Ask a leader to be a 'net' for each team by standing near their team. When their number is called, children will jump up and attempt to hit the Pokémon to their leader to catch. They can catch a balloon if it comes close to them, but shouldn't over-reach or move from the space. You can shout more than one number at a time for added chaos.



These resources might need some preparation - cutting out Pokémon and adding paper clips, turning a skittle into a Pikachu, or creating fishing rods..



# BOARD GAMES

## Zombie Dice

Understand probability in this push-your-luck dice game

### You will need:

5 copies of Zombie Dice  
Pens and paper for score keeping



### Who are you, what are you doing?

You're a Zombie. You're trying to eat brains, without getting shot.

### How do you win?

Collect the most brains to win! The end of the game triggers when someone gets to 13 brains – play to the end of the round and whoever has the most, wins.

### What do you do on your turn?

Pick 3 dice without looking - Roll them.

Keep any brains and shot gun blasts (you reroll the runners on your next turn).

Decide if you want to have another roll, if you do pick up your runners and add dice from the cup until you have 3. Keep going until you think your luck is about to run out.

If you get 3 or more shot gun blasts, you do not add the brains to your total (you're 'bust').

### How does this relate to maths?

There's two levels of probability. Firstly there's a different distribution of red, yellow and green dice. Then, there's a different number of shot guns and brains on each different colour. So red dice are rarer, but more likely to get you shot!

### Draw out the maths by:

- Exploring the difference between green, yellow and red dice faces.
- Counting how many of each colour are in the pot.
- Before someone decides to carry on rolling, you could ask the chance of picking up a red dice compared to a green dice.

**Runner** - if you take another turn, you must include runners as part of your three dice.



**Shotgun** - 3 of these and go bust

**Brains** - collect the most to win

# MATHS

How do we know who's going to win?

## Pokémon Knockouts

### You will need:

4 or 5 Large Pokémon Cards  
1 Pokémon card per child  
Numbers 1 to 10+ on the wall

Now children have played Pokémon twice they should be fairly familiar with the rules.

This means we can introduce some complex maths, disguised as simple Pokémon tactics.



Look for cards that are relatively simple - those that deal different damage based on coin flips can be tricky for this exercise.

### Step 1 - How many rounds until your Pokémon is knocked out?

Give each child a Pokémon card (you should be able to differentiate based on ability by providing cards with easier numbers for health points and damage, e.g. cards requiring multiples of 30 may be for the more mathematically experienced children).

Show one of your large Pokémon.

Highlight the damage it can do each turn (if it has more than one way to cause damage choose one. Ignore any special abilities or probability based effects – just work off the stated number. Also ignore weaknesses and resistance for now).

Ask each child to compare the damage your Pokémon will do every turn with the HP of their Pokémon, and ask them to calculate how many turns it will take until their Pokémon is knocked out. Ask them to stand under the corresponding number. Have peers check each other under each number.

E.g. You hold Pikachu. He does 10 damage per turn. A child has Bulbasaur who has 50HP. Therefore, it will take 5 turns for him to be knocked out. Repeat this a few times.

### Step 2 - Who will win?

Now ask all children to stand in a line in front of you.

Hold up your card, and ask "If my Pokémon attacks first, which Pokémon will be knocked out? If your Pokémon will lose, move to the left. If your Pokémon will win, move to the right". After checking responses, bring the children to the middle and ask again either with a different Pokémon or alternate which Pokémon will attack first.

### Step 3 - For experienced children

You may wish to split the group in two, with those looking for greater challenges asked to consider the resistance and weaknesses in their calculations.

Children can keep their cards and add them into their bags.

# CRAFT

Make your own 8-bit decorations

## Perler Bead Pokémon

### You will need:

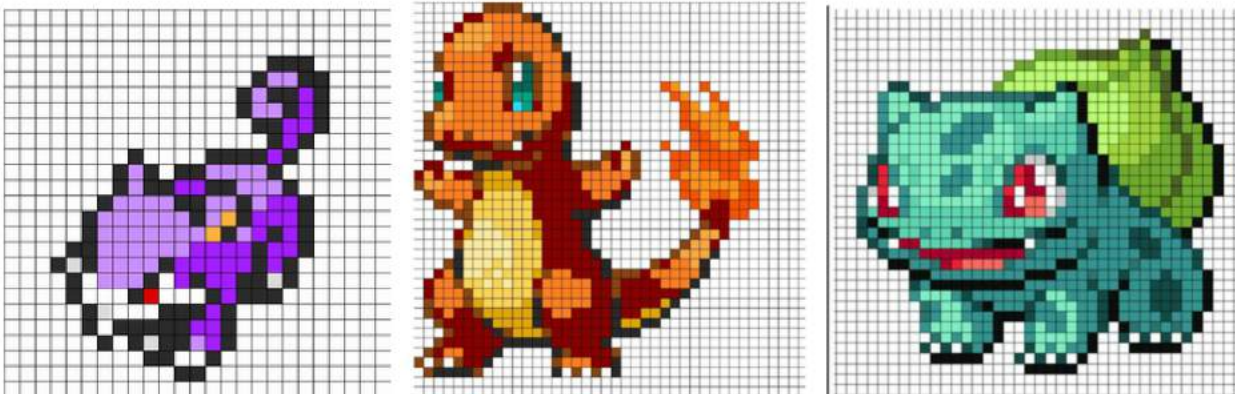
Perler Beads (or equivalent)  
Perler bead boards (1 per child)  
Baking paper  
Iron  
Ironing mat/board

Pokémon trainers will create impactful designs, and think about pattern and space while doing it.

Choose a design.

Place the beads on the board matching the design.

A leader (or child under close one-to-one supervision) should place a sheet of grease proof paper or baking paper over the top, and run a warm iron (medium heat) in circles over top of the paper until the beads start to melt and fuse together, this may take around 10 seconds. Carefully flip the creation over and cover bottom with some ironing paper. Melt the bottom with a warm iron. While it cools, place something heavy over the top to ensure they don't curl.



We found these fantastic designs at  
[www.U-Createcrafts.com](http://www.U-Createcrafts.com)



# DAY THREE

- Intro Activity** Create your own Pokémon Card
- Upfront Game** Pokéball Toss
- Pokémon TCG**
  - Games** Scavenger Hunt
  - Lunch**
- Board Games** Kingdomino
- Maths** Pokémon Algebra
- Craft** Pokémon Fridge Magnets
- Circle Games**



# INTRO ACTIVITY

How OP will your Pokémon be?

## Create Your Own Pokémon Card

### You will need:

Pokémon Card templates  
Colouring pens or pencils

Use the templates to create your own Pokémon card. It could either be a completely new Pokémon, or your own design and stats for an old Pokémon



This is a great time to ask children about what their evening was like or how their day is going.

# UPFRONT GAME

Use an assembly-type game to mark an official 'start' & generate some energy

## Pokéball Toss

### You will need:

1 Pokéball per team

Invite all the children to sit together 'assembly style' in one room or at the front of the hall.

Depending on the size of the club, split into teams of around 10-15, and ask the children to move so there's clear space between each group. If the club has fewer than 10, you could run this as a game where every individual child gets a turn rather than as a team, with one pair winning. Ask for two volunteers per team.

How good is your Pokéball throwing?

Give each pair a ball. Place them at arm's length from each other.

Ask them to pass the ball to each other (this shouldn't even require throwing)

Then, ask them to take one step back and pass the ball to each other. Each time they make the catch, they take another step back. If a ball is dropped they're out.

You can repeat this with other volunteers. Each winning pair wins a card for each of their team.



# GAMES

Energy, fun, and helping to meet the  
DfE Physical Activity targets

## Pokémon Scavenger Hunt

### You will need:

Call list

Split children into teams and sit them in different corners. You will shout an item from a 'call list', this is the 'treasure' the teams have to hunt for. However, each team needs to elect a captain. All children can hunt, but only the captain can bring it to you. If anyone else brings you the item it doesn't count.

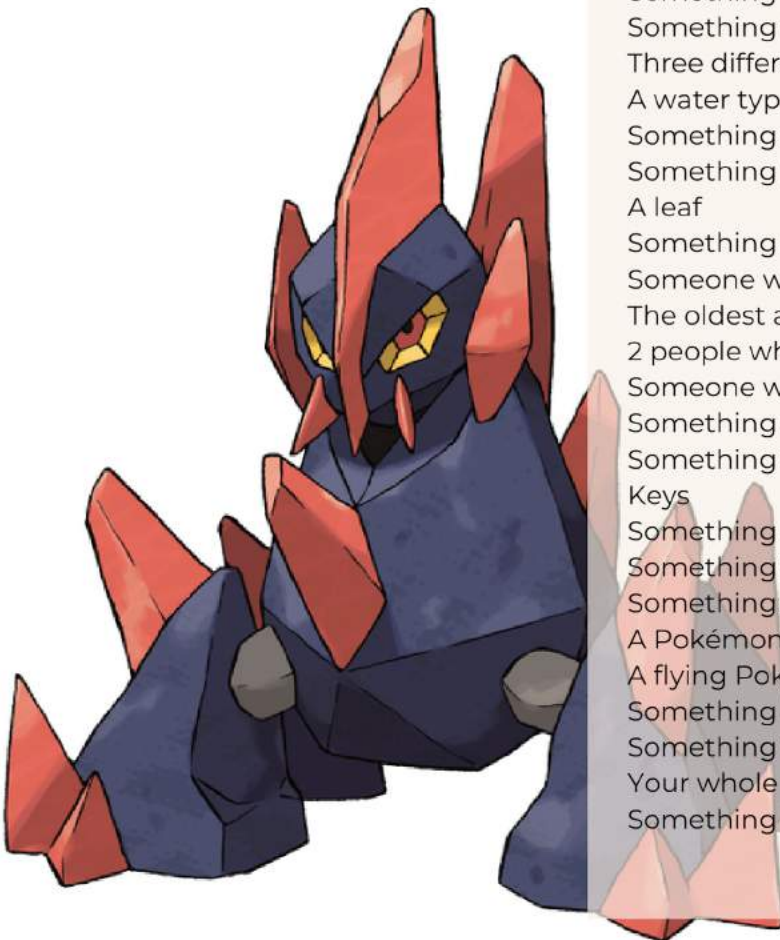
Please consider specific boundaries for your venue – What can or cannot children take from the wall? What's out of bounds? Are they allowed to leave the immediate area to find something? Be mindful of anything that could break while running around.

Children can be creative. A leaf, for example, doesn't have to be a physical leaf. It could be a picture, a t-shirt with an image, or a piece of paper hastily cut to look like a leaf.

A point for each item found and collected first, and the winners get Pokémon cards.

### These are our ideas - but you can add your own based on what's available in your group

- Something with Pikachu on
- Something that's good for you
- Three different colour shoes, not being worn.
- A water type Pokémon
- Something soft and fluffy
- Something loud (not a human)
- A leaf
- Something at least 3 meters long
- Someone who wasn't born in Hartlepool
- The oldest and youngest member of your group
- 2 people who's ages add up to 15
- Someone who wasn't born in the UK
- Something orange
- Something with buttons
- Keys
- Something cylindrical
- Something you'd usually find outside
- Something sticky
- A Pokémon card
- A flying Pokémon
- Something bright
- Something with at least 5 colours
- Your whole team in a line in age order
- Something broken



# BOARD GAMES

Practise multiplication while building a Kingdom

## Kingdomino

### You will need:

7 copies of Kingdomino  
28 Whiteboard pens  
28 Kingdomino score sheets

### Who are you, what are you doing?

You're a king, attempting to develop your kingdom.

### How do you win?

Scoring the most points. Count number of squares in a landscape type and multiply by the number of crowns.

### What do you do on your turn?

First, take your king and place it on a tile. Then, take a tile you've previously chosen and place it in your kingdom (at least one edge has to match or touch the castle).

### How does this relate to maths?

Scoring requires multiplication facts, but there's also knowledge of shape and space with the creation of the kingdom.

### Draw out the maths by:

- Using the playmats to make the scoring explicit
- Considering during the game whether one more crown, or one more square, will give you more points - and why.



# MATHS

How much is each Pokémon worth?

## Pokémon Algebra

### You will need:

- A3 sheets with Pokémon characters, numbers and operators
- Activity sheets
- Pencils

One way to introduce the concept of algebra is to create logic puzzles where numbers are missing.

All pupils should encounter algebra, often in year 6, but other forms of 'missing number' calculations may have been introduced from early key stage 2.

### Step 1 - Altogether

Ask the children to sit together.

Either stick up, or ask children to hold, some of the large Pokémon.

Start with a very easy set of calculations with the Pokémon as the answer, for example  $1+1 = [P1]$ , what's the value of the Pokémon?

You can soon change the Pokémon to one of the numbers in the calculation: e.g.  $[P1] + 3 = 5$ . Then you can introduce two hidden terms and introduce the idea that the Pokémon could have more than one value, e.g:  $[P1] + [P2] = 6$ , if P1 and P2 are different what could all the values be?

To understand this, we could add another calculation to see if it helps:  $[P1] + 3 = 4$ , now what do we think P1 is and P2 is?

### Step 2 - Pokémon Grid?

Now ask children to find a space to work, provide them with an activity sheet according to their ability, and see if they can work out the values of each Pokémon.

4	17	4	
			5
			10
			10

# CRAFT

Create your own Pokéball

## Pokémon Fridge Magnets

### You will need:

White modelling clay  
(enough to make a circle roughly  
4cm in diameter and 0.5 cm thick)  
Acrylic paint  
8 Pipettes  
Clay modelling knives (1 per child)  
Magnets  
Laminated Pokéball examples  
30x Protective boards



There's two options for colouring the modelling clay – for some, it'll be appropriate for children to add the colour themselves so they can choose which design to use. For younger children, having premade red, white and black clay may be more suitable.

### Step 1

Choose a Pokéball design. Think about the colours that are needed for it.

Take your clump of clay and separate it out into the colours (e.g. almost half white, almost half for red, and a little bit for the black line on a standard Pokéball).

Take a pipette and add drops of colour onto the clay, kneading it in well. It may take a while for the colour to spread, but should only need a few drops.

### Step 2

If you are making a standard Pokéball, take a small ball of white clay and shape it into a slightly flattened circle, then cut it in half. Repeat this with the red clay.

### Step 3

Cut both circles in half – put the white half and red half together (the remainder can be given to someone else to use).

### Step 4

Add a magnet to the back – so that it is flush with the clay, or just a little proud of it.

### Step 5

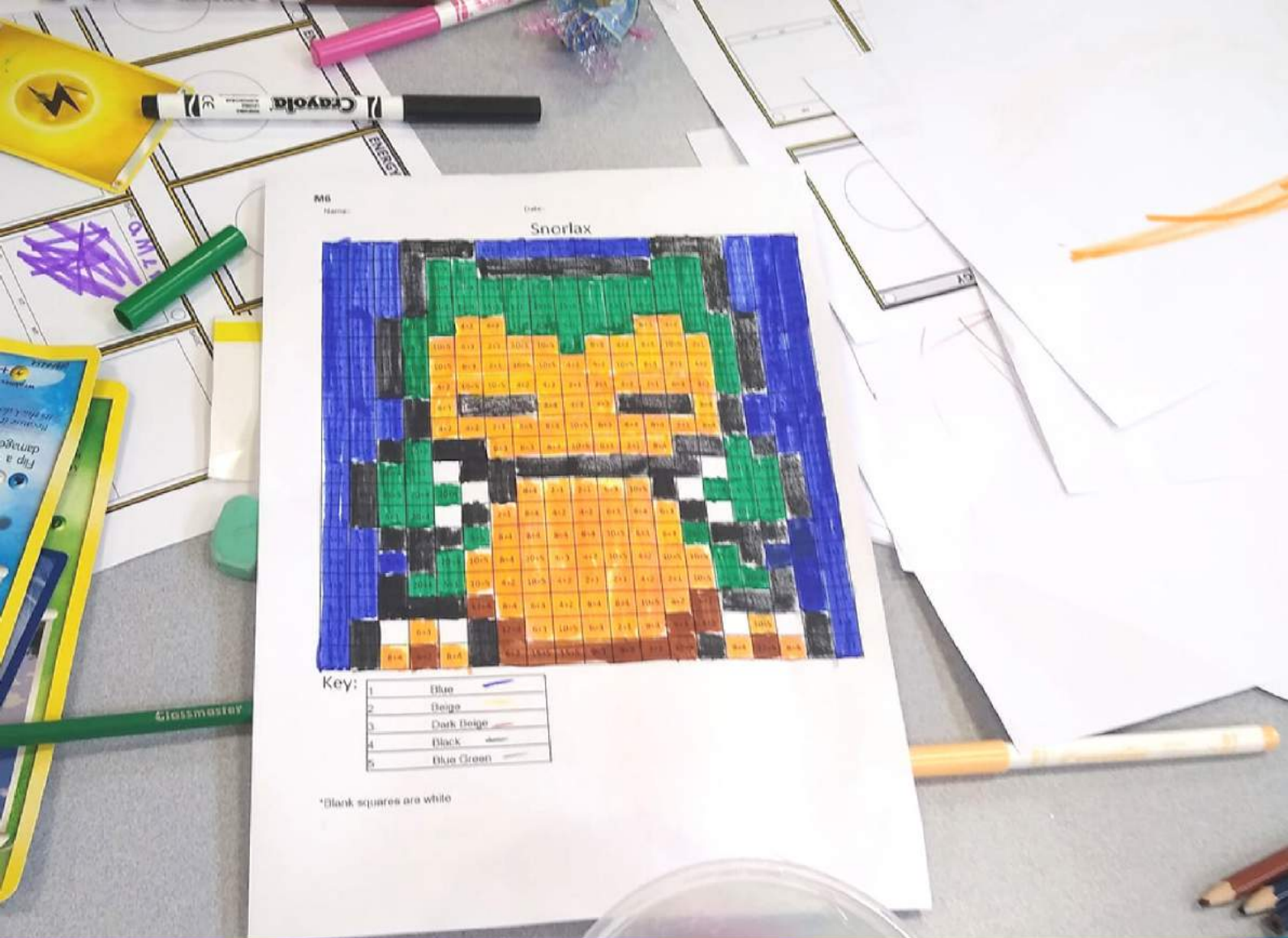
Take a small piece of black clay and roll it into a thin and long 'worm', then flatten it to create a belt. Put this around the middle.

### Step 6

Take a very small piece of black and white, and create a very thin black circle and a slightly smaller white circle. Stick them into the middle.

(Adapted from Artsycraftymom.com)





# DAY FOUR

- Intro Activity
  - Upfront Game
  - Craft
  - Pokémon TCG
  - Lunch
  - Board Games
  - Games
  - Maths
  - Circle Games
- Circle Games
  - Pokémon Feeding
  - Oddish Plant Holder
  - Just One
  - Pokémon Go
  - Pokémon Go tallys

# INTRO ACTIVITY

Get people straight into the games as they arrive!

Circle games

See the ideas from Day One.

# UPFRONT GAME

Use an assembly-type game to mark an official 'start' & generate some energy

Feed the Pokémon

## You will need:

Shaving foam  
Packing peanuts  
Protective top (e.g. binbag with le in the top)

Split the children into teams.

Have one leader for each team who is willing to have a shaving foam 'beard' applied (harmless, but very messy)

Pick one volunteer from each team. They will throw 'packing peanuts' from about a 3m distance at the leaders' beards.

After 1 minute, the volunteers stop throwing, and count the number of peanuts on each beard. The one that has the most wins a Pokémon card for everyone on their team.

## After the game:

Explain what's happening today – and go over any special instructions for playing Pokémon Go, and explain the different order for activities today.



# CRAFT

Grow Oddish's leafy hair at home

## Oddish Plant Holders

### You will need:

White modelling clay  
(around a 5cm blob)  
Blue acrylic paint  
Compost  
Sun flower seeds  
Acrylic pens  
Water spray

Prepare in advance some clay by kneading blue acrylic paint into it.

### Step 1

With a clump of clay, first pull a small amount off (for feet). Then, create a ball with the clay, before putting a thumb into the middle to create a hole for the soil.

### Step 2

Roll the remaining clay into a cylindrical shape and cut in half. Stick these to the bottom of the pot and shape into feet.

### Step 3

Use the pens to add details, including eyes and mouth.

### Step 4

It takes 24 hours to dry fully, however within a couple of hours it should start to harden enough to add the soil and the seed.





# BOARD GAMES

Wait a minute.... this isn't maths....

## Just One

### You will need:

4 copies of Just One

### Who are you, what are you doing?

In this cooperative game, you're providing one word clues for a guesser on your team.

### How do you win?

You're trying to get as close to 13 out of 13 as you can.

### What do you do on your turn?

The first person takes a card without looking at the words on it and chooses a number from 1 to 5. Everyone else writes a one-word clue in secret. Then, the clue writers check there's no duplicate clues (any duplicates are rubbed out), and the guesser guesses with the remaining clues.

### How does this relate to maths?

This game doesn't relate to maths, but is excellent for learning and recalling vocabulary, particularly tier two words.



# GAMES

Energy, fun, and helping to meet the DfE Physical Activity targets

## Pokémon Go

### You will need:

Phones with Pokémon Go (one between two)  
Clipboard (one between two)  
Pencils and paper

Pokémon Go is a mobile app that allows players to 'catch' Pokémon in their local area. If you haven't played before, we suggest you download and try it first to understand how it works.

Although a great game in its own right, this exercise combines it with learning about tally charts and bar charts. Children will usually have been introduced to tally charts by the end of Key Stage 1, and bar charts in year 3.

Before taking the phones outside, make sure that there's a planned walk and risk assessments have been carried out to highlight potentially dangerous areas or situations, including being near busy roads.

Put children into pairs. For half of the journey, one of the pair will look after Pokémon Go and collect Pokémon. The partner will keep a tally of all the Pokémon collected (this is swapped for the second half).



# MATHS

How many Pokémon did you catch today?

## Wall Bar Chart

### You will need:

4m of rope  
4 sticky hooks  
Different coloured paper (A6)  
Colour A6 paper, cut into 5 strips  
White paper  
Bluetac

When you have returned, create a bar chart on the wall using the rope as axes.

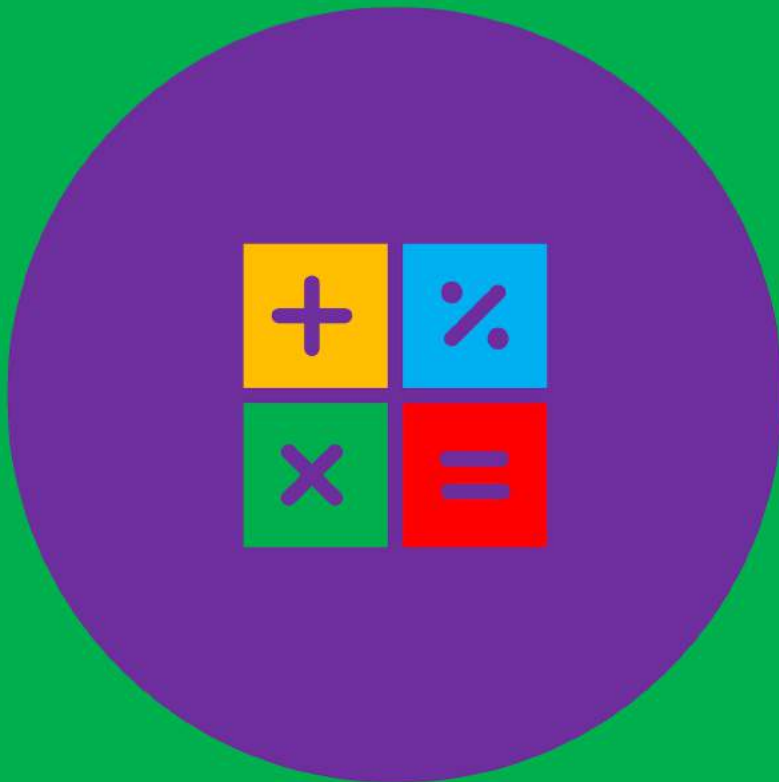
Ask one pair to choose one of their Pokémon and write a label for it. Stick that underneath the X-Axis.

If each piece of A6 paper is 5 Pokémon, stick the right amount of paper to the wall to create a 'bar'. Use the strips to represent 1 Pokemon to get to the exact amount.

Ask all the other pairs if they have that Pokémon, and ask them to add to the bar chart.

Once the first Pokémon's data is collated, ask the second pair to do the same, and so on until all pairs have chosen a Pokémon.





[1] ALLINDER, RM, FUCHS, LS, FUCHS, D, HAMLETT, CL EFFECTS OF SUMMER BREAK ON MATH AND SPELLING PERFORMANCE AS A FUNCTION OF GRADE LEVEL THE ELEMENTARY SCHOOL JOURNAL

[2] EEF "SUMMER SCHOOLS"  
[HTTPS://EDUCATIONENDOWMENTFOUNDATION.ORG.UK/EDUCATION-EVIDENCE/TEACHING-LEARNING-TOOLKIT/SUMMER-SCHOOLS](https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit/summer-schools)

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We set up Gamers@Hart in 2014 after seeing the benefit gaming had on our young family. We also work for People's Meeples, a not-for-profit dedicated to the social and educational benefit of gaming.

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