M.A.D !

EXERCISE PHYSIOLOGIST ⟷ SPORT PSYCHOLOGIST

PSYCHO-PHYSIOLOGIST

ASHRIDGE
DEFENCE ACADEMY
INTERNATIONAL SPORT

Different outcomes, similar processes

Budgets, ego's, media, dysfunctional individuals and teams, non work issues, pressure, travel, long hours, data overload, non negotiable performance targets, lifestyle issues, coaching etc

Overview

- This session will look at the link between the mind and the body and investigate ways in which individuals can create a realistic competitive advantage in their chosen field. The session uses examples from business, sport and the military and will cover brain and body physiology and a unique new approach to mental development which is interactive, innovative a great fun.

"To be an effective leader you have to be mentally and physically robust"

Sir John Harvey-Jones

Roman Poet Juvenal

- It is to be prayed that the mind be sound in a sound body.
- Ask for a brave soul that lacks the fear of death,
- which places the length of life last among nature's blessings,
- which is able to bear whatever kind of sufferings,
- does not know anger, lusts for nothing and believes
- the hardships and savage labors of Hercules better than
- the satisfactions, feasts, and feather bed of an Eastern king.
- I will reveal what you are able to give yourself;
- For certain, the one footpath of a tranquil life lies through virtue.
-
- *orandum est ut sit mens sana in corpore sano.*
- *fortem posce animum mortis terrore carentem,*
- *qui spatium uitae extremum inter munera ponat*
- *naturae, qui ferre queat quoscumque labores,*
- *nesciat irasci, cupiat nihil et potiores*
- *Herculis aerumnas credat saeuosque labores*
- *et uenere et cenis et pluma Sardanapalli.*
- *monstro quod ipse tibi possis dare; semita certe*
- *tranquillae per uirtutem patet unica uitae.*
- (10.356-64)

Group thinking

THE BODIES

Physical Characteristics
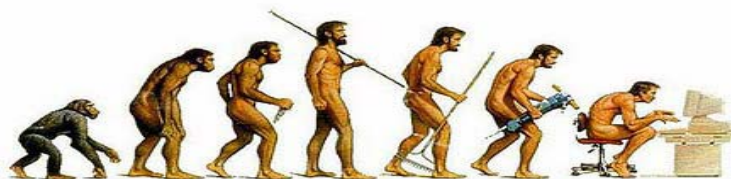
THE BRAINS

Mental Characteristics

WHO IS UNDER PRESSURE RIGHT NOW ?
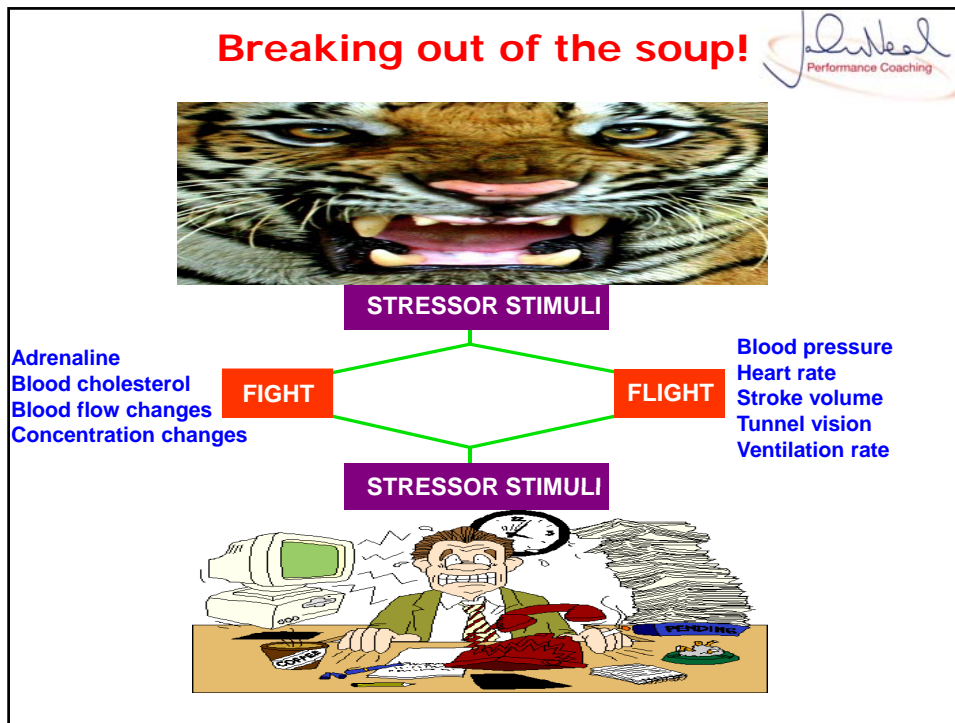
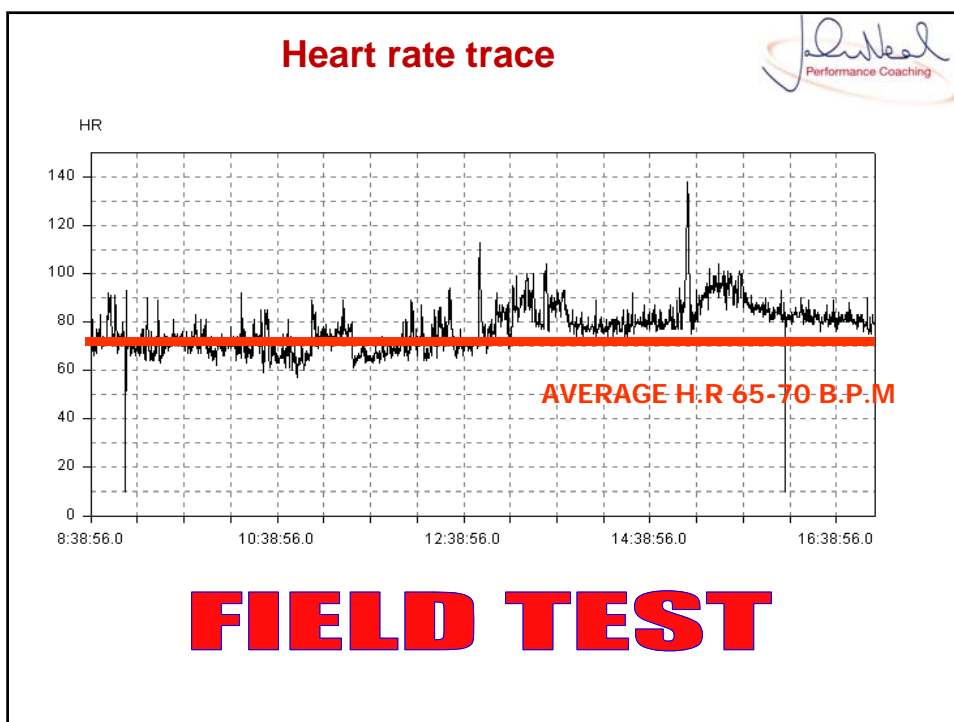**Evolution has been too slow!**

We are all animals – highly evolved

But animals all the same

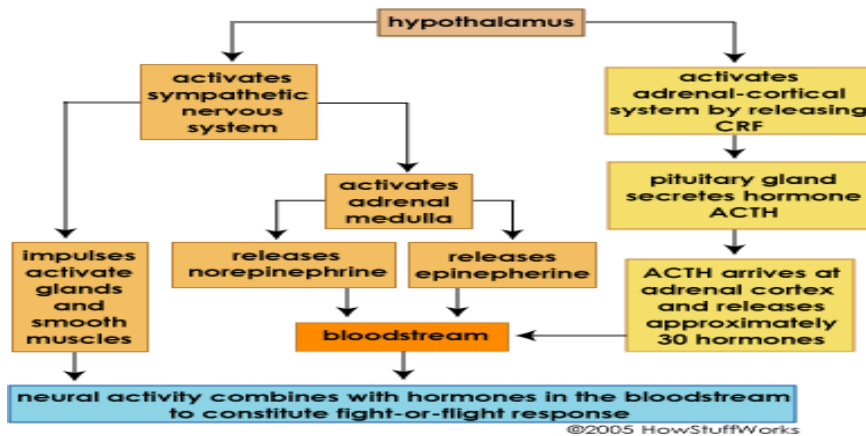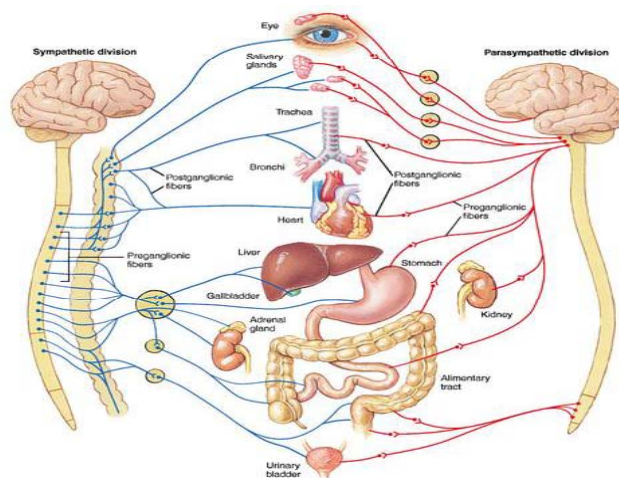## Breaking out of the soup!

STRESSOR STIMULI

Adrenaline
Blood cholesterol
Blood flow changes
Concentration changes

FIGHT

FLIGHT

Blood pressure
Heart rate
Stroke volume
Tunnel vision
Ventilation rate

STRESSOR STIMULI

Heart rate and cognition

130 b.p.m   30% cognitive capability

175 b.p.m   3% cognitive capability

Heart rate trace

AVERAGE H.R 65-70 B.P.M

FIELD TEST

The process in action

hypothalamus

activates sympathetic nervous system

activates adrenal-cortical system by releasing CRF

activates adrenal medulla

pituitary gland secretes hormone ACTH

impulses activate glands and smooth muscles

releases norepinephrine

releases epinepherine

ACTH arrives at adrenal cortex and releases approximately 30 hormones

bloodstream

neural activity combines with hormones in the bloodstream to constitute fight-or-flight response

©2005 HowStuffWorks

Mind – body link

Eye

Sympathetic division

Salivary glands

Parasympathetic division

Trachea

Bronchi

Postganglionic fibers

Postganglionic fibers

Preganglionic fibers

Heart

Liver

Stomach

Preganglionic fibers

Gallbladder

Kidney

Adrenal gland

Alimentary tract

Urinary bladder

The core brain at work

Thalamus
Hypothalamus
Prefrontal cortex
Olfactory bulb
Amygdala
Hippocampus

What to do ?

- Coping
- Confronting
- M.A.D

EXERCISE SMARTER

SLEEP

COPING

RELAXATION	HEALTHY EATING & H20
SLEEP : SWS	SEX
MASSAGE	COMMUNICATION
FRIENDSHIPS	SUPPORT
SECURITY	REDUCE NOISE
LAUGHTER	SUNSHINE & LIGHT

CRUTCHES - DRUGS, ALCOHOL, FOOD, CIGS, ETC

What do you want to learn?
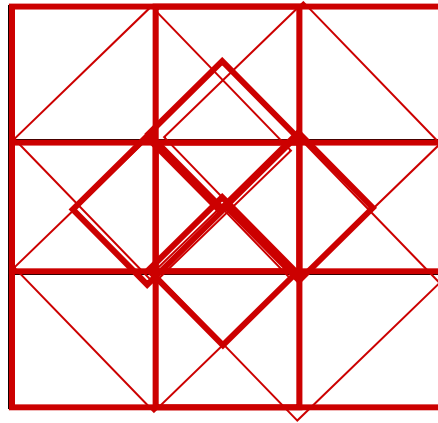
How do you LEARN BEST?

M.A.D !

LOGOTHERAPY

THE 60TH ANNIVERSARY EDITION OF
THE CLASSIC BESTSELLER

VIKTOR E. FRANKL

MAN'S SEARCH FOR MEANING

OVER THREE MILLION COPIES SOLD!

"Perhaps the most significant thinking since Freud and Adler."
—The American Journal of Psychiatry
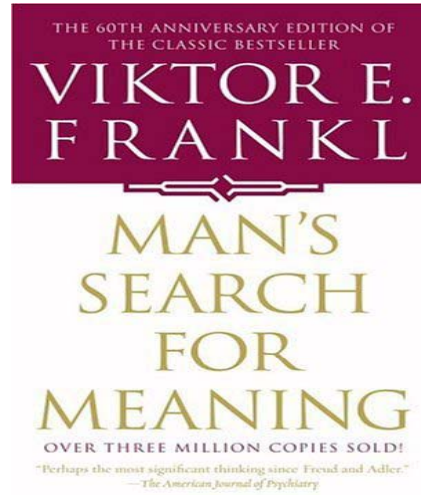
Which side dominates under pressure?
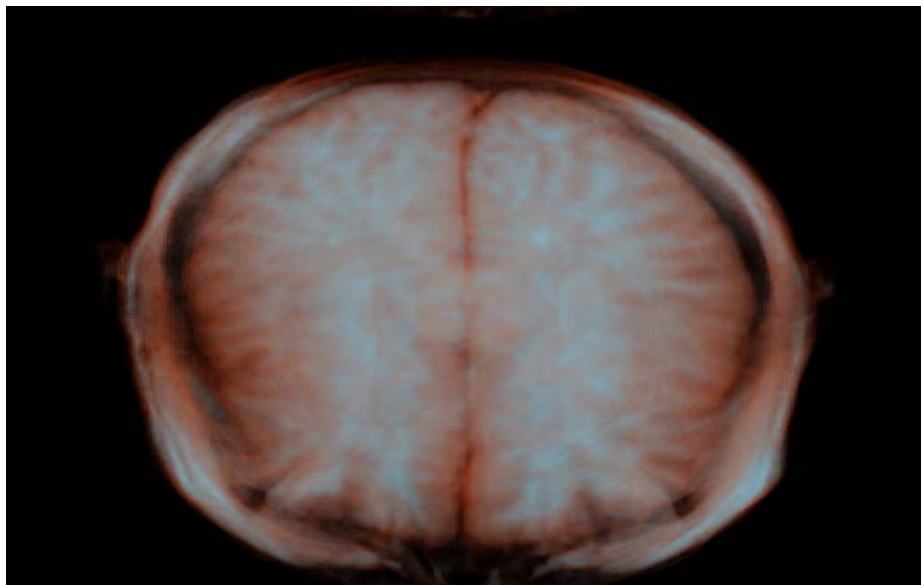
As fast as you can on this one…..

Ready.?

How many squares are there here ?

The results have been staggering and are shown below on the graphs.

Average improvement in reading age (NfER)	Average improvement in comprehension (SATs)	Average improvement in writing (SATs)

Before DDAT

During DDAT

19 months

6 months

Before DDAT

During DDAT

0.78 level change

0.16 level change

Before DDAT

During DDAT

1.1 level change

0.3 level change

Progress in **Reading** was more than **3 times greater** than in the previous year

Progress in **Comprehension** was nearly **5 times greater** than in the previous year

Progress in **Writing** was **17 times greater** than the previous year

300% improvement in reading
500% improvement in comprehension
1700% improvement in writing

Self-esteem

Self-esteem and other things improve too!

Many report huge improvements in self-esteem, sporting ability and concentration whilst on the programme.
So, we measured how the research patients felt after 12 months of DDAT exercises.

Subjective changes measured over twelve months   ■ Control group   ■ on DDAT
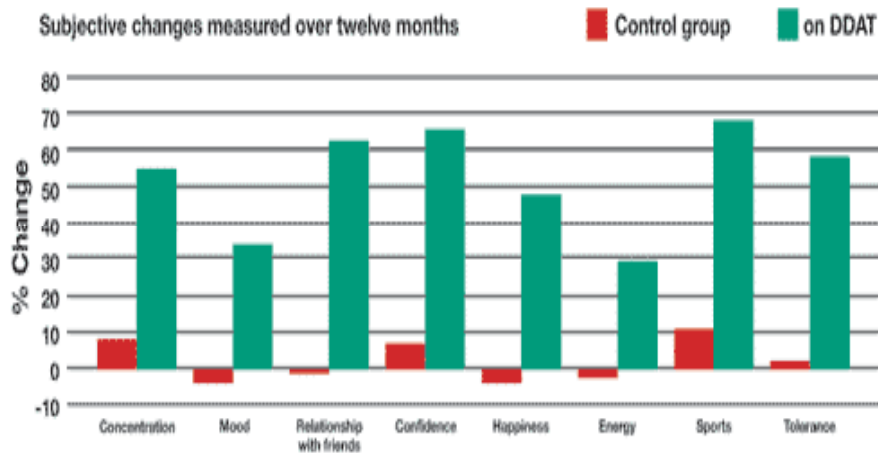
Which side of your brain is dominant?

Mentally Athletic Training

- These tests will asses your:
- Left right brain co-ordination
- Memory
- Decision making
- Spacial awareness
- Creativity
- Eye tracking

L – R Co-ordination

- Rotate your left foot anti clockwise
- Now draw a figure 6 in the air with your right hand

L – R Co-ordination

How on Earth?

I cdnuolt blveiee taht I cluod aulaclty uesdnatnrd waht I was rdanieg
The phaonmneal pweor of the hmuan mnid! Aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it deosn't mttaer inwaht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit a porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe. Amzanig huh? Yaeh, and I awlyas thought slpeling was ipmorantt.
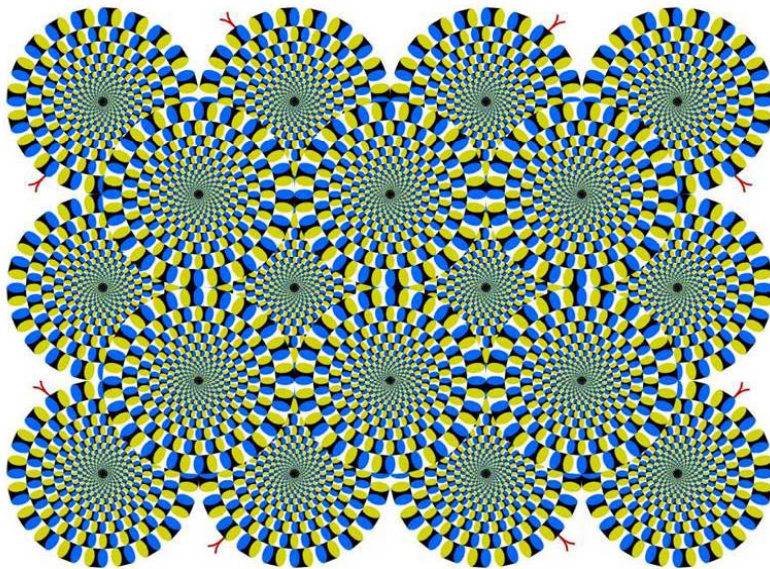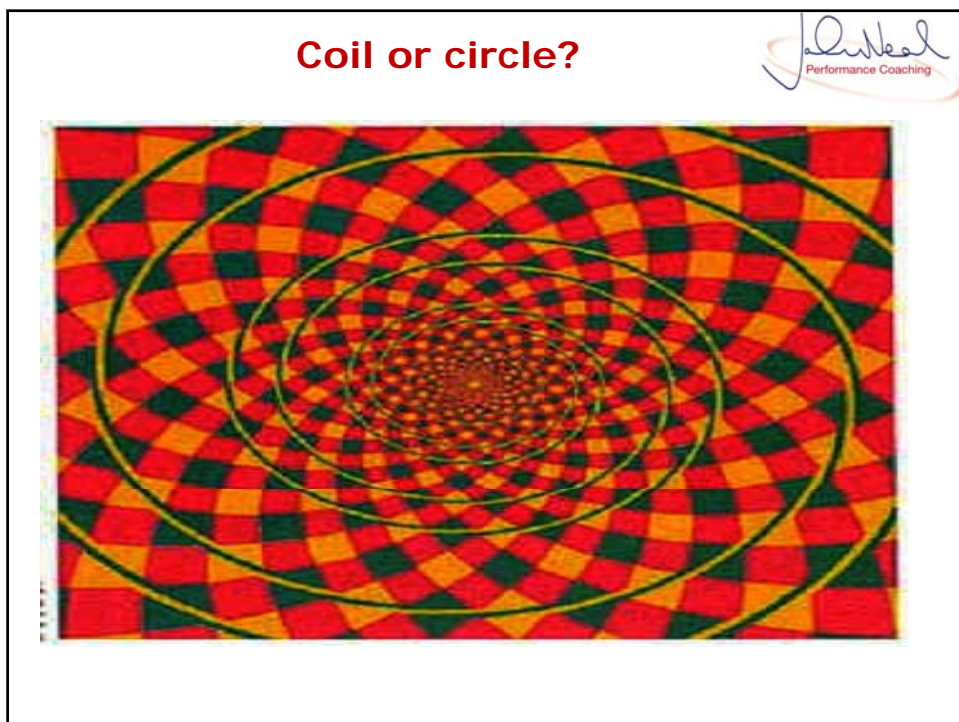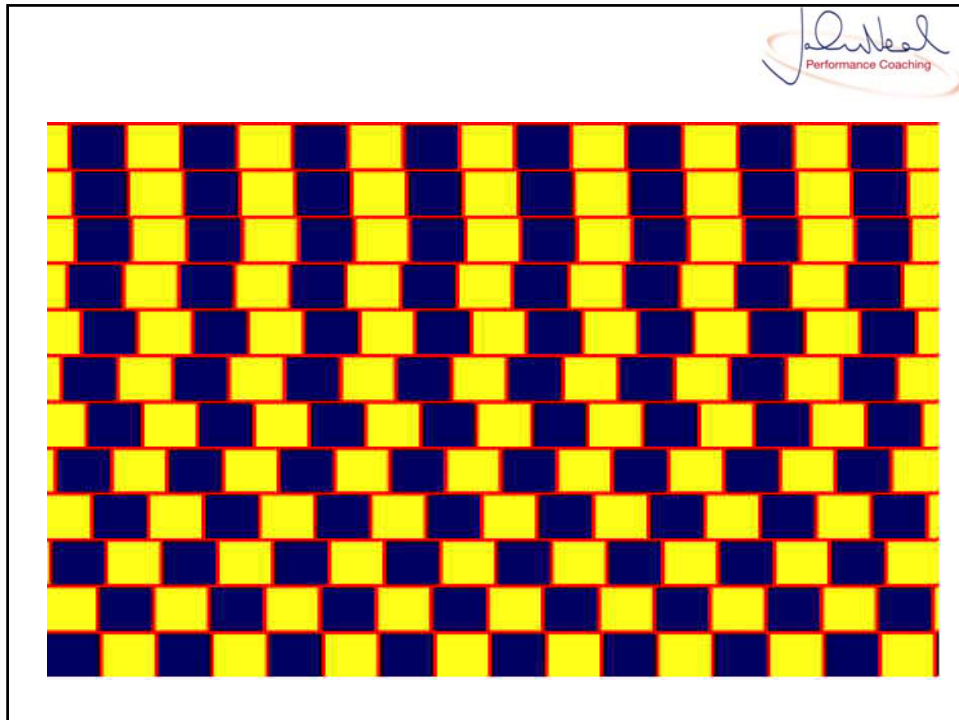
Take a look at the picture? What do you see?
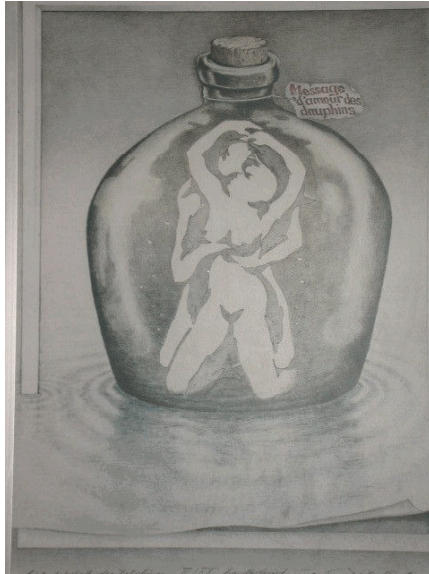
Research has shown that young children cannot identify the intimate couple because they do not have prior memory associated with such a scenario.
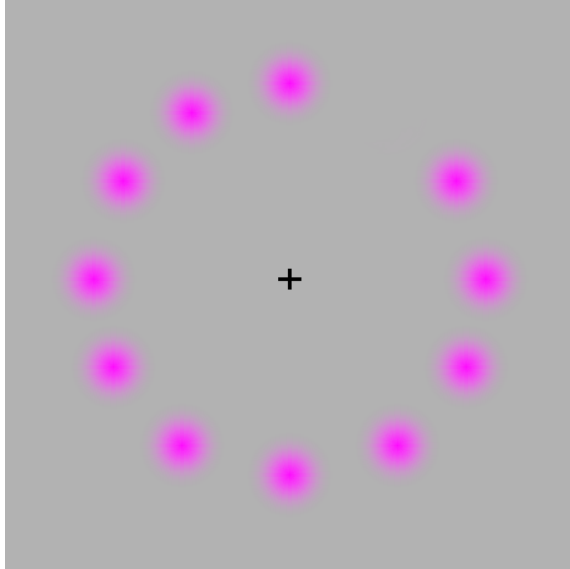
Children see nine dolphins.

Coil or circle?
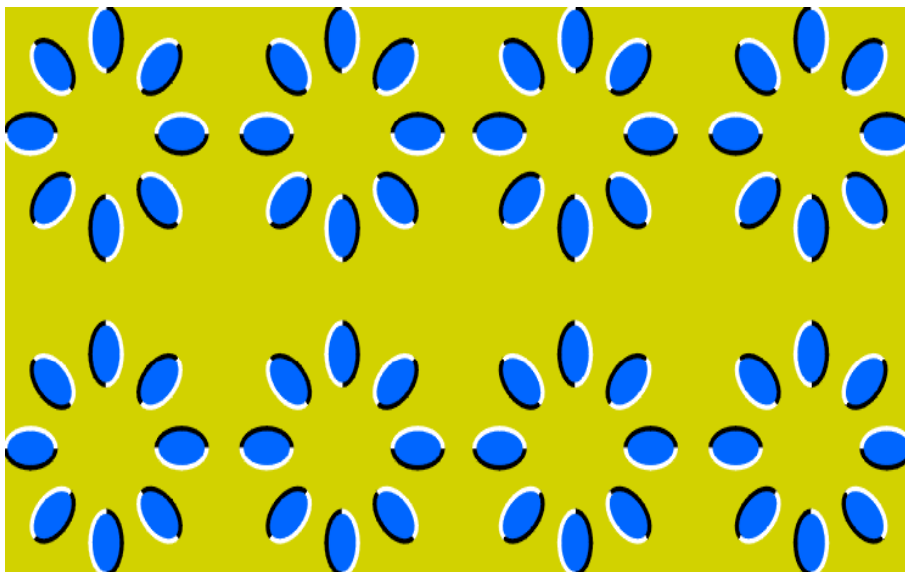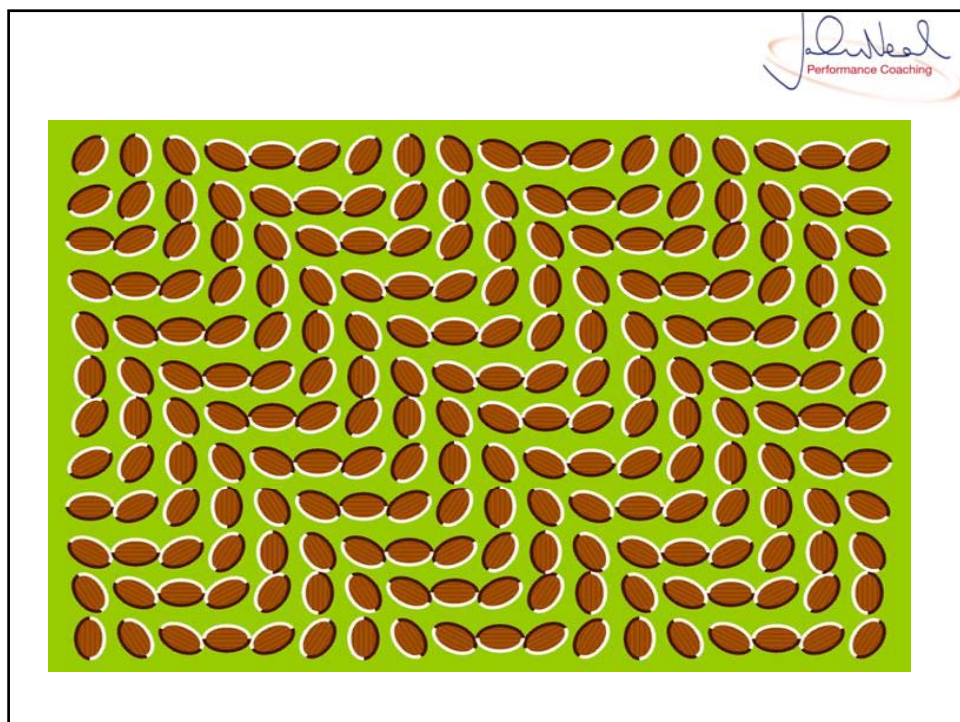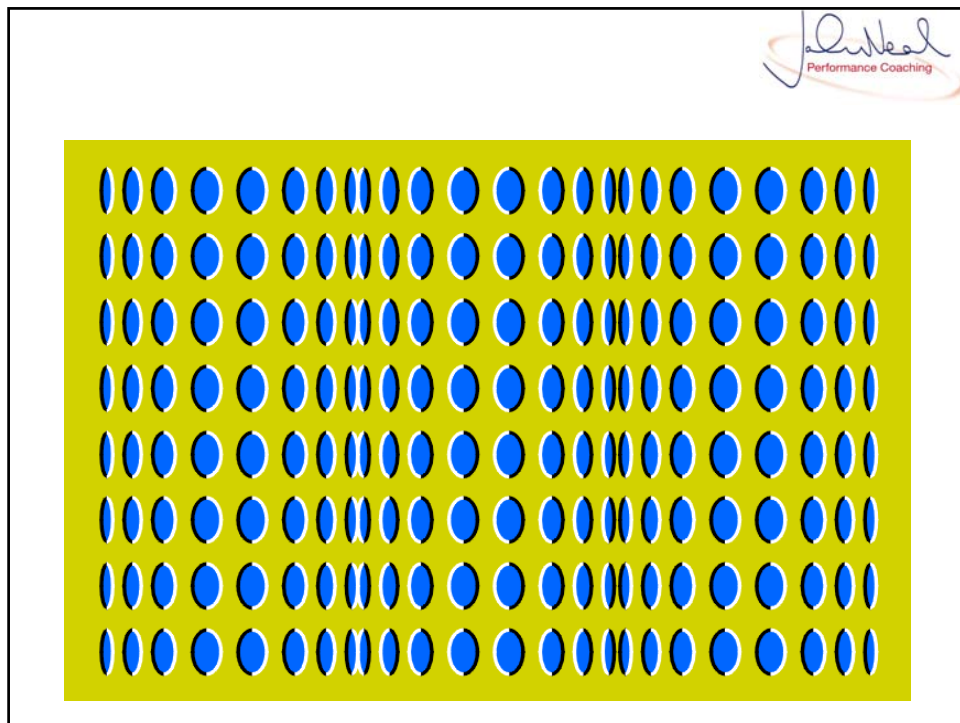
**Concentrate on the cross in the middle,
after a while you will notice that this moving
purple dot will turn green!**

Look at the
cross a bit
longer and you'll
notice that all
dots except the
green one will
disappear.

Decision making - Spatial awareness

How many 4's ?

4   2   6   4

1   2   4

Answer = 3

Read out the colours not the words

BLUEREDGREEN

BLUEREDGREEN

BLACKORANGE

Read out the words

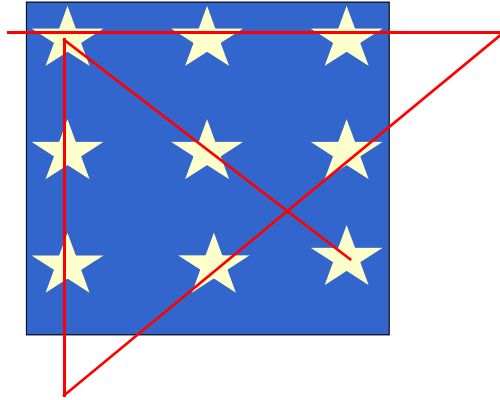# BLUEORANGE
BLUEREDGREEN
REDBLACKGREEN

Logical thinking under pressure

- Can anybody count down from 0 – 100 ?

- Must be done out loud

- Group can try to distract them mentally
- The group CAN'T touch them in any way
- The group CAN'T throw anything

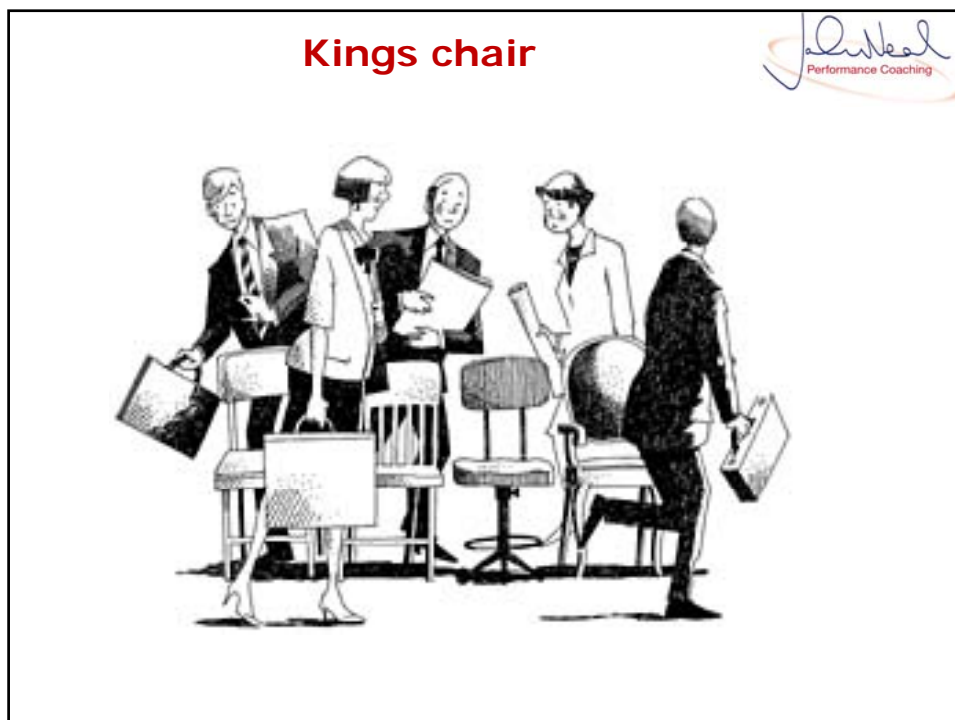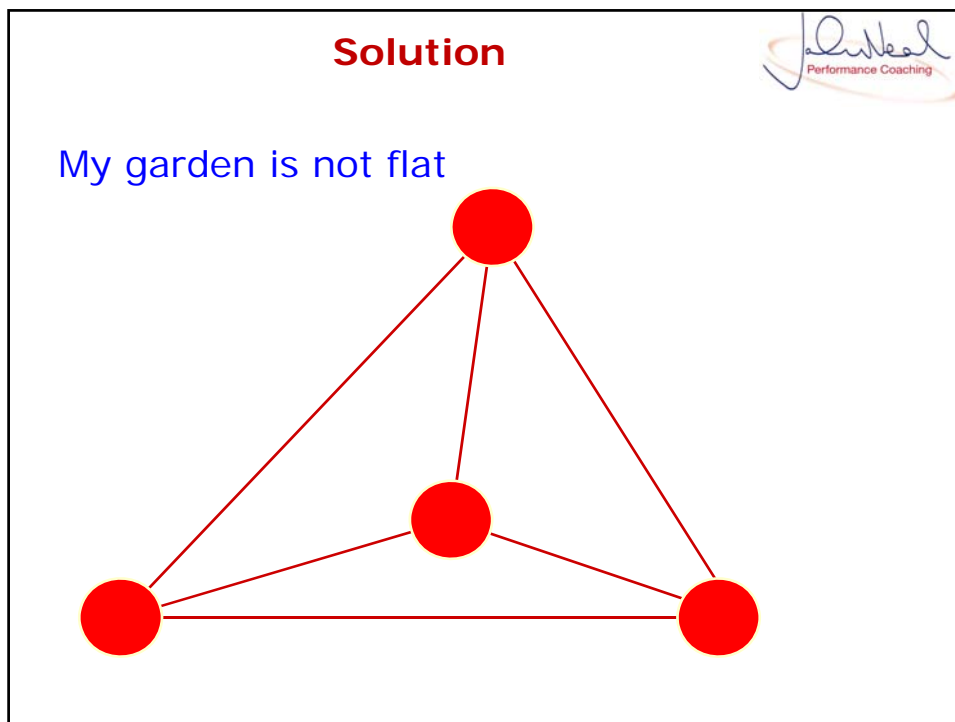## Problem solving exercise

Using four straight lines join up all the stars
without your pen leaving the paper

There are four trees to be planted in my garden.

They must all be the same distance apart
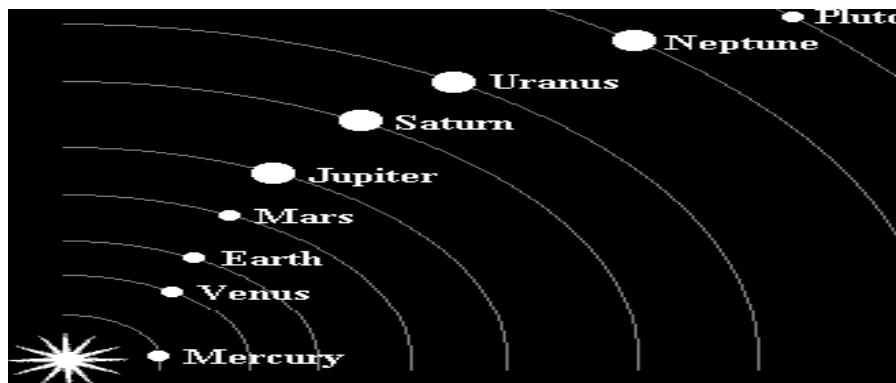How will you plant them?

Solution

My garden is not flat

Kings chair

Memory and creativity

Creativity and Memory

What is the planetary sequence in our solar system

Average result is **ONE** correct

THE SOLAR SYSTEM

A LITTLE MORE CREATIVE

Eye tracking

- Read the poem on the left whilst looking at and
- tracking the associated images on the right.

Man in the mirror

When you get all you want and
you struggle for self,
and the world makes you king for a day,
then go to the mirror and look at yourself
and see what that man has to say.
For it isn't your mother,
your father or wife
whose judgment upon you must pass,
but the man, whose verdict
counts most in your life
is the one staring back from the glass.
He's the fellow to please,
never mind all the rest.
For he's with you right to the end,
and you've passed your most difficult test
if the man in the glass is your friend.
You may be like Jack Horner and
"chisel" a plum,
And think you're a wonderful guy,
But the man in the glass
says you're only a bum
If you can't look him straight in the eye.
You can fool the whole world,
down the highway of years,
and take pats on the back as you pass.
But your final reward will be
heartache and tears

if you've cheated the man in the glass.

Sensory awareness

It's nothing new!

How MAD are you?