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# Introduction

Why should an ordinary deck of cards become an essential tool to teach maths?

Here are a few reasons:-

- ❖ It's inexpensive – cheap to buy; cheap to replace
- ❖ It's familiar – many homes have at least one deck
- ❖ It's dual purpose – leisure and learning
- ❖ It offers seemingly, endless possibilities
- ❖ It's easy and it's fun.

The suggestions which are included in this booklet are not intended to substitute the many excellent published mathematics schemes found in our schools. These games and practices are most effective when they are used to complement and extend the textbook exercises we use in the classroom.

Some of the exercises and games can be used prior to textbook work – for very young children or children with SEND.

Some can be used to introduce textbook work or as an alternative to the ubiquitous Mental Starter.

Some can be used to reinforce textbook work (further examples of the same task with individually generated numbers.)

They are great for homework (everyone at home can get involved) and there are no worksheets to photocopy or mark.

In next to no time, you and your pupils will find new and effective ways to practise, consolidate and extend their mathematical skills.

Many of the tasks lend themselves to written work, too. I usually ask children to write 10 examples in their books (labelling them A, B, C etc, because they are calculations of number). This not only consolidates their mental skills, but gives evidence of the learning and achievement that has taken place. Whilst written work is not always required, it should not be ignored either. A good balance of written and mental maths is easily achieved with **Deck Ahoy!**

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# Welcome to Deck Ahoy!

Activities are labelled by the key skill phrase or a game name and are divided broadly into three sections:

- ❖ Key Stage 1
- ❖ Lower Key Stage 2
- ❖ Upper Key Stage 2

On the contents list on pages 3–5, I have linked the activities only to the year in which a skill first appears in the National Curriculum for England, rather than provide references for every time the skill is repeated using larger numbers. For some of the activities, there are no direct National Curriculum references. I would include these activities in my lessons, regardless.

Please do not be restricted by these labels.

If **Deck Ahoy!** is introduced at Key Stage 1, then the activities will probably be met in the time scale suggested by the labels. If you are introducing **Deck Ahoy!** to a Y5 class then you may wish to go back to basics rather than start at Upper Key Stage 2.

There is no reason why able or gifted children should be confined to activities in their Key Stage. Move on!

Many of the activities are compatible with the 'Mathematics Passport' concept, adopted by numerous schools around the country, which arranges skills of number recall and calculation into several categories of learning (eg, Continents or Planets). Some also refer to Mathematical knowledge of Measurement (including time). All of these skills can be complemented by **Deck Ahoy!** It is a useful tool for pupils to assess each other and record their progress through their passports.

Additional activities can be found which are not included in the curriculum but which I have found effective and valuable and pupils have enjoyed.

From time to time, additional materials are useful or required. A3/A2 poster paper is essential for **Times tables mats** (page 15) and comes in handy when setting variations for each suit. Coloured counters or cubes and whiteboards and pens are needed for the later stages of **Clock solitaire** (page 53). Base 10 apparatus gets an airing, too. Other materials will creep into the scheme of things but nothing which is expensive or elusive, I am sure.

The more I teach, the more I realize that my own knowledge is neither complete nor infallible. So, please alter, amend, correct or dispose of anything you feel is inaccurate. And *please* add your own ideas as you find your feet, on deck!

# Terminology

Most terms will be familiar but you say 'boot' and I say 'trunk', you say 'lunch' and I say 'dinner' etc. – so let me just explain a few and, forgive me now, for stating the obvious:

Complete deck	All 52 cards and the 2 Jokers
Closed deck	Cards face down, closed together, held in the hand or placed on the desk
Open deck	Cards face up, spread horizontally, held in the hand or placed on the desk
Faceless deck	A, 2, 3, 4, 5, 6, 7, 8, 9, 10
Digit deck	A, 2, 3, 4, 5, 6, 7, 8, 9
Zeros	The face cards (J, Q, K), placed face down
Twenties	The Jokers (can be used for any maximum number you require)
Suits	Hearts (red), diamonds (red), clubs (black), spades (black)
Shuffle	Mix'em up!
Stacked deck	Stack cards in numerical order, face up (in suits), lowest value at the bottom, highest at the top
Face down	No number or face showing
Face up	Showing number or face
Random and Rapid Fire! ( <b>RRF!</b> )	<p>This is the part the kids love the most. When they have practiced a skill to the point they are sure they can recall randomly and rapidly, shuffle the deck and turn over each card, one at a time, but rapidly as the child calls out the response.</p> <p>This is excellent for homework and parents love this, too. They can see for themselves, their child's achievement. Exercises that lend themselves to this will be punctuated with '<b>RRF!</b>'. (RAPID FIRE with a 'stacked' deck is the first step. Shuffle the deck when the pupil's knowledge is secure – <b>RRF!</b>. You will probably find that the kids will refer to both as RAPID FIRE – the word RANDOM seems to be an 'Adult Thing'.)</p>
Statistics	Once called Data handling. There is a section devoted to Statistics on page 49.
Clock solitaire	This traditional game is the basis of activities devoted to teaching the measurement of <i>time</i> . It is fully explained in the final chapter, Teaching Time (see page 51)
Units	It appears the term 'units' is being replaced with the term 'ones' in the UK. When I am assured that every other nation in the world has followed suit, I too will embrace the new terminology. Until then...

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# Who has the deck?

In an ideal world, each child would have a deck of their own. In the past, I have known affluent parents, delighted to equip their child with a deck for school and another for home.

Recently, I have provided a class of 30 with a deck each, to use in school and take home, as their 'prize' for completing a reward chart. Schools may opt to provide each pupil from school funds or fund-raising events. Some may provide a 'class set' to be used in school only and be shared between classes. The solution will arise according to the needs of the pupils and the schools, I am sure.

If children provide their own decks, encourage them to buy cards with unusual backing pictures. If school provides the decks, mark each pack with different combinations of stars, stickers, etc. This makes life so much easier when children drop a card, leave their deck in the book corner, put it in someone else's tray by mistake... . These things can and will happen.

Be patient! The initial excitement (and ultimate waste of time which accompanies such excitement) will pass. Within a few weeks, your class will produce their cards at their desks with the minimum of fuss and set to work calmly and diligently.

Should a child forget their cards, or you do not have a deck for each child, remember – **half** a deck is better than none! Sometimes it is necessary to share it according to suits (so each child has one complete red suit and one complete black suit). Sometimes it is simply a matter of handing over roughly half the number of cards, with no regard to suit or value. (I always found that giving team points to the child who shared their deck, encouraged more children to bring in their own! Kids, eh?)

Finally, all these tasks will need to be introduced and modelled by an adult. However, it is surprising how quickly children not only recall the exercises, but quickly adapt to new numbers and calculations.

The exercises, tasks, games – call them what you will – can be individual, pair or group activities. The curriculum references are progressive but the activities within are not hierarchical.

Please trawl and hopefully find something to suit your needs. Make them your own. Make them work for you and yours.

I hope you find **Deck Ahoy!** at worst useful, and at best, inspirational and you and your pupils fan the flames of a burning desire to excel in mathematics.

Enjoy!