The SEEN Programme

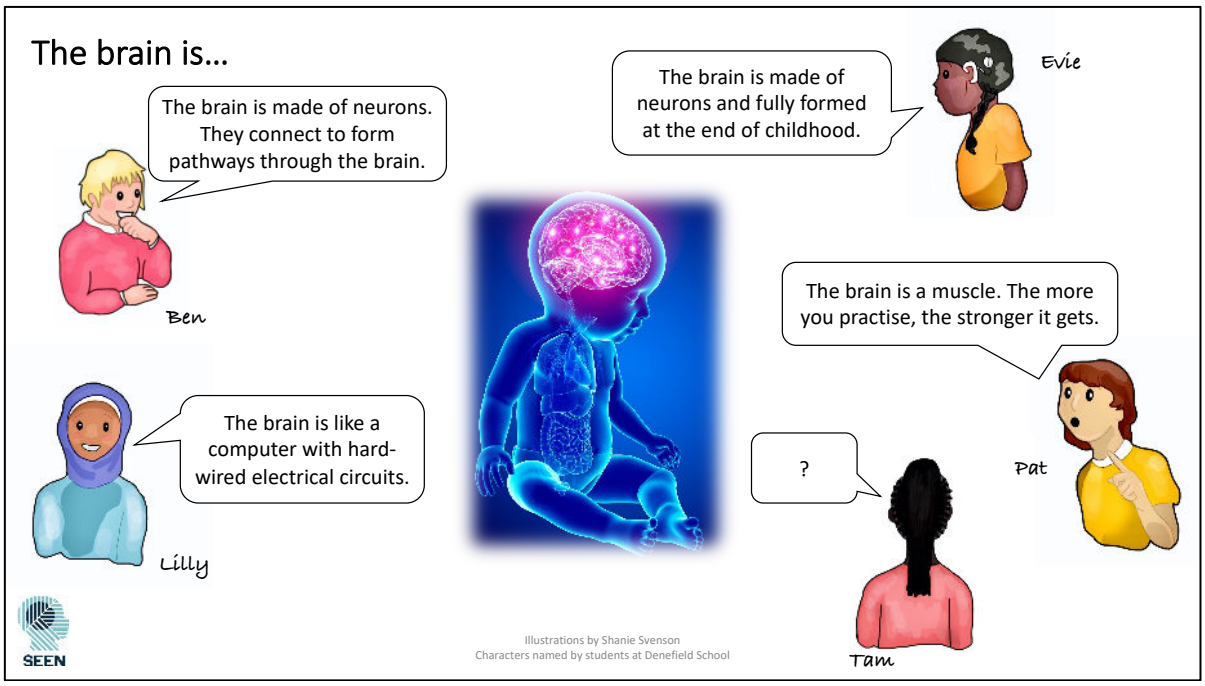
Concept Cartoon Instructions

A series of five concept cartoons have been designed specifically for the SEEN Programme as a visual representation of the ideas covered in the lessons. A number of viewpoints about different ideas are represented by the cartoon characters. They can be used as a prompt for discussion and a means to address misconceptions. Below are the teacher notes for each slide.

The concept cartoons can be used at different stages of teaching the SEEN lessons. They can be revisited at a later occasion to review understanding.

The concept cartoon characters were illustrated by Shanie Svenson and named by students at Denefield School.

Cartoon 1



Explain to your class that the young people have been asked to explain what the brain is. Tell them to read their answers and decide who they agree with and why.

Ben – The brain is made of neurons. They connect to form pathways through the brain.
This is correct. The brain is made of neurons (although also blood vessels and some other nerve cells called glial cells). Neurons are interconnected to form pathways or circuits in the brain. Experiences determine which pathways form. The brain is plastic and its structure can change in response to experiences.

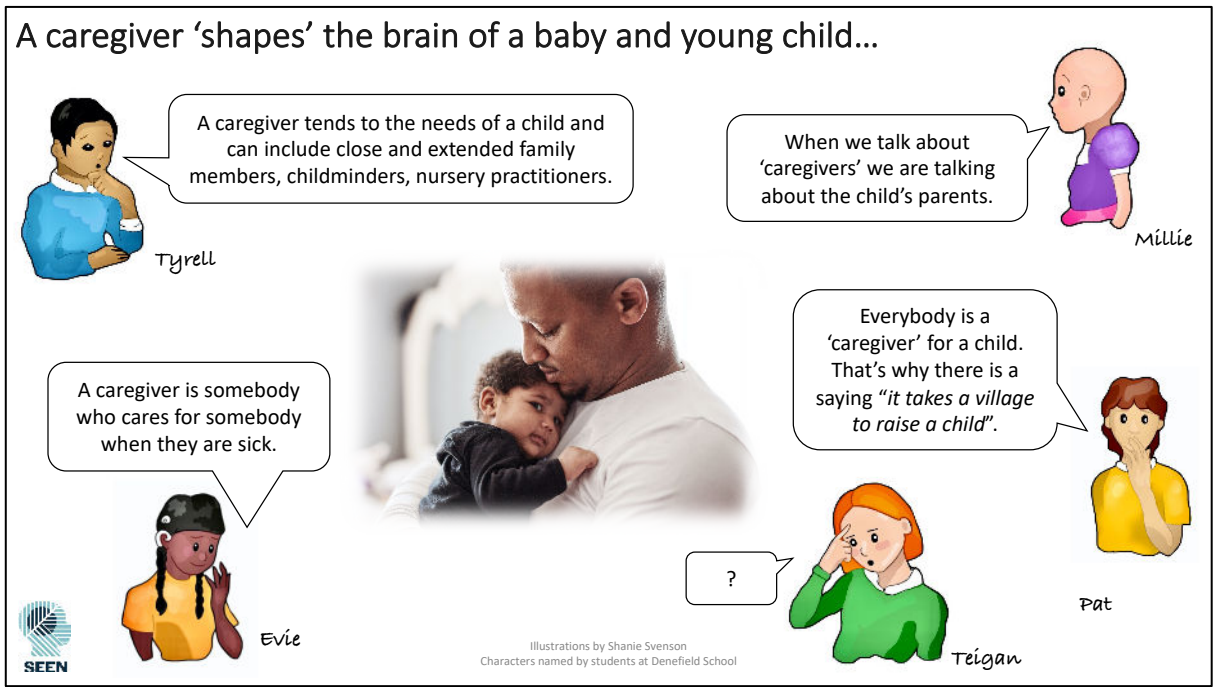
Evie – The brain is made of neurons and fully formed at the end of childhood.
The brain is made of neurons, but it can change throughout life. The first few years of childhood the brain grows and changes considerably… and again in adolescence. It is fully "mature" by the end of adolescence, sometime in the mid-twenties (depending on the individual), but it can change in response to experiences throughout life.

Pat – The brain is a muscle. If you practise the brain gets stronger.
This is a common misconception, that the brain is a muscle, or made of muscle cells. It is not a muscle, it is made up of nervous and circulatory tissue. It is the case that the more you repeat an activity the stronger a 'pathway' becomes… and therefore the more likely a message will pass along a neural pathway.

Lilly – The brain is like a computer with hard-wired electrical circuits.
The brain is often compared to a computer as it is organized with certain bits specialized for certain tasks, connected along pathways (like wires) and communication takes place in part through ions (pulses of electricity). However, it is not 'hardwired' or determined… it is plastic. For instance, rewiring can happen when a new skill is learnt; or parts of the brain can compensate for lost tissue after a brain injury.

Tam – doesn't know… or is the one trying to decide what they think!

Cartoon 2



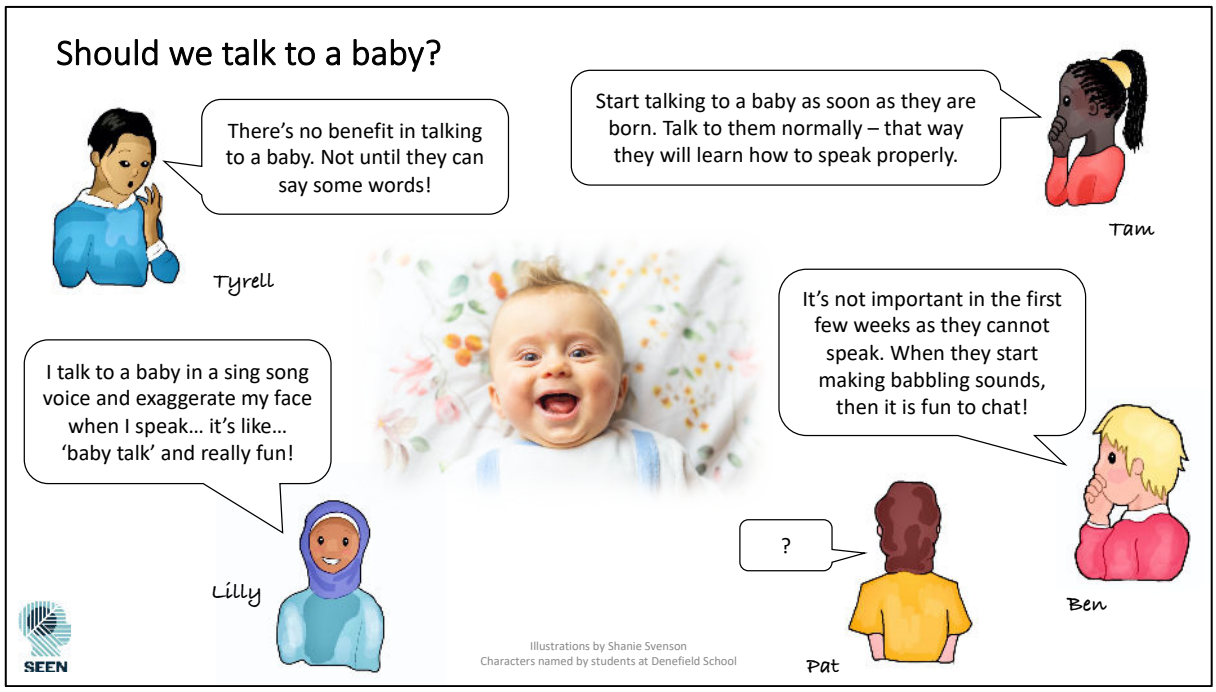
What is a caregiver? Ask your class to read the different responses from the characters and decide who they agree with and why.

Tyrell is the closest to the definition we use in these lessons, but also celebrate those that choose **Pat** as society can play a role collectively for the upbringing of the next generation, after all, they will be impacted more broadly by a prospering and healthy society (early childhood experiences are a predictor of long term health, wellbeing, learning and earnings potential).

People often point to parents as the ones responsible for being the caregiver… but for many families, a family member (e.g. grandparent), childminder or nursery practitioner will be spending lots of time with a baby or child and will therefore have substantial influence on the development of the child’s brain through their interactions. So **Millie** gives an opportunity to address this issue.

Evie touches on another application of the term caregiver, and it might be worth talking about the broader contest of ‘carers’ – they aren’t always caring for ‘sick’ people! However, in this context Tyrell (or Pat) are closest.

Cartoon 3



Explain to your class that the young people have been asked if we should talk to a baby. Tell them to read their answers and decide who they agree with and why.

Talking to a baby is incredibly important (see theory below). It is important to talk to a baby straight away (after birth), it helps 'fire' or prime the connections in the brain that form the foundations of language. So **Tyrell and Ben** are incorrect. Babies, communicate with noise, waving hands, crying etc, well before they can speak.

Tam Is correct that we should talk to babies from birth It is often a misconception that you should talk 'normally' to a baby (in our pilot research we found some teachers were teaching this despite the coverage of baby talk in the lessons). Using baby talk can prime the baby for listening and help develop language networks in the brain.

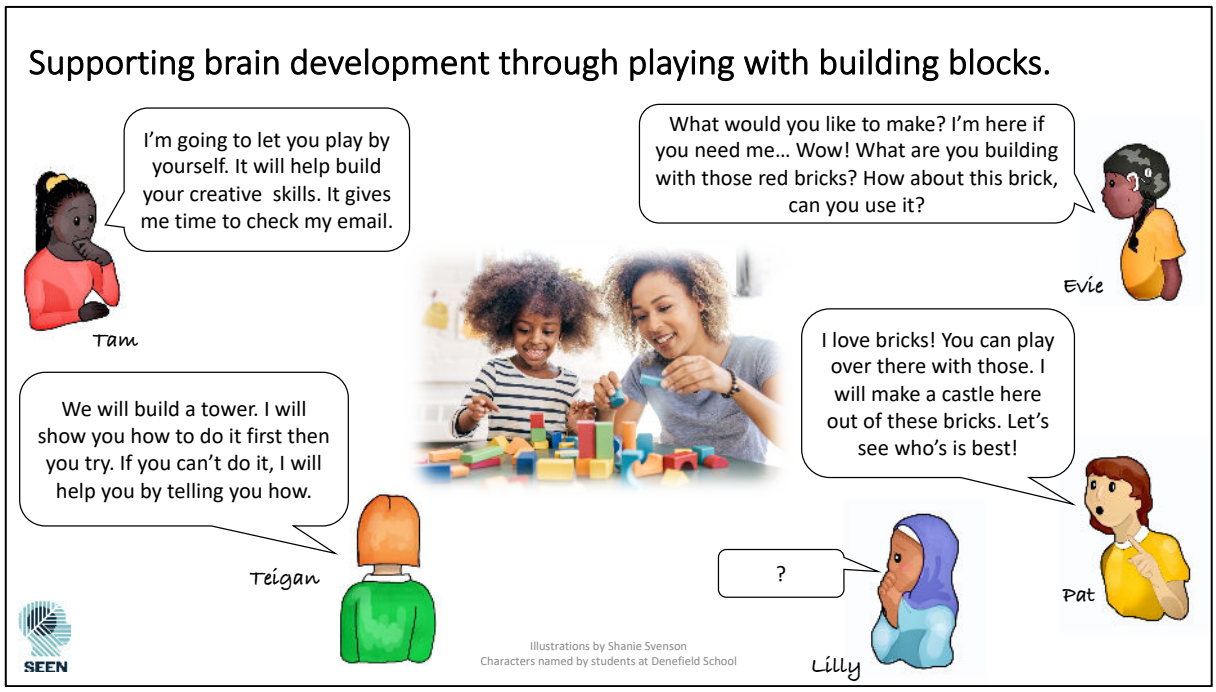
Lilly is correct as baby talk is important. Combine this with Tam's idea of communication from birth. Baby talk is normal language but made simpler, repeating words, higher pitch, speaking slower and with exaggerated facial expressions. Baby talk is instinctive for many people, but not everybody! https://www.unicef.org/parenting/child-development/baby-talk-class

Theory: A baby is primed for social interactions from birth, but for this to happen they need a parent or caregiver, to respond positively to their cues. Sensitive and responsive parent-infant relationships have been shown to be pivotal for the development of infants' social, emotional, behavioural and cognitive skills. These are the building blocks for child and adult outcomes, with longitudinal research repeatedly demonstrating that these skills are associated with better long term mental and physical health.

The caregiver's focus of attention to child signals and associated contingent responsiveness (Serve and Return) is essential for the development of the child's cognitive ability. Contingent responses to

the infant also teach the infant about connections between stimuli and responses, and help establish and develop the infant's own attentional skills.

Cartoon 4



Ask your class "how can playing with building blocks best support brain development?" Whose ideas are most correct?

This concept cartoon is more nuanced and there is no clear right or wrong. It therefore gives an opportunity for discussing playful learning and the pros and cons of the different suggestions. Some ideas are given below and in the theory section further down.

Evie – Taylor is modelling excellent playful interactions. They are asking the child what they want to do (child led) rather than directing. The child then makes the decisions, but knows somebody is there to support and is interested in what they are doing. Evie comments and show interest in what the child is doing by asking questions – extending the learning by providing a new brick.

Tam – it is good to allow time for children to play by themselves and explore. It can indeed improve skills. All caregivers have times when they need to do other jobs. In this case Tam wants to check email. This is ok provided it isn't happening all the time, and there are times that Tam is giving the child their full attention. Either way, by turning her attention to her device, Tam is not being attentive to the child… especially if she is outside of the room.

Teigan – this is often how less experienced caregivers will interact with a young child, by directing the activity, demonstrating, expecting the child to copy and correcting them if they don't do it the 'right' way. There are times when a demonstration followed by trying out themself is helpful. However, this 'expert' approach is missing an opportunity for creativity and exploration from the child… after all, there is no 'right' way to play with bricks!

Pat – This caregiver is highly competitive and more interested in their own enjoyment with the bricks! This is often a fun and engaging way to play with a child. However, the wording suggests that Jordan is not paying much attention to the needs of the child during this activity – "you can play over there" and the child does not seem to have much choice in how the activity is run.

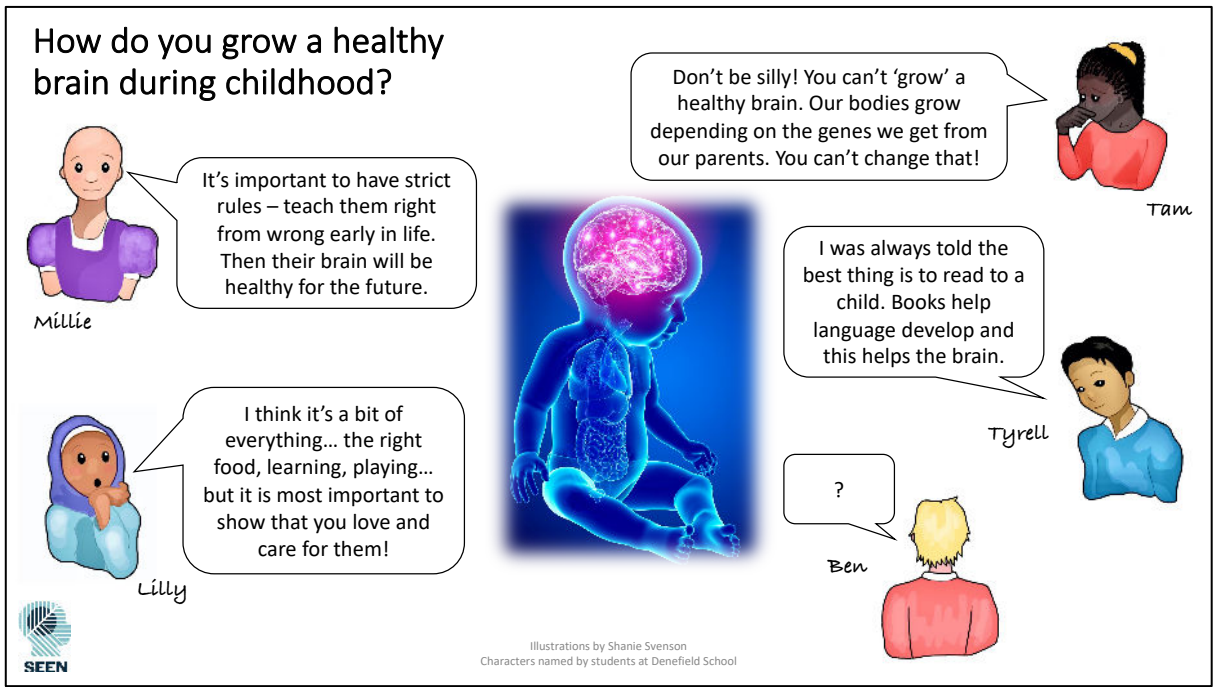
Theory:

Play is central to learning and brain development, particularly in the early years. It helps to lay the foundations for learning and development by increasing connectivity in neural circuits. Play gives opportunities for: thinking creatively, problem solving, language development, positive social skills, reading and learning to write. The following are ways in which play can support healthy brain development:

- Take and make opportunities for **playful interactions** e.g. peekaboo. **Join in**.
- Play teaches **turn taking, focus and concentration.**
- **Follow the child's idea** of how to play and how to use equipment.
- **Label and describe what is happening** as they play. This helps build their vocabulary and language skills. It shows the caregiver is paying attention.
- Caregivers can help children **increase the complexity of their play** interactions or build on what they are doing.

Make believe or pretend play is particularly important for developing some of the executive function skills. Caregivers can improve play experiences by playing along, joining in with the role play by asking questions. They can also look out for social interaction and use of language to interact with other young children and deal with frustration when it arises. The adult can facilitate here by asking questions and encouraging positive interactions. Play complexity should increase as they get older, adding further dimensions to the play. Carers can help support this by suggesting additional depth to the play or questioning to add detail and complexity to the play e.g. "have you thought about doing this… or… what would happen if you did that?". Caregivers need to also give time for children to play alone too. Promoting play enhances overall child development. It incorporates the principles behind serve and return interactions or contingent responses.

Cartoon 5



Ask your class to think about how somebody can help grow a health brain in a baby or child. Whose ideas are most correct?

This concept cartoon is an opportunity to discuss the wide range of ways in which a caregiver can support healthy brain development. It can be used to discuss before or after the lessons – to establish prior understanding and/or determine what has been learnt. If doing before and after the lessons, you could keep the "ideal answers" Students could write down their thoughts before and after the SEEN lessons and compare them to see how their knowledge, skills and attitude have changed.

Tam is correct to say that genes have an impact on brain development… but he is wrong overall – the environment or experiences a baby or infant have will affect how the brain grows. Neuroplasticity is the process by which experiences throughout life can change the structure of the brain. The brain can change throughout life.

Millie – children need to know boundaries, particularly when they ensure that a child will be safe and healthy. Children might argue that Millie's thoughts are correct – teaching right and wrong are important. Whilst teaching right from wrong is critical, there are many other important factors that support healthy brain development.

Tyrell – Tyrell is correct that reading to a child is important and helps strengthen the neural pathways associated with language development in the brain. Reading is one of the most important interventions that can support a child's early cognitive development. Again, there are other factors though…

Lilly – is correct in that there are a number of factors that work together to support healthy brain development. In the lessons, we cover 5 areas: a healthy and supportive home (love, safety, nutrition); good communication (serve and return interactions, baby talk, etc); everyday opportunities for learning e.g. counting out the laundry, labelling items, narrating what you are

doing; reading; and playful learning. Research has shown that one of the most important factors in resilient brain development is the presence of a single caring and supportive adult.

(**NB: Millie** - You may not want to cover this in class in case of triggering, but you may also find it comes up in discussion - in some extreme cases, super strict environments can become scary or promote fear in a child, if continuous and threatening, it can lead the brain to become more stress sensitive… so this is not necessarily "healthy brain development. See the teacher pack and online training for support with safeguarding young people).