



READY... STEADY...  
**THINK!**  
**TOGETHER**  
AT HOME

BRAIN BOOSTER GAMES FOR PARENTS AND CHILDREN... TOGETHER!



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# THE BENEFITS OF HOMEWORK

## *Research shows.....*

Homework reinforces what your child is learning in school. Practice can improve attainment. It also gives you a chance to become involved in the learning process.

How much homework is right for your child?

Guidelines say children should read everyday plus:

YR1-Y2—60 minutes a week

Y3-Y4—90 minutes a week

Y5-Y6—30 minutes a day

Sometimes homework which involves **talking** about what the child has learned that day can be the most important homework of all, consolidating and expressing understanding, especially if you ask them meaningful questions about what they have learned.

# TOP TIPS FOR SUCCESSFUL HOMEWORK

**Agree some homework rules** with your child —be consistent.

**Find the right place**—make sure they are comfortable.

**Find the right time**—avoid making homework run into bedtime.

**Be prepared**—have the right equipment available.

**Remove distractions**—no TV, videos, noisy siblings.

**Don't do the homework for your child**—let them use critical thinking strategies: ask them “What do YOU think?” Don't show your stress or frustration if you don't understand it—**keep positive**.

**Make it fun**—projects can involve all the family and the outdoors.

**Return homework on the required day**—don't let it pile up. Check it together with your child before handing in.

## COMPUTERS AND THE BRAIN

Sometimes children can get reliant on their online world. Watch out for:

- obsession with playing games on or offline
- compulsive browsing or database searching, leading to limited social interaction with family and friends
- inappropriate interest in adult chatrooms or role-play sites that can distort your child's understanding of real-life intimacy.

Addiction to social networking, chatrooms, texting and messaging to the point where a child prefers virtual relationships to real life ones, or spends too much time updating and sharing.

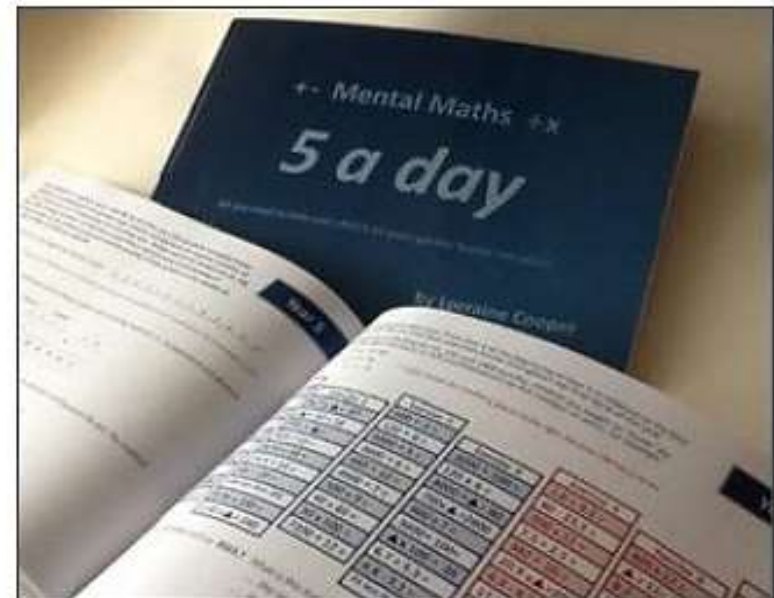
Show them how to use electronic devices as a way of using their brains to create, to research and to help with schoolwork—not just to play games or watch music videos. Explore creative ways of using apps to produce useful items such as invitations, birthday cards, family trees, posters, home videos, photo albums.

**Don't let the computer do all the thinking!**

## MENTAL MATHS 5 A DAY

Every family gets a free first copy of this book. **5 minutes** with you every day will improve mental agility—help your child to compute and calculate arithmetic quickly with good understanding—a skill they will need for life!

Homework is set by your child's teacher every day, but you'll soon get to know whether you need to visit earlier pages to brush up on some skills.



# WATER



The brain is one of the most important organs of the body and is approximately 85% water.

Water gives the brain the electrical energy for all brain functions including thought and memory processes.

When your brain has the optimum amount of water you will be able to think clearer and faster, be more focused and be more creative.

## TOP TIPS

Often we don't feel thirsty even though our bodies need water. That's why it's a good idea to drink water regularly during the day and especially when it's hot.

Drink water as soon as you wake up.

4 - 8 year olds - 1.3 litres per day.

Girls 9 - 11 year olds 1.5 litres per day.

Boys 9 - 11 year olds 1.7 litres per day.

You need to drink more water when you are physically active.

Pack a water bottle whenever you go out.

# BRAIN BOOSTING FOOD

Remember breakfast is the most important meal of the day as your brain has been fasting and needs energy.

**ANTIOXIDANTS** Antioxidants protect the brain cells from membrane damage. They can be found



in blueberries, strawberries, raspberries and blackberries. The brighter the colour of the fruit the more nutrients it contains.

## CHOLINE



Choline is a nutrient that is essential for brain development and memory function, it helps the brain communicate with the rest of the body. Choline can be found in eggs (especially the yolk), beans, Brussel sprouts, broccoli, cauliflower, and

## OMEGA 3 AND ESSENTIAL FATTY ACIDS



Healthy fats are crucial for brain and eye development. They can be found in salmon & oily fish, shrimps, walnuts, eggs and yoghurt.

## COMPLEX CARBOHYDRATES



Complex carbohydrates are crucial to the brain's functioning because they are the main source of energy. They can be found in whole grain bread, pasta, crackers, cereals and brown rice.

# BRAIN GYM



## Your brain is a muscle

It is divided into 2 sides – the left and the right. When you move the left side of your body you are using your right brain and when you move the right side of your body you are using your left brain.

## Like every other muscle it needs exercise!

Brain gym is one way to exercise your mind so that you can learn better .

## CRAZY 8



Stick your thumb in the air and trace an eight lying on its side. Do this three times. Your head should not move but your eyes should focus on the thumb.

Crazy 8 improves balance and co-ordination and also helps with reading and long-term memory.

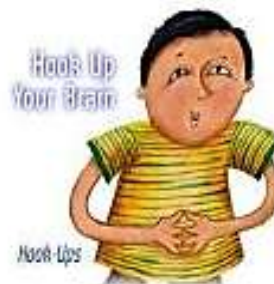
# CROSS CRAWL

Standing, begin to march in time. Raise your knees and alternately touch each knee with your hand. Progressively move your elbows to each knee.

Cross crawl activates both halves of the brain together. It improves co-ordination, visual, auditory and kinaesthetic ability and can improve listening, writing and memory.



## HOOK UPS



Cross your left ankle over your right. Extend your arms, crossing your left wrist over your right. Bring your palms together and interlace your fingers. Bring your hands up towards your chin. Sit quietly for a minute with your eyes closed while you breathe deeply.

Say the colour that you see ... NOT the word that you see!

RED YELLOW PINK BLUE BROWN GREEN BLACK WHITE  
ORANGE GOLD BLACK YELLOW BLACK YELLOW PURPLE  
PINK RED BLACK BLACK BLUE GREEN GOLD BLUE BLUE

ORANGE WHITE RED WHITE YELLOW

Research suggests it improves co-ordination, visual, auditory, and kinaesthetic ability and can improve listening, writing, spelling, reading and memory.

# BIG QUESTIONS

The use of questions can be used to stimulate discussion and develop children's thinking skills by verbalising their reasoning. There is no right or wrong answer, as there will be many different opinions.



Does time have different speeds?

If someone does something bad does it make them a bad person?

When people disagree does it mean one of them is wrong?



Should you always tell the truth?

Do you have to 'know' something before you can believe it?

# BRAIN GAMES

3-6 YEARS

**What am I thinking?**

Think of something both you and your child know about e.g. pets, games, items in the home etc. Start by saying, 'I am thinking of .....'  
Ask your child to think of questions to guess what it is.  
**Key skills:** Develops questioning, language and reasoning about cause and effect.



**How many ways or uses?**

Ask your child, 'How many ways can you cross a road?' or you could use a story e.g. 'Goldilocks and the three bears,' when Goldilocks slowly enters the house. Ask your child, 'Can you think of different ways she could get into the house?'  
Encourage the use of vocabulary.

Take an everyday object such as a paper plate. Ask, 'What could this be used for?' Other examples: sunshade, hat, mask, frisbee, a fan, a cover for something. Praise them for interesting or imaginative ideas.



**Key skills:** Develops language skills creativity and imagination.

**Can you remember?**

Choose an interesting picture from a favourite book. Give your child time to study it then close the book. Can they remember 10 things from the picture?

**Key Skills:** Develops memory, language and vocabulary skills.

## I spy

Once your child knows letters and letter sounds they can play 'I spy'. Start by choosing something they can see. 'I spy with my little eye something beginning with ..... "**Made from**" I-spy - (something made from wood) "**Shape I-spy**" (something that is square)

"**Purpose**" I-spy (something that we eat).

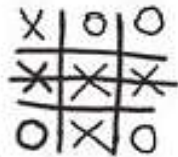
**Key Skills:** Develops memory, language letter sound perception and vocabulary skills.



**Development**— Start with I spy... but the person guessing must ask questions instead. They start by asking "Is it an animal, vegetable or mineral?" Then the person can only answer, "Yes" or "No". They need to ask questions using key concepts relating to size, e.g. is it bigger than a house? Purpose, e.g. Is it a type of vehicle? Shape e.g. Is it cuboid?

## Noughts & Crosses

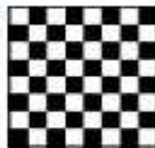
Players take turns marking the spaces of a 3 x 3 grid with either a 0 or a X. The player that succeeds in placing three 0s or Xs in a horizontal, vertical or diagonal line wins the game.



Key

**Skills:** Develops strategic thinking, planning and problem solving.

**Avoid 2 (or 3)** It is played on a draughts board with 8 counters each. The aim of the game is NOT to get two counters in a row either vertically, horizontally or diagonally.



**Key Skills:** Develops strategic thinking, planning and problem solving.

# BRAIN GAMES

6-9 YEARS



## 20 questions

One person thinks of an object then decides if it is animal (either live or made from an animal e.g. wool) vegetable (a plant or product that comes from plants e.g. wood) or mineral (anything else, such as metal stone or plastic) or a combination of both.

Players take turns to ask the person a question. The only answer that can be given is yes or no. If the player can guess the object before the 20 questions are asked, then they win. If not, the person thinking of the object wins.



## Who am I?

A person goes out of the room and the other decides on either a real or fictional character. The player then returns and has 20 questions to guess the person.

**Key skills:** Develops logic, language, questioning skills, speed of thinking.

## Connect

Explain how one word has a connection with another, for example, foot connects with ball, this then connects with beach - sand—castle— queen etc. This is like a game of word tennis!

**Key skills:** Develops language skills, vocabulary, concept building and creative thinking.



## Would you rather?

Is a simple questioning game between two or three alternatives. The challenge is for the child to explain their reasoning.



For example, would you rather be an ant or an elephant? Would you be a yes or a no? Would you rather be a colour or a sound? Why?

This can be developed into more alternatives e.g. Would you rather live in a house surrounded by the sea, snow or jungle?

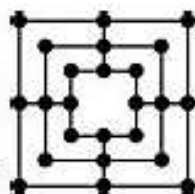
**Key skills:** Develops language, reasoning and creative thinking.

## Three in a row (2 players)

Each player has 4 counters. Players take turns to place their counter on the board trying to get three in a row either vertically, horizontally or diagonally. Once all counters have been placed they take turns to move their counters to get three in a row.

## Nine Men's Morris

Using the same board above the aim is to place three counters in a line. Each player has 9 counters. If there are not three in a row, players take turns to move one counter at a time. When a row of three is formed they can remove one of the other person's counters. Each time a new row of 3 is completed a counter is removed from your opponent. The winner is the player whose opponent has no counters left or resigns.



**Key skills:** Develops logic, strategic thinking, problem-solving, planning and predicting.

# BRAIN GAMES

## 9-11 YEARS

### Speed word (2 - 5 players)

The aim of the game is to define a set of words in a given time, e.g. 1 minute. To play you need to prepare lists of words (10-15) of common objects, e.g. clock, car, table, rose, apple, ball, cup, pen, jam & fish. The game involves one person trying to define an object without stating the word, e.g. If the word was clock you would say "It is not a person. It has hands, a face and you hang it on the wall." The person describing must describe as many of the words in one minute.

#### Variations -

- ◇ Name of people or places could be used.
- ◇ Limit the amount of words used for the definition.
- ◇ Prevent the describer from using certain words e.g. if describing a banana they are not allowed to use the word yellow.



**Key skills:** Develops quick thinking, vocabulary and verbal fluency.

### Categories (2—4 players)

Choose a list of categories, e.g. animals, countries, food and famous people. A letter is chosen, e.g. 'F' Everyone has to write down an answer for each category, fox, France, frankfurt & Frank Lampard. Everyone reveals their answers. Players only score points for each unique answer that no other player has guessed.

**Key skills:** Develops quick thinking, vocabulary and verbal fluency.



## Magic Square

Children have to add the numbers in each row vertically, horizontally and diagonally so the total to each row is 15. The magic square can be increased in size and have different totals.

**Key skills:** Develops logic, understand number and strategic thinking.

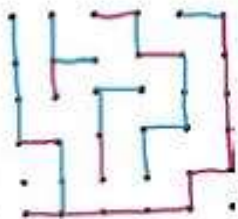
2	9	4
	5	

## Squares game (2 players)

You will need either dotted paper or to draw a square grid with dots (this can be any size depending how long you want the game to last!)

Each person takes a turn to draw a single line from one dot to another either vertically or horizontally. The aim of the game is to complete the most amount of squares by giving away as few as possible to your opponent.

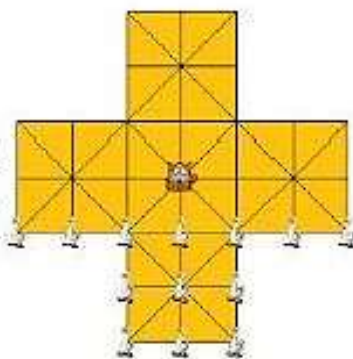
**Key skills:** Develops logic, strategic thinking, problem solving, planning and prediction.



## Fox and geese (2 players)

This is played on a solitaire board. There are 13 white pieces (geese) and 1 black (fox). The first player moves the fox. The fox can move one square in any direction or jump over a goose if it is next to it (it must land in an empty box). If a goose is jumped over it is removed from the board. Player 2 (the geese) can only move forward or sideways and cannot jump. The geese win if they surround (trap) the fox. This cannot happen if too many have been eaten. The fox wins if he eats enough geese.

**Key skills:** Develops logic, strategic thinking and planning.



# HEALTHY BODY, HEALTHY MIND

Exercise affects the brain in multiple ways. It increases heart rate, which pumps more oxygen to the brain. It also helps the body release hormones which participate in aiding and providing a nourishing environment for the growth of brain cells.

- ✓ Children under five need three hours of activity a day
- ✓ Children aged five to 11 need to be active for at least 60 minutes each day.

Small changes can make a big difference. Try the following:

- ✓ Walking to school
- ✓ Get off the bus two stops early
- ✓ Play football in the park or garden
- ✓ Play dance games in the front room
- ✓ Try creating an obstacle course with everyday objects
- ✓ Try a bike ride.



# SLEEP

Sleep is needed for good health and brain function. Poor sleep reduces concentration.



**Tired children will have a tired brain!**

Amount of sleep needed

3yrs - 12 hours

4yrs - 11 ½ hours

5yrs - 11 hours

6 yrs - 10 ¾ hours

7 yrs - 10 ½ hours

8 yrs - 10 ¼ hour

9 yrs - 10 hours

10 yrs - 9 ¾ hours

# STRATEGIES FOR THINKING

Children need to be able to judge, analyse and think critically. They also need to think clearly and creatively and use information to solve problems. If we allow them time to reflect on their tasks and to challenge ideas, they will be able to deepen their understanding.

Remember :

- ✓ Talk to your child - have meaningful discussions.
- ✓ Play board games with your child.
- ✓ Teach children the strategies as well as the rules.
- ✓ Encourage your child to experiment with a wide range of vocabulary.
- ✓ Model your thinking aloud and encourage your child to do the same.

## WEBSITES

<http://www.bbcgoodfood.com/howto/guide/10-foods-boost-your-brainpower>

<http://www.psychologytoday.com/blog/you-illuminated/201010/why-your-brain-needs-water>

<http://nrich.maths.org/frontpage>

<http://www.nhs.uk/Change4Life/Pages/why-change-for-life.aspx>

<http://www.jumpstart.com/parents/activities/critical-thinking-activities>

<http://www.brainbox.co.uk/>

<http://www.bbc.co.uk/scotland/brainsmart/>

<http://www.funbrain.com/>