YOUR TEENAGER IS DRIVING YOU MAD?

Cavendish Connect
Student, Staff & Family Community

The Cavendish High Academy
A Special School in Cognition & Learning

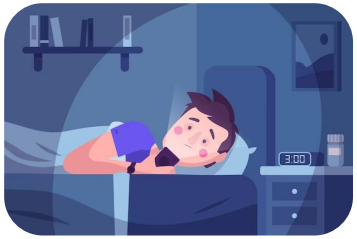
Three week course - *22/09/23 29/09/23 06/10/23*

Course Lead - *Donna Tofts*

Session break down

Session One

Teen Brain
Brain function
Brain development
Sleep



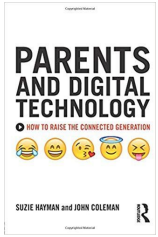
Session Two

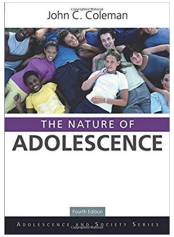
Hormones
Communication
Behaviour

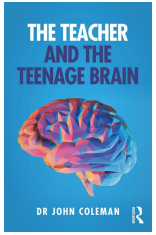
BEWARE:
HORMONAL TEENAGER INSIDE

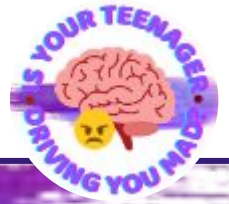
Session Three

Special Guest
Dr John Coleman









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The Team

Donna Tofts

Student and Family Liaison Manager

Student + and Family Liaison Manager

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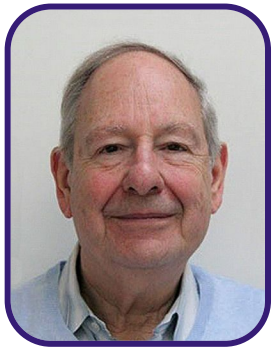
Guest Speaker

Dr John Coleman

Psychologist

Psychologist

https://www.jcoleman.co.uk/



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Is Your Teenager Driving You Mad?

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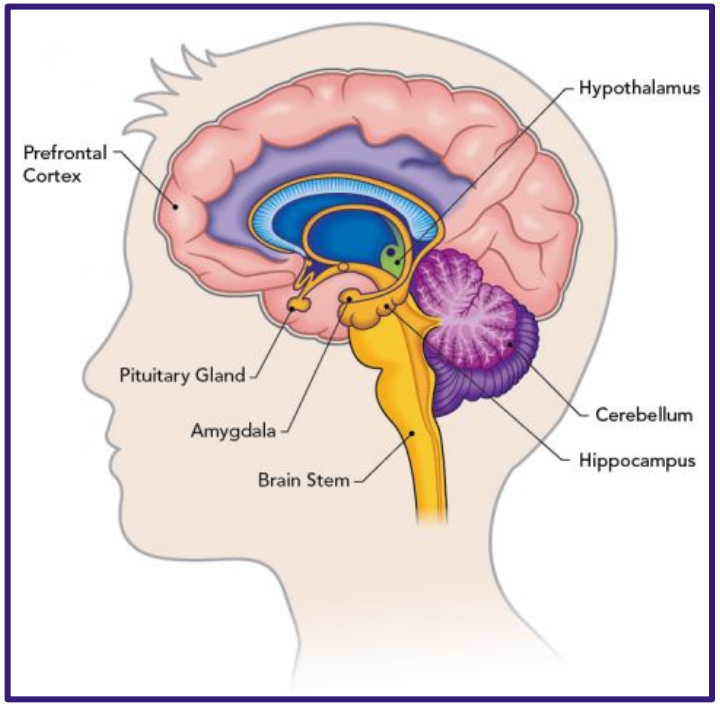
TEENAGER INSIDE

Session Two

RECAP



- The prefrontal cortex (thinking and reasoning)
- The amygdala (emotion, sensation and arousal)
- The hippocampus (memory)

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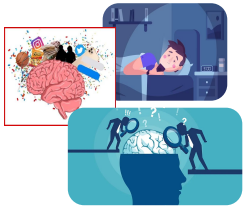

Session One

Back to the brain. Let's think a bit more about pruning.

- We have learnt that there is a major increase in gray matter at the end of childhood;
- The following years see a gradual decrease in this matter – this is known as pruning;
- In essence the brain concentrates on the useful neurons and connections, and lets the others die away;
- This is an essential process, but involves a really big reorganisation.
- A 17% reduction in gray matter.

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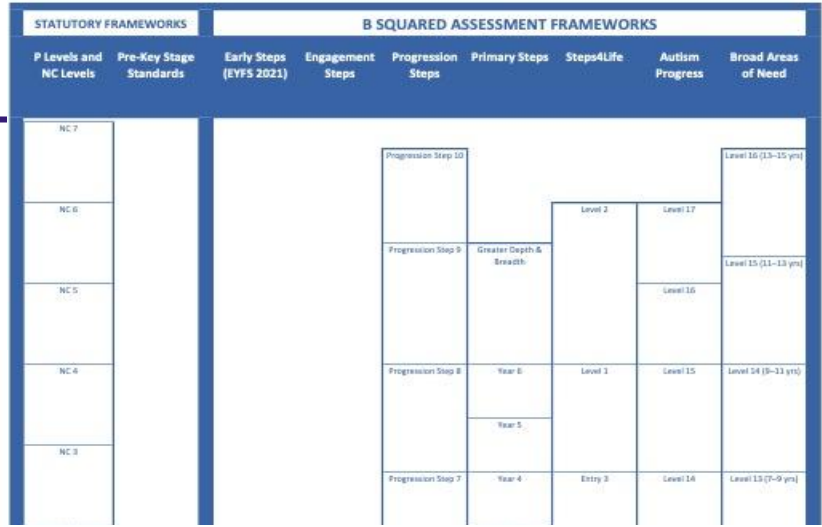
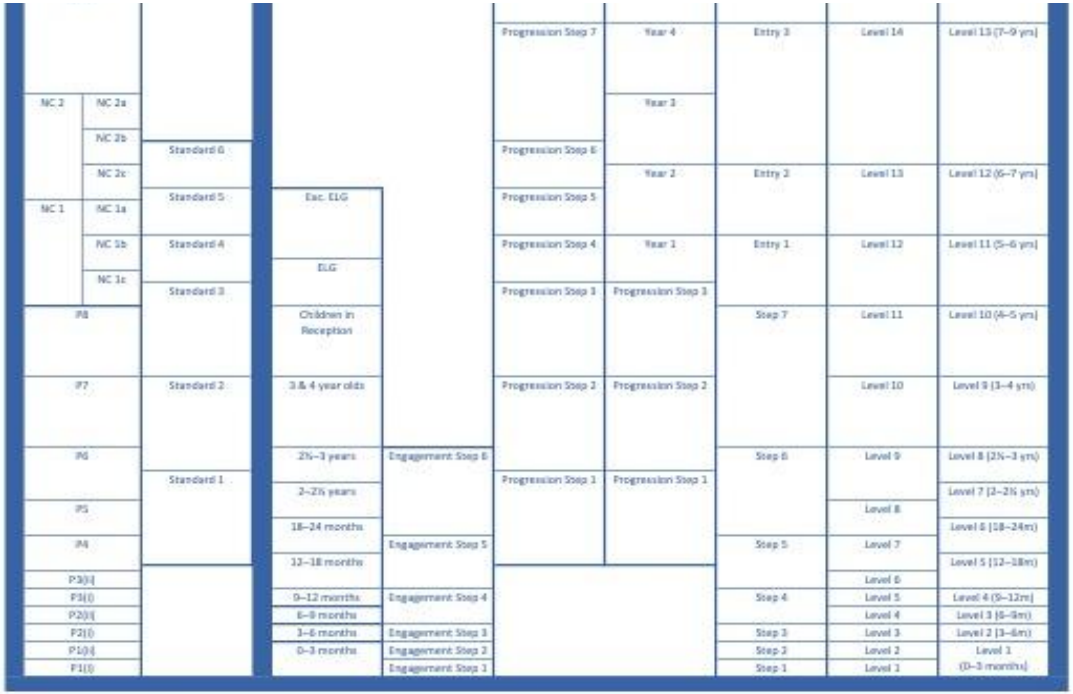
TEENAGER INSIDE

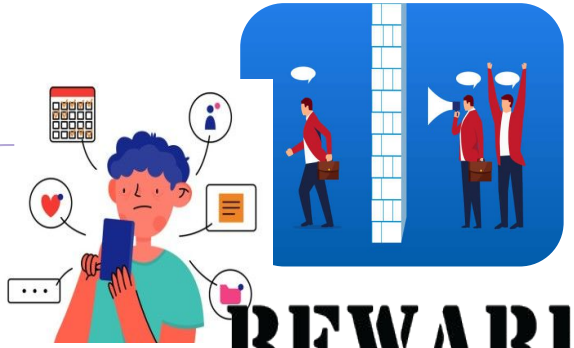
Session Two

Academic Ability





Session Two



Communication

Hormones

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Behaviour

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Hormones

Puberty is the process when males and females become capable of producing children. Puberty begins when a small gland near the brain called the pituitary gland starts to release hormones.

A hormone is a special chemical which is made in a gland, and is released into the bloodstream.

Hormones carry messages from one part of the body to another.

For example - adrenaline, improve performance

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HORMONAL
TEENAGER INSIDE

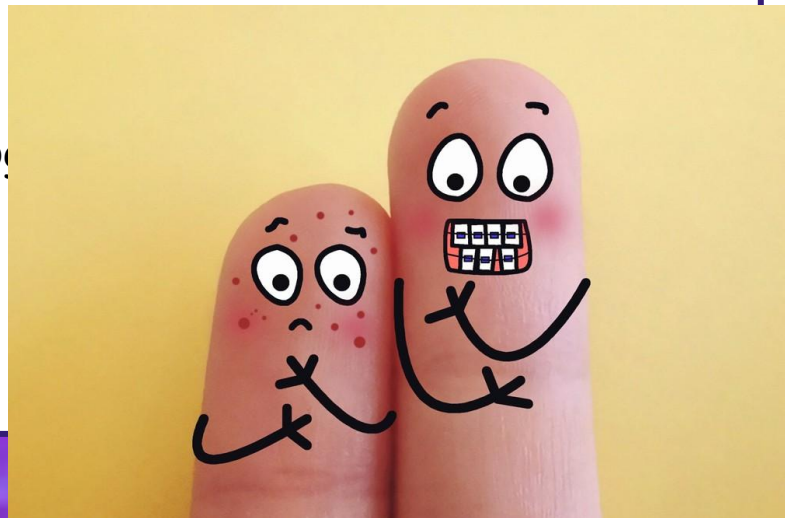
Session Two

Hormones

The pituitary gland is responsible for your growth.

In addition to the pituitary gland notifies the reproductive glands that it is time to for some change in your body.

The reproductive glands start making their own hormones. The two main hormones for females estro and progesterone. Male hormone is testosterone.



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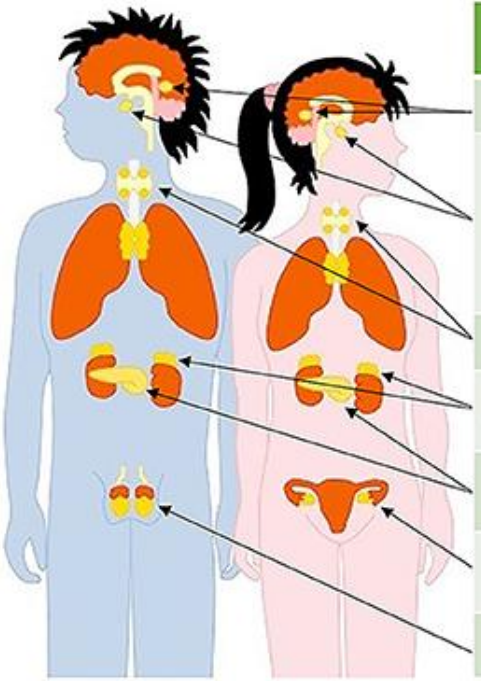
Session Two

Hormones



Gland	Hormone	Target Organ	Function
Pineal gland	Melatonin	Many	Biological clock
Pituitary gland	FSH / LH ADH Growth hormone Oxytocin Prolactin	Ovaries Kidneys Uterus Breast tissue Many others	Menstrual cycle Osmoregulation Growth & division Birth contractions Milk production
Thyroid gland	Thyroxin	Liver	Metabolic rate
Adrenal glands	Adrenaline Cortisol	Many	Fight or flight Anti-stress
Pancreas	Insulin Glucagon	Liver	Blood sugar levels
Ovaries	Estrogen Progesterone	Uterus	Menstrual cycle
Testes	Testosterone	Many	Male characteristics

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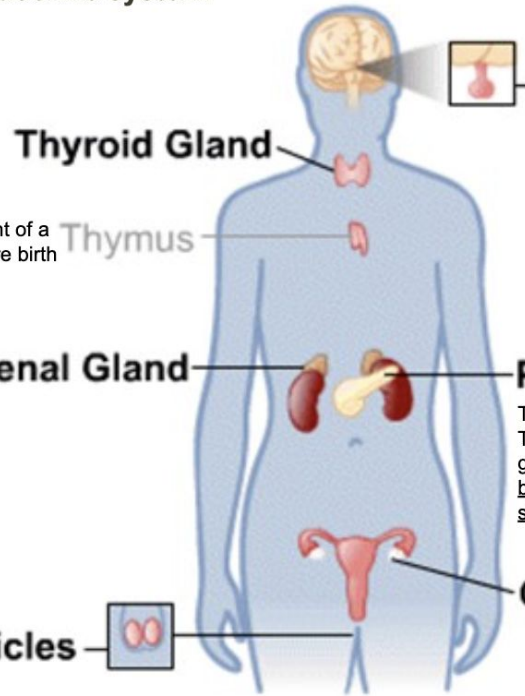
Endocrine System

- ***The endocrine system*** **is instrumental in regulating mood, growth and development, tissue function, metabolism, and sexual function and reproductive processes.**
- **The endocrine system consists of glands throughout the body that regulate body functions.**
- **The hormones that cause the physical and emotional changes of adolescence are produced by your endocrine system.**



Controls the rate at which cells burn fuels from food to produce energy. **Thyroid hormones help kids' and teens' bones grow and develop, and they also play a role in the development of the brain and nervous system**.

Thyroid Gland

Plays a role in the development of a **child's immune system** before birth and for a time thereafter.

Thymus

Pituitary Gland

Also known as the **"Master Gland".** Signals the reproductive organs to make sex hormones The pituitary gland also controls ovulation and the menstrual cycle in women

The outer part, produces hormones that influence or regulate salt and water balance in the body, the body's response to stress, metabolism, the immune system, and sexual development and function.
The inner part, produces hormones, such as epinephrine. Also called adrenaline, epinephrine increases blood pressure and heart rate when the body experiences stress.

Adrenal Gland

Pancreas

Two important hormones, **insulin and glucagon.** They work together to maintain a steady level of glucose, or sugar, in the blood and to keep the body supplied with fuel to produce and maintain stores of energy.

Testicles

Ovary

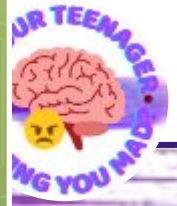
Produce eggs and secrete the female hormones estrogen and progesterone. Estrogen is involved when a girl begins to go through puberty. Estrogen and progesterone are also involved in the regulation of a girl's menstrual cycle. These hormones also play a role in pregnancy.

Changes associated with puberty, like penis growth, height, deepening voice, and growth in facial and pubic hair, sperm production.

Changes in Girls

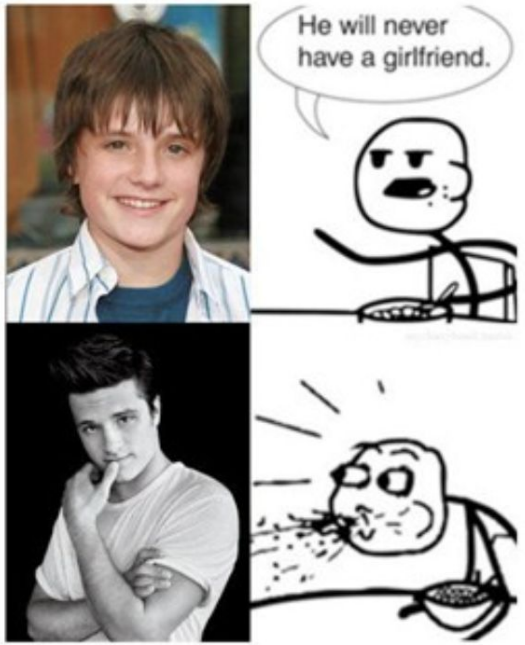
- Sudden Rapid Growth (11-14, 3 inches, 9 ½ -14 ½ yrs.)

- All permanent teeth come in
- Breast develop (7-13yrs.)
- Pubic hair appears (7-14yrs.)
- Underarm hair appears
- Acne may appear
- Perspiration increases
- External genitals enlarge
- Hips get wider (10-16 yrs.)
- Waistline gets narrow (10-16 yrs.)
- Ovulation occurs (10-16 ½ yrs.)
- Menstruation starts
- Uterus and ovaries develop
- ***Remember this is an average***



Changes in boys

- Sudden rapid growth (13-16yrs, 6-7inches)
- All permanent teeth
- Acne appears
- Underarm hair appears (14 yrs.)
- Pubic hair appears (12 yrs.)
- Perspiration increases
- External genitals enlarge (11-13 yrs.)
- Breast may enlarge somewhat (13 yrs.)
- Shoulders get broader)
- Muscles develop Sperm production starts
- Facial hair appears (15-16 yrs.)
- Larynx gets larger
  and voice deepens (13-15 yrs.)
- Hairline begins to recede
- **Remember this is an average**



Session Two

Hormones

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Hygiene

Shaving,
Deodorant,
Acne

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Managing Hormones

- **Get enough protein**. Proteins provide amino acids that your body cannot make on its own and are needed to produce peptide hormones. These hormones play a crucial role in regulating several physiological processes, including growth, energy metabolism, appetite, stress, and more.
- **Exercise regularly**. Getting enough physical activity strongly influences your hormonal health. It enhances hormone receptor sensitivity, helping the delivery of nutrients and hormone signals.
- **Maintain a moderate weight**. Weight gain is directly associated with hormonal imbalances. Obesity relates to a lack of ovulation in women. Eating within your calorie range can help maintain hormonal balance.
- **Watch your gut health**. Your gut produces numerous metabolites that can affect hormone health.

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Managing Hormones

- **Lower sugar intake**. Minimizing added sugar intake can help balance hormones. Eating added sugar promotes insulin resistance, and fructose intake is linked to disruptions in the gut microbiome, ultimately leading to hormonal imbalances.
- **Reduce stress**. Stress can significantly harm the body's hormones in many ways. Work to decrease and manage your daily stress.
- **Get enough sleep**. Sleep is one of the most important factors in hormonal imbalance. The levels of hormones can rise and fall throughout the day due to the quality of sleep.
- **Eat healthy fats**. Healthy fat intake can work to maintain balanced hormones that are involved with appetite, metabolism, and feeling full.
- **Eat plenty of fiber**. Fiber plays a role in gut health, helping regulate hormones like insulin.

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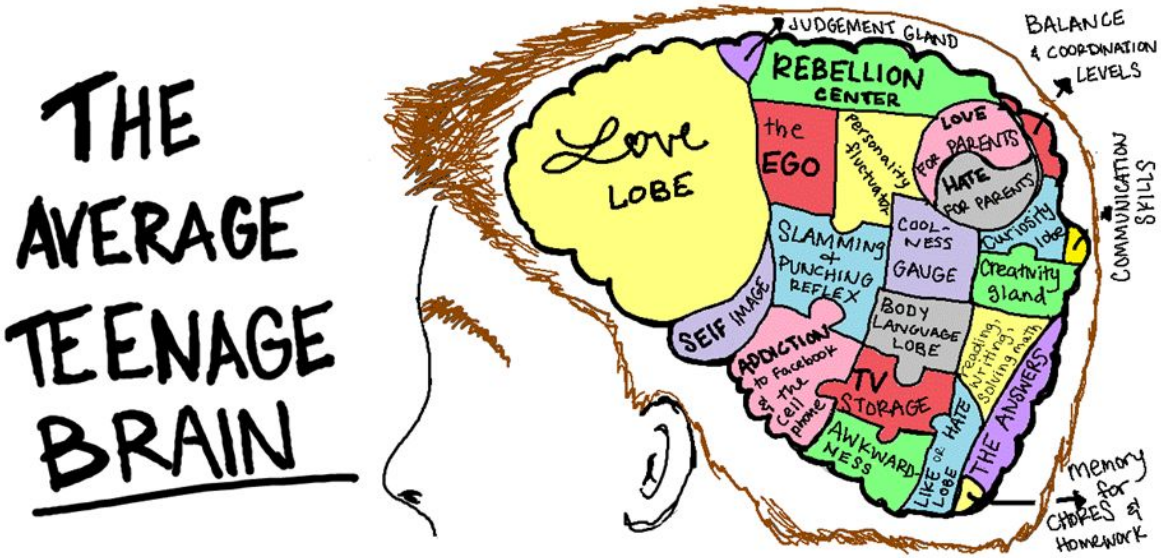
HORMONAL
TEENAGER INSIDE

Session Two

Hormones



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Hormones

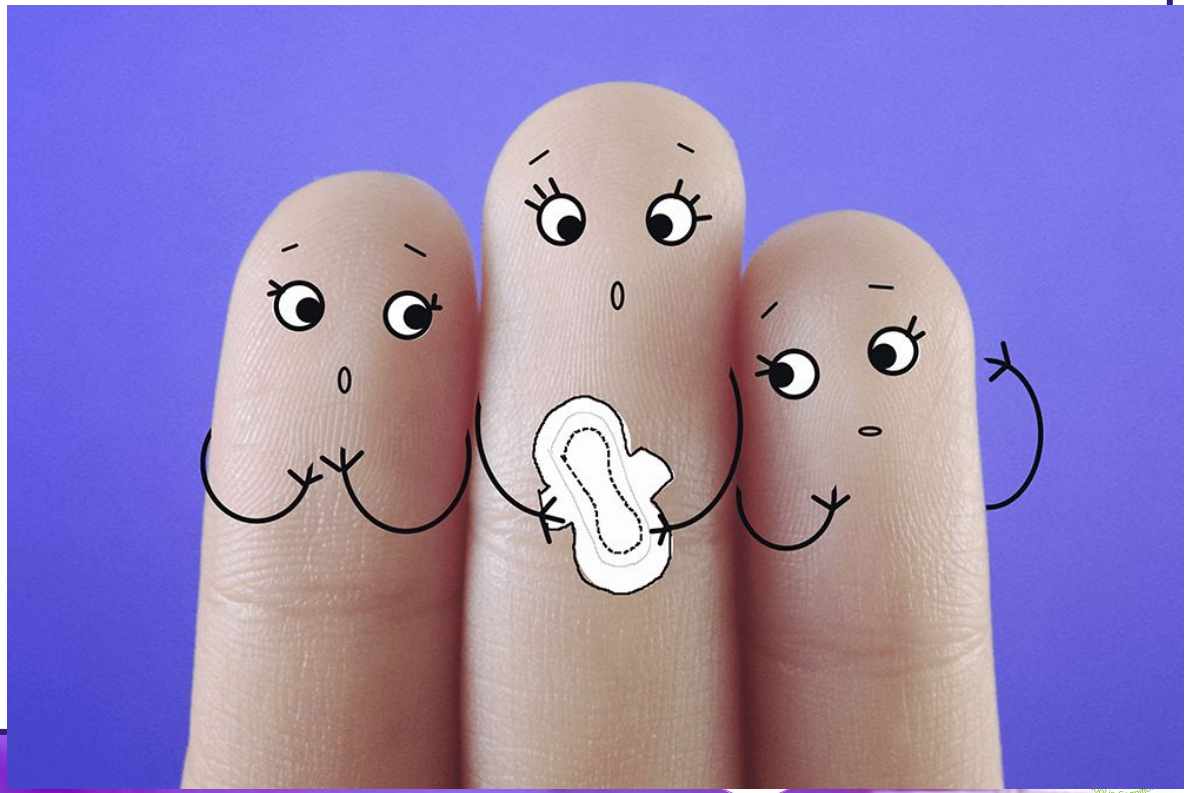
Sexuality

Menstruation

Erections and
Nocturnal Emissions

Masturbation

Attractions and
Crushes



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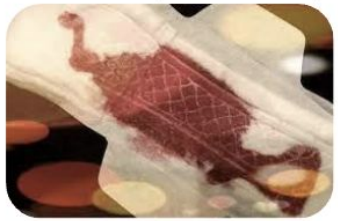
TEENAGER INSIDE

Hormones

social story about

Periods

I need to change my pad regularly when I am on my period. At least three to four clean pads a day.



To keep myself healthy, I must keep myself clean by washing my vagina and regularly changing pads when I am on my period.

Hot and sweaty 	Have an early night: eat chocolate or favourite treat! 
Cross and stressed out 	Bring a change of underwear/cloth to school and lots of spare pads 
Pains in tummy 	Listen to your soothing music or watch your favourite TV programme. 
Dirty and smelly 	Dress in loose comfortable clothes and where lots of deodorant.
Tired and sad 	Shower often and use a nice smelling body spray. 
Worried about leaking blood	Take painkillers and use a hot water bottle at bed time. 

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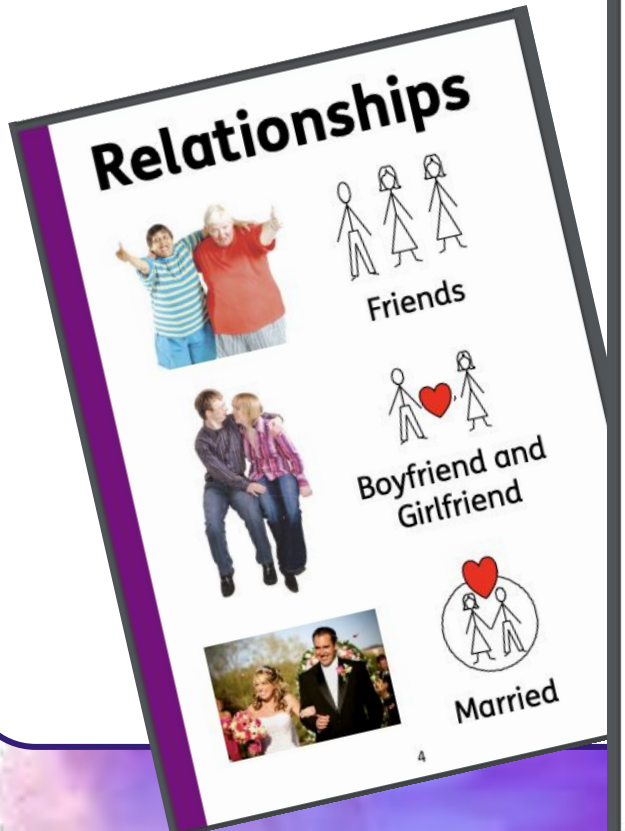
Hormones



Is your teenager driving you mad?

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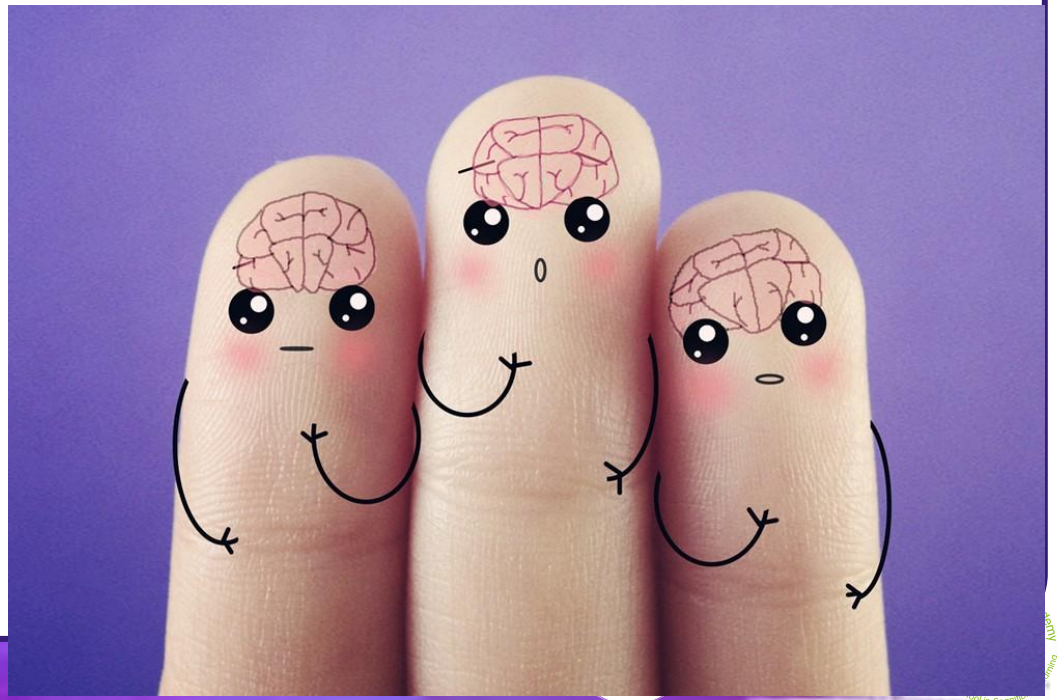
Session Two

Health

One in four individuals with autism have seizures. There is an increase in prevalence of seizures around puberty, jumping from 12% of people with autism in infancy to 26% in adolescence. While research is not clear on why this increase occurs, doctors theorize that it may be due to hormonal shifts and/or Cerebral Folate Deficiency.



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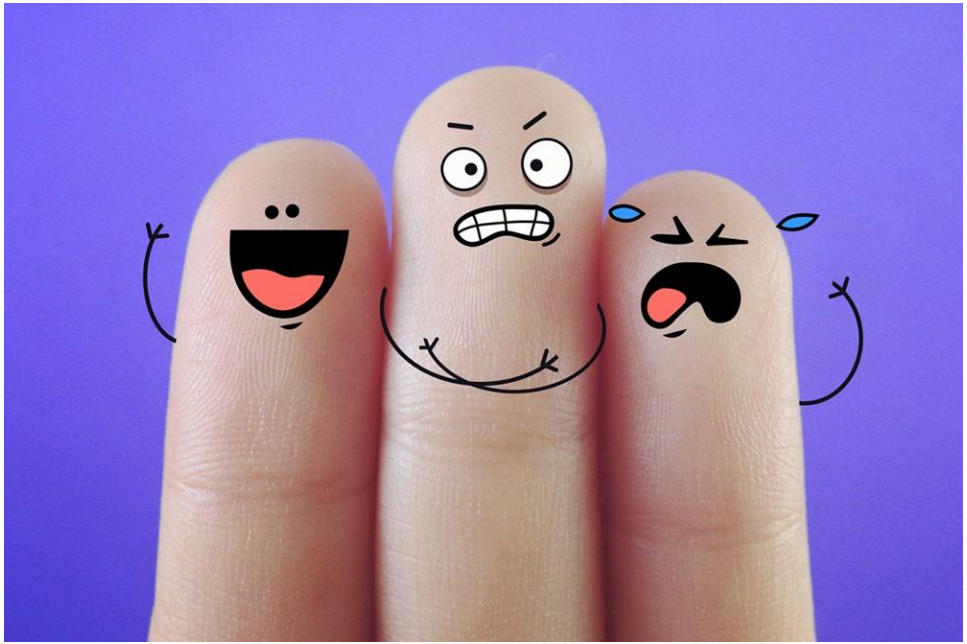
BEHAVIOUR



What behaviours do we experience?

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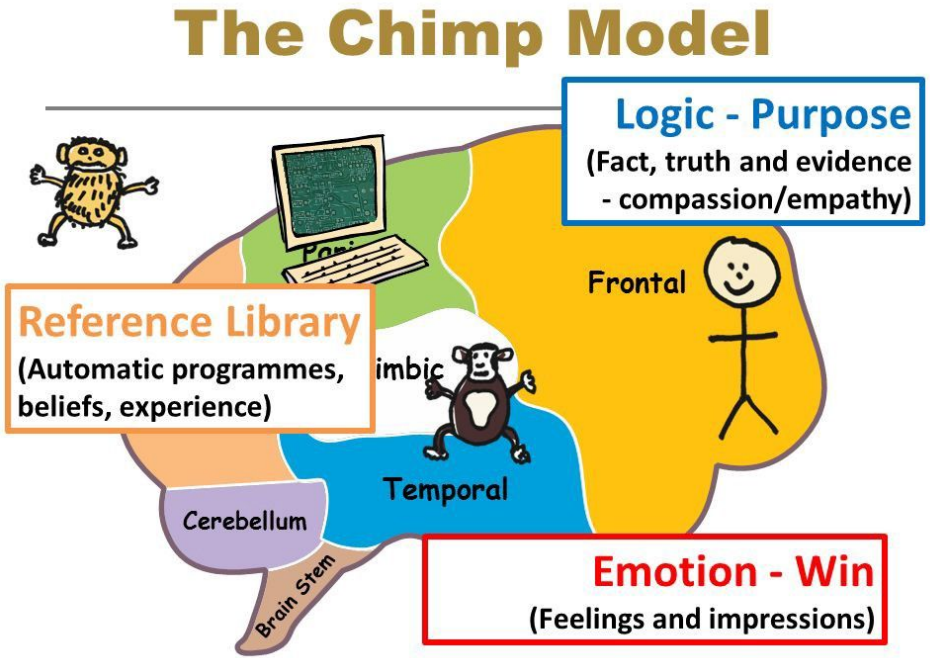
THE CHIMP PARADOX ANIMATED

Chimp Paradox, Peters (2012)

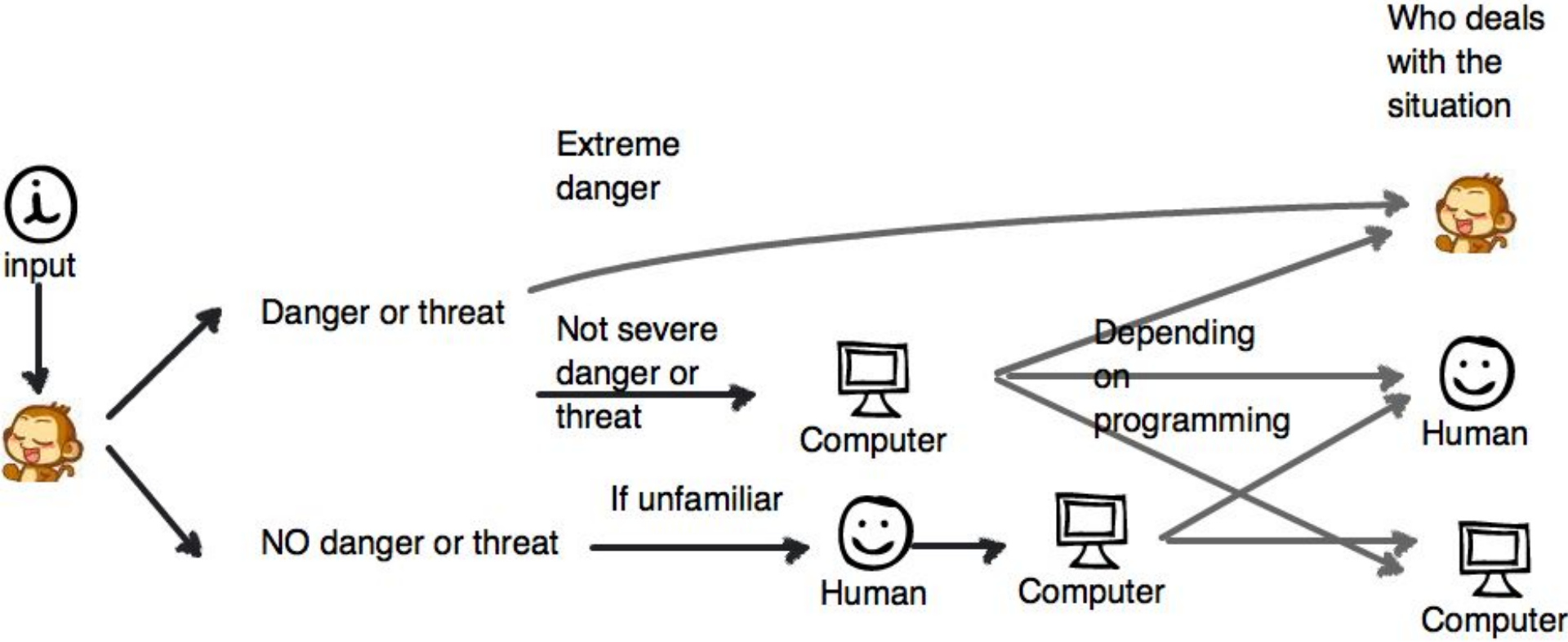
Chimp Paradox
We no longer need FIGHT, FLIGHT or FREEZE

Quick Questions
Step back - "How do I want to be in the moment?"

Your mental health matters!!



Session One


Who deals with the situation
Extreme danger
input
Danger or threat
Not severe danger or threat
Computer
Depending on programming
Human
If unfamiliar
NO danger or threat
Human
Computer
Computer

THE SCIENCE OF FLIPPING YOUR LID

Session Two

Behaviour - Mental Health - Transforming 2022

Children and young people with SEND and their families are at greater risk of experiencing poor mental health.

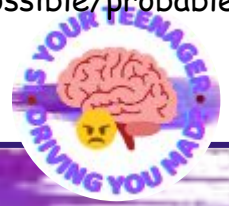
Research found that those with SEND are disproportionately likely to be living in vulnerable and precarious situations and less likely to be able to access the support needed.

In an analysis of UK population based data, children with learning disabilities were 1.5 to 2 times more likely to be exposed to social and environmental risk factors.

The latest NHS Digital report showed that more than half of 6 to 16-year-olds with a special educational need or disability (SEND) had a probable mental disorder (56.7%), compared with 12.5% of those without SEND.

In March 2021, two thirds of children with SEND (68%) were classified as possible/probable cases for attentional problems, in comparison to 17% of those without SEN.

Half of the children with SEND (52%) and 15% of children without SEND were classified as possible/probable cases for emotional problems.



Session Two

Behaviour - Mental Health

In a recent study Mind / NAS 2022

- 94% of autistic adults experience anxiety
- 83% of autistic adults experience depression

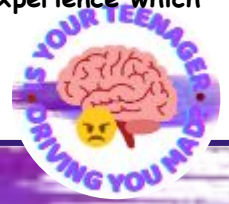
Autistic adults are 8 times more likely to experience loneliness
Autistic adults are 7 times more likely to experience chronic loneliness
9 out of 10 autistic adults worry about their mental health

Neurodiversity and Mental Health 2021

- Nearly 3 in every 10 children diagnosed with ADHD have an anxiety disorder

Autism has been also associated with higher rates of eating disorders, gender dysphoria, mood disorders, OCD, personality disorders, schizophrenia and substance misuse disorders.

Romme & Escher's research shows that at least 77%* of people who hear voices have had some traumatic experience which they connect with hearing voices.
people with Autism are up to 3 times more likely to experience hallucinations, psychosis



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Session Two

Behaviour

Stress and Anxiety - Definition

“Stress can be defined as a state of worry or mental tension caused by a difficult situation. Stress is a natural human response that prompts us to address challenges and threats in our lives.”

World Health Organization

Potential symptoms:

Headaches Eating too little / too much Hard to concentrate
Irritability Upset stomach Hyperventilation Muscle tension
Unable to relax Difficulty sleeping Palpitations

Session Two

Behaviour

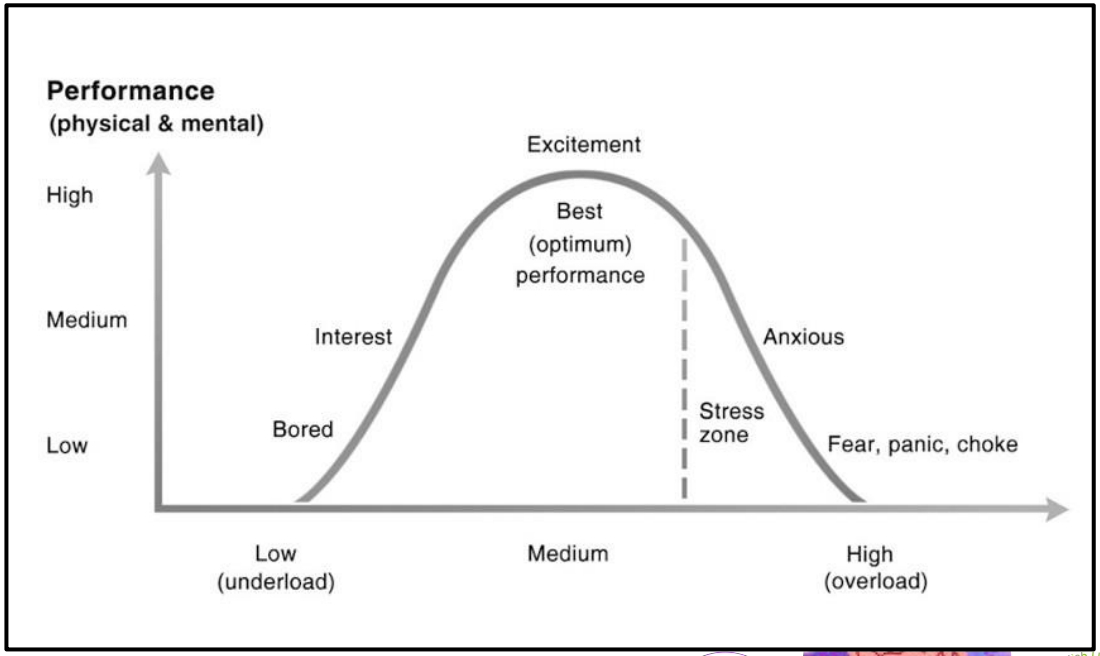
Yerkes-Dodson theory (1908)

This graph demonstrates the relationship between stress and performance in mice.

Before we jump in!

Do we trust this resource?

What might be problematic?



Session Two

Behaviour

Understanding the 'fight, flight, freeze' response

We now know…

…too little stress might not provide enough motivation to get things done.

… and too much stress might hamper our performance.

But do you know…

…how our inbuilt 'fight, flight, or freeze' response affects us in today's world?

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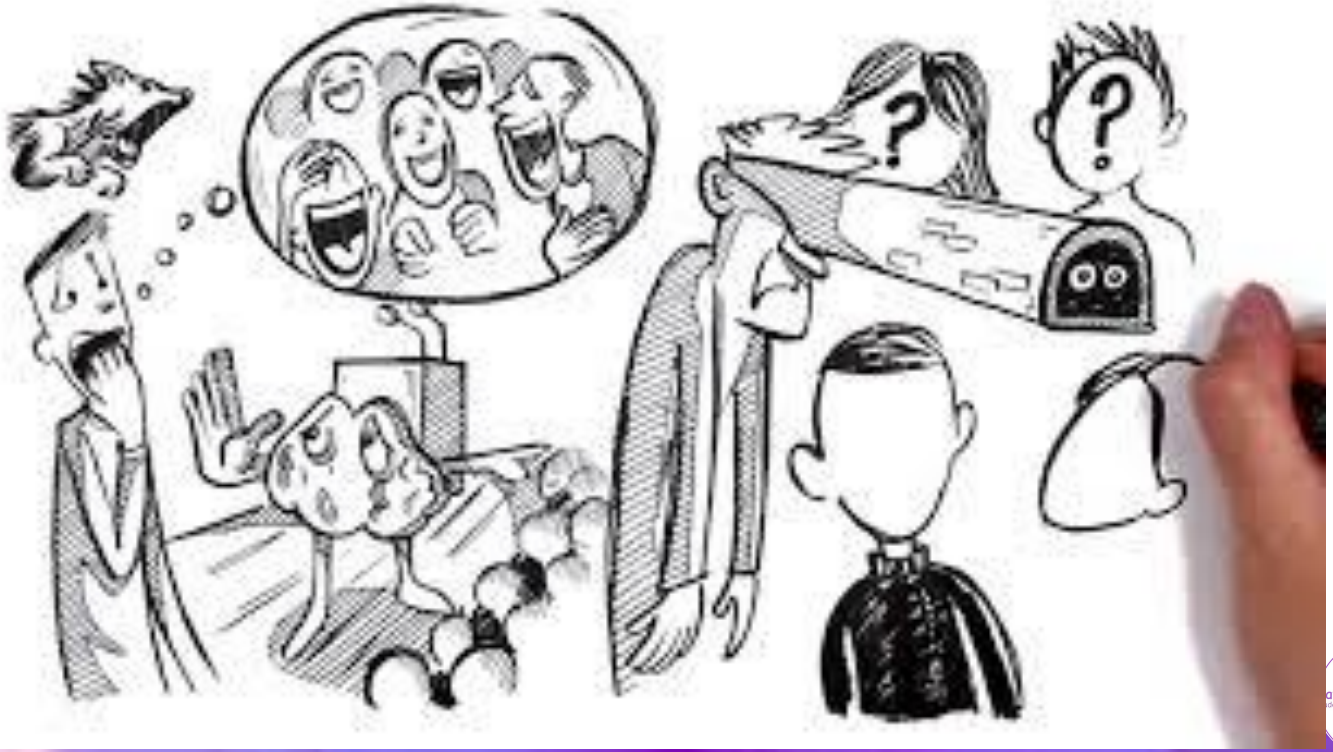
Session Two

Behaviour



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Session Two

COMMUNICATION

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HORMON
TEENAGER I

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Session Two

Communication

The Blank Model of Language Development (Blank, Rose and Berlin, 1978)

Blank's Levels of Questioning is a questioning framework developed by Marion Blank, a renowned psychologist. There are four levels of questioning which move from simple, concrete questions to more difficult, abstract questions. Blank's questions encourage development of general language and vocabulary as well as skills in comprehension, reasoning, inferencing, predicting and problem solving.

Students will:-

- Lose concentration
- Switch off - Become frustrated
- Possibly misbehave

Blank's levels of questions

Always use real objects or pictures to support understanding at level 1.

Level 1 - Naming

- What is it?
- Show me a pen.
- Find another one like this.

Pictures will support understanding at level 2.

Level 2 - Describing

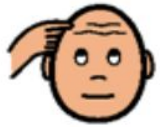
- What is happening in the picture?
- Who? Where?
- What can you stick with?
- Tell me another colour.
- What goes with scissors?
- What does glue feel like?

Pictures may help at level 3.

Level 3 – Think about it

- Get a pen and lined paper and write the date.
- What could he say?
- What might happen next?
- Find the scissors that are not sharp.
- Tell me another thing you can write with.

Pictures are not always needed at level 4.



Level 4 – Reasoning

- What could you do if your pen stopped working?
- What made the man fall off his bike?
- Why can't we go outside to play?
- How are a pen and a pencil the same?
- How do you know the ice will melt?

Session Two

Blank Levels Explained

Level 1 – Naming

Children at Blank Level 1 are talking about things in front of them or that have only just been taken away. Their responses are short or nonverbal e.g. pointing.

Level 1	Example Question
Looking for a matching object	Find one like this
Finding an object by sound	Show me what you heard
Finding an object by touch	Show me what you touched
Naming an object heard	What did you hear?
Naming an object touched	What did you touch?
Naming an object seen	What is this?
Copying a simple sentence	Say this…
Remembering pictured objects	What did you see?
Remembering other information	What did you see?

Session Two

Level 2 – Describing

Children at Blank Level 2 are talking about things directly in front of them. They can talk about part of an object. They will be talk about what an object does or what it looks like.

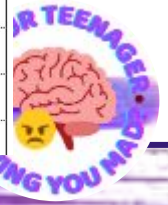
Level 2	Example Question
Looking for an object by function (what it does)	Find one that can…
Describing a picture	What is happening?
Remembering things named in a comment (e.g. what things fly?)	What things…?
Remembering simple information (who, what, where questions)	Who? What? Where?
Finishing a sentence (sentence completion)	You cut with a…
Concepts: Naming parts of an object or what it does (e.g. pen lid)	This is the...
Concepts: Responding to 2 things about an object (e.g. colour and size)	Find one that is … and …
Concepts: Knowing differences	How are these different?
Concepts: Giving an example from a category	Name something that is a…

Session Two

Level 3 – Retelling

Children at Blank Level 3 are learning to tell stories, make predictions and define words. They must think and know the facts before giving an answer.

Level 3	Example Question
Finding an object by using verbal and visual information	Find one to use with this...
Describing what can happen next from a sequence of pictures	What will happen next?
Saying what a person might say or think	What could he say?
Following a set of directions	Do this, then this
Putting pictures in order	Make these into…
Giving a set of directions	Tell me how to…
Making a general comment about something that's happened	What happened to all of these?
Telling a simple story from a set of pictures	Tell this story
Concepts: Finding and describing similarities	How are these the same?
Concepts: Finding an object or a set of objects by	Find the ones that are not…



Session Two

Communication

Concepts: Giving an example by excluding a specific object	Name something that is not
Concepts: Giving an example by excluding a group of objects	Name something can…but is not a
Concepts: Defining word	What is a…?
Unusual imitation	Say this…

Session Two

Communication

Level 4 – Justifying

Children at Blank Level 4 can make inferences and deduction. They can talk about cause and effect. They use their past experience and information beyond what they can see and hear.

Level 4	Example Question
Predicting: Changes in position	Where will…?
Predicting: Changes in structure	What will happen if…?
Justifying and explaining a prediction	Why will…?
Justifying a decision – explaining the reason for your decision	Why do you…? Why would you…?
Identifying the causes of an event	What made it happen?
Thinking of and explaining a solution	What could you do?
Thinking of and explaining a solution from someone else's point of view	What could she do?
Explaining how to reach a goal (e.g. what could we use to cook scrambled eggs)	What could we use?
Explaining why (e.g. why would you use a pan)	Why should we use that?

Session Two

Communication

Explaining the construction of objects (e.g. why is the pan made of metal?)	Why is… made of that?
Explaining an inference drawn from what they see	How can we tell?
Explaining the logic of compound words (e.g. basketball, snowflake)	Why is this called…?
Explaining the problems to an action	Why can't we…?

Cavendish Connect
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Session Three

Cavendish Connect
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IS YOUR TEENAGER DRIVING YOU MAD?

The Cavendish High Academy
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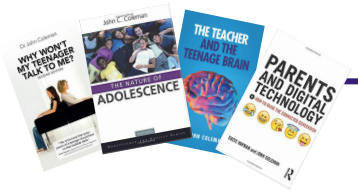

Session Three

Guest Speaker - DR John Coleman

Thoughts and feelings, any questions?