

## Lesson 6: Under construction - the teenage brain!

**WE ARE LEARNING THAT:** Our brains change as we go through puberty.

**BORIS ASKS:** Can the children describe the changes in the brain as they go through adolescence?

**RESOURCES:** Slide; Different coloured play dough.

Before you start the lesson, show the children the ground rules slide to help them remember to be HeartSmart towards one another in this lesson.

Explain that today you will be looking at how the brain changes during puberty. Explain to the children that the brain doesn't grow in size during puberty (it is already about 90-95% adult size by time you are 6!) but it does undergo an extensive remodelling process. The connections between the regions of the brain are strengthened and increase or, if they are no longer needed, they are pruned away. Your brain continues this reconstruction process until the end of adolescence, around mid 20s.

Show the children the slide of the brain. Briefly explain what each section of the brain does:

- Frontal lobe - Thinking, planning, decision making, reasoning, judgment, movement, behaviour
- Temporal lobe - Speech, hearing, learning, emotions
- Parietal lobe - Language and touch
- Occipital lobe - Visual processing
- Cerebellum - Balance, co-ordination
- Brain stem - Breathing, heart rate and temperature

The brain develops from back to front. Ask the children which area they think is last to develop. That's right, the frontal lobe. Therefore teenagers often make decisions based on their feelings (based in the temporal lobe) rather than by thinking them through.

*Continued...*



### HERE ARE SOME WAYS IN WHICH THIS RELATES TO THE CURRICULUM:

#### R&HE

**Changing Adolescent Body 1.** key facts about puberty and the changing adolescent body, particularly from age 9 through to age 11, including physical and emotional changes

#### PSHE

**H13.** How their body will, and their emotions may, change as they approach and move through puberty

#### BIBLE REFERENCE

For you created my inmost being; you knit me together in my mother's womb. I praise you because I am fearfully and wonderfully made.

Psalm 139. 13-14

#### SMSC

**The spiritual development of pupils is shown by their:**

- willingness to reflect on their experiences
- sense of enjoyment and fascination in learning about themselves, others and the world around them

#### SIAMS

IQ1. How does the school's theologically rooted Christian vision enable pupils and adults to flourish?

# 'No Way Through' isn't True!



Everyone develops at different rates. Your brain's re-modelling may be at a different stage to someone else. This is totally normal. While your brain is under construction you may...

- Take more risks
- Feel a range of strong emotions
- Make impulsive decisions
- Be more vulnerable to stress factors
- Feel tired at different times

It is important to look after yourself and your friends as you grow. Be kind, patient and encouraging to one another. Talk to an adult you trust if you have any concerns about how you are feeling.

Give the children 6 different colours of play dough to make a model of the brain. Using the last slide as a prompt, ask the children to label the different parts.



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### SIAMS

Strand 2: Wisdom, Knowledge and Skills

Strand 3: Character Development: Hope, Aspiration and Courageous Advocacy

# 'No Way Through' isn't True!

**Frontal lobe**  
Thinking, planning, decision making, reasoning, judgment, movement, behaviour

**Parietal lobe**  
Language and touch

**Occipital lobe**  
Visual processing

**Temporal lobe**  
Speech, hearing, learning, emotions,

**Brain stem**  
Breathing, heart rate and temperature

**Cerebellum**  
Balance, co-ordination



## 'No Way Through' isn't True!



- Take more risks
- Feel a range of strong emotions
  - Make impulsive decisions
- Be more vulnerable to stress factors
- Feel tired at different times (eg later in eve and in morning)

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