

NCFE

CACHE

Sample Assessment Materials (SAMs)

**NCFE CACHE Level 2 Technical Specialist in
Neuroscience in Early Years (Award)**

QN: 610/4570/6

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Introduction

These tasks are in the main unitary, but there are examples of a holistic approach (see tasks 2 and 4 (a) given as well.

Centres may write their own tasks according to the guidance in the qualification specification to suit individual learner needs, or contextualise the tasks given here to their learner's context.

Tasks

Task 1

Create a poster for parents at an early years setting that:

- defines neuroscience and its primary areas of study
- using a diagram or table, describes the main stages of brain development from the first trimester to birth
- introduces the five main parts of a baby's brain (include cerebrum, cerebellum, brain stem, pituitary gland and hypothalamus).

(Links to Unit 01: LO1 AC1.1, 1.2, 1.3)

Task 2

Create a leaflet for parents of babies and children in an early years setting.

Your leaflet must explain the development of the brain from birth to 7 years.

You must divide your explanation into four stages:

- birth to 1 year
- 1 to 3 years
- 3 to 5 years
- 5 to 7 years.

You must also include information on the maturation of brain structures, such as cortex and prefrontal cortex development, limbic system development and motor skills.

(Links to Unit 01: LO1 AC1.1, 1.2, 1.3, Unit 02: LO1 AC1.1)

Task 3

Prepare a brief presentation for your colleagues about the neurobiology of the brain and factors that might affect its development.

In your presentation, you must:

- describe the different stages of development from neuron formation, growth of neurites, contact and communication, synapse formation and synaptic pruning
- describe two main basic cell types in the central nervous system, including what their main overall functions are
- draw an image of a neuron and include the three main parts; indicate in your diagram the function of each part
- describe what synaptogenesis is and why it is considered a critical process in brain development, learning and memory
- describe what synaptic pruning is, why it happens and when it stops.

To conclude your presentation, you must also:

- give an example of a disease of the brain that is caused by the death of neurons
- list some factors that affect synaptogenesis.

(Links to Unit 01: LO1 AC1.2, 1.3, LO2 AC2.1, 2.2, LO3 AC3.1, 3.2, 3.3)

Task 4 (a)

Prepare a brief blog about a child's brain development from birth to 7 years for parents to understand relevant milestones, giving particular attention to the following four stages:

- birth to 1 year
- 1 to 3 years
- 3 to 5 years
- 5 to 7 years.

In your explanation, you must consider:

- the social changes that take place in the developing brain
- influential factors that can impact the development of the social brain
- recognition of trauma in children and the impact on the development of the social brain.

Your blog must also explore how these developmental changes correlate with significant developmental milestones. You must ensure your blog includes some examples of enabling environments for parents and colleagues and reference evidence-based research.

(Unit 01: LO1 AC1.3, LO4 AC4.1, LO5 AC5.1, 5.2, Unit 02: LO6 AC6.1, 6.2)

Task 4 (b)

Create a journal for the blog that must include:

- which areas you found easy to research and write about
- which areas you found difficult to research and write about
- a consideration of how you will measure the success of this blog
- a consideration of how learning from neuroscience can be embedded into daily practice.

(Unit 01: LO5 AC5.3)

Task 5

You have been asked by your manager to prepare a staff training session related to managing children's emotions and supporting self-regulation. The aim of your session is to support the staff's neuroscientific understanding and knowledge of self-regulation, and to suggest how they can support children who are challenged by this.

You must prepare a staff presentation (including slides) that:

- explains what the limbic system is and how specific parts of the brain (hypothalamus, amygdala, hippocampus) are linked to children experiencing stress
- describes what is meant by 'self-regulation'
- defines the five domains of self-regulation (social, prosocial, biological, emotion, cognitive)
- defines and describes the five domains of stressors and explains how they relate to self-regulation.

The presentation must refer to at least two pieces of scholarly work, for example, Shanker (2022).

(Links to Unit 02: LO1 AC1.1, LO2 AC2.1, 2.2, 2.3)

Task 6

Research the Special Educational Needs and Disability (SEND) Code of Practice (2015) using the following prompts to guide your reading. After reading, write a report to clearly demonstrate your understanding of special educational needs.

While reading, focus on answering the following questions:

- what is meant by the term 'SEND'?
- what is the role of the SENDCo?
- what is meant by the term 'Local Offer'?
- what is the duty of early years providers with regards to supporting children with special educational needs?

Now write your report using the information you have just gained through guided reading.

Your report must:

- explain how children with special educational needs might be influenced and impacted by the five domains of self-regulation and relative stressors
- describe how a practitioner may begin to support the process of self-regulation.

(Links to Unit 02: LO3 AC3.1)

Task 7

Co-regulation is a key strategy used to support children who may become dysregulated within the five domains of self-regulation. Create a poster to demonstrate your knowledge and understanding of co-regulation and how this can be used as a tool to support children and parents.

Your poster must include:

- a definition of self-regulation and co-regulation
- an explanation of the role of co-regulation in nurturing children to achieve self-regulation.

(Unit 02: LO4 AC4.1 and 4.2)

Task 8

‘Stress can be defined as any situation that overwhelms our ability to cope’ – Gerhardt (2015).

Write a web page for parents to view that:

- defines what the 10 adverse childhood experiences (ACEs) are and how these may manifest in children both physiologically and psychologically
- explains what ACEs are and your understanding of how they may affect a child’s development in the short term and long term, making reference to wellbeing, mental health and physical health conditions
- defines the stress response system and identifies the three main types of stress that may impact a child from birth to 7 years
- describes the stress response system and explains the three types of stress (acute, episodic and chronic) that may impact a child from birth to 7 years old.

Make sure that there are clear references to relevant literature to support your answer opinions.

(Links to Unit 02: LO5 AC5.1, 5.2, LO6 AC6.1, 6.2)

Task 9

Nurturing children's behaviour in early years provision is an important aspect of the practitioner's role. To share this information with parents and coworkers, create a flyer with a table on it that:

- explains various behaviour management approaches by describing:
 - behaviourist approach, reward and punishment (such as Skinner)
 - relational approach (such as Glasser, Thorsborne).

Create a table that clearly compares practical examples of a behaviourist approach and a relational approach when supporting the behaviour management of children.

For example:

Approaches to nurturing behaviour	
Behaviourist A child is offered a gold sticker due to following an instruction to tidy up.	Relational When a child has calmed and is able to process language, share 'The Colour Monster' story and talk about different feelings.
A child receives a timeout of 5 minutes due to breaking another child's artwork.	

At the end of the table (the bottom of your flyer), include a short section that:

- defines 'emotion coaching' and demonstrates your understanding of how emotion coaching can support practice within both the early years setting **and** at home
- explains that emotion coaching can be a powerful tool to use when supporting children in developing their ability to regulate their emotions.

(Links to Unit 02: LO7 AC7.1, 7.2, 7.3)

Task 10

Trigger warning, sensitive reading and information to be discussed and processed within this learning outcome.

'Trauma is an emotional response to an event that is deeply frightening or distressing. It happens when a person feels so overwhelmed by difficult emotions – such as fear or anxiety, that their mind can't make sense of it. These emotions stay with the person and can influence the way they feel in the future.'

(Source: www.annafreud.com, 2023)

Read the case study below and consider how Jana may have been impacted by her experience of warfare.

Case study

Jana is 3 years old and has started attending at a private day nursery. She arrived in England 2 months ago from a country experiencing warfare. She is being cared for by the local authority and has been placed with a foster family. Jana has learnt a little English in her short time in England but is generally a quiet child. Jana does not play with other children and spends much of her time next to her key worker, Hayley. Jana often cries when coming into nursery and cries for 'Mama', frequently taking a long time to settle. Hayley is working with Jana on building relationships, but Jana does not seem ready to play with other children. Her foster family have advised that at home she does play with dolls and likes to push them in a pram in the garden.

Task: Prepare an oral presentation (video-recorded or voice-recorded slide presentation) to outline key indicators of experienced trauma in children.

Your presentation must include:

- an explanation of what trauma is in children, what a trauma informed approach is and why it is needed
- an outline of the key strategies to support an individual child, like Jana, who has experienced trauma
- an example of how self-regulation strategies can be used to support Jana when she becomes dysregulated.

(Links to Unit 02: LO8 AC8.1, 8.2, 8.3, 8.4)

Change history record

Version	Description of change	Date of Issue
V1	First publication	August 2025