

Active Essex EY Pilot Training – Crib Sheet

Brain Development

When babies are born, their brains are not fully developed. Genes are intrinsic to the make-up of our brains, however, we must remember that enriching experiences in the early years, such as being active and developing positive relationships also play a large role in how the brain develops. The formation of the young brain is influenced by experience and the environment which can impact on it negatively and positively.

Windows of Opportunity

Scientific research has found that the brain has “windows of opportunity” in early years, where specific areas develop to their optimum at specific times from birth to the age of around 10 years. It is therefore very important to provide young children with many opportunities to be active and also ensure that they are exposed to a wide variety of activities. E.g. the window for language acquisition, starts to close at the age of 5 years. During this window of opportunity, children will only require exposure to the language in order to easily learn it and will speak without a foreign accent and they can also learn many languages simultaneously. After the age of 5 years we are still able to learn new languages but it gets progressively harder to do so.

Plasticity

Plasticity is the brain’s ability to change as we learn. This occurs throughout our lives but mostly in the early years. Genes play an important role in the starting point of our brains, however as young children are exposed to experiences and environmental factors, the brain changes and develops. Through research we have found that some of the factors affecting our brains, before birth and as young children grow are: 1. attachment (positive or negative attachments) 2. nutrition 3. sensory stimulation 4. motor stimulation 5. social exposure and experiences 6. drugs and alcohol. Young children’s brains are most vulnerable to these factors but are also more capable to recover. Hence, the more positive and enriching experiences young children are exposed to the larger the positive impact on their brain.

Brian Hemispheres

When we are born, the left and right side of the brain do not communicate and many of our movements are stunted. We not only need both hemispheres of the brain to communicate in order to complete day-to-day tasks but also to be able to read and write efficiently. This hemisphere communication develops through children playing, being active and exploring the environment. As the brain in young children is shaped by and responds to their environment, children learn through activities and enhancing experiences. Movement is therefore essential for babies’, infants’ and young children’s brain development and their learning.

Children’s experiences in the early years have a major impact on their future life chances – Feinstein, L. and Duckworth (2006)

Inspired to Move

Babies and children who are not yet walking should be active through floor and water-based activities on a daily basis. Children who can walk unaided in their early years should be active daily (spread out through the day) for a minimum of 180 minutes (British Heart Foundation recommendation and Government guideline).

This time should be offered throughout the day and should be divided into:

- 120 minutes moderate activity, where the belly button is moving (such as building and sand play)
- 60 minutes high impact activity, allowing opportunities for higher heart rate and getting out of breath, within a healthy range (such as jumping and dancing).

Sedentary Time

Being sedentary normally means when someone is sitting or lying down doing something that uses very little energy. It is important to encourage physical activity in early years and equally as important to ensure that the amount of time young children spend being sedentary is minimised. Children are spending more time watching television and videos, playing computer games and spending time on the internet and less time being active. Babies are also spending more time being restrained (in buggies and car seats, etc.). It is important that children and babies have opportunities to rest, but these occasions should be kept short and be split up with more active opportunities. As recommended by the British Heart Foundation, young children should not be sedentary for longer than one hour at any one time (with the exception of sleeping).

Working with Parents

Early years practitioners should share their knowledge and ideas with parents and ask them to do so in return, hence working as partners. Always share positive messages with parents. If you have a good Physical Development or Physical Education policy which you share with parents and carers, it will be clear as to what you feel is acceptable and not acceptable practice with children in your care.

Positive Messages

Minimum of 180 minutes a day (at your setting and home)

Physical activity aids learning Adults are role models

Encourage being active Parents and practitioners working together

Provide a variety of activities

Children develop good habits in early years

Active children are more likely to become active adults

Find activities to do together

Being outside is good for children

Parents are the Best Piece of Equipment for their Children

Kids need play to grow physically, intellectually, socially and emotionally - United Nations

Physical Development in the EYFS

Physical development involves providing opportunities for young children to be active and interactive; and to develop their co-ordination, control, and movement. Children must also be helped to understand the importance of physical activity, and to make healthy choices in relation to food.

Moving and Handling

Children show good control and co-ordination in large and small movements. They move confidently in a range of ways, safely negotiating space. They handle equipment and tools effectively, including pencils for writing.

Health and Self-care

Children know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe. They manage their own basic hygiene and personal needs successfully, including dressing and going to the toilet independently.

Links to other areas of learning in the EYFS

Physical activity supports:

Personal Social and Emotional Development

Positively impacts confidence and self-esteem

Supports social skills development

Helps concentration

Support stress relief and promotes relaxation

Teaches children the importance of their own health and well-being

Communication and Language

Supports communication skills development

Develops thinking skills

Literacy

Encourages reading skills through imaginative play, jumping, skipping, hopping and balancing

Mathematics

Develops decision making and problem solving

Helps to understand mathematical concepts

Pattern spotting

Understanding the World

Supports imaginative play and role play

Expressive Arts and Design

Develops fine motor skills such as writing and drawing

Includes dance and movement to music

Outdoor experiences can promote social and emotional development, as well as healthy physical development, and can support the varied learning styles of different children – Early Years Foundation Stage Review 4 Enabling Environment The Physical Environment Babies and young children require an environment (inside and outside) that allows them space to move in, offers many opportunities to learn and explore, lets them relax in a quiet area when needed and allows easy access to different resources and toys that will stimulate their interest and development. Enabling environments should be age specific, appealing to children's interests, making them feel happy, safe and secure and be a place where they can confidently play and learn. Remember: if adults are moving and enjoying themselves then babies and young children will be encouraged to join them.

Be aware of the different stages of development that children are at, their learning styles and whether particular children require additional help to develop specific skills.

Indoor

Indoor spaces need to be flexible to accommodate children's changing interests and needs. When babies become mobile, ensure they have space to move about in and provide stimulating objects; however, it is important to ensure that the environment is safe and that there are no objects that could cause a choking hazard. Ensure there are spaces inside where children can be active. If space is limited, consider activities such as dancing, active stories and yoga. These do not require a lot of space yet significantly raise the heart rate.

Outdoor

Children should be outdoors as much, if not more, as being indoors and have a balance of child-lead and adult-let activity time.

Risk taking and challenges

Challenges and risk taking are important for children to develop physically; the outdoors offers many opportunities for this. Children will be more willing to take risks and attempt new challenges if they feel safe and secure and it is important for them to learn about their own health and safety. Adults should provide a safe environment, act as positive role models and teach children about being safe as well as respecting the environment.

Inexpensive outdoor resource ideas

- Blackboard paint to use as permanent fixture
- Chalk to create games on cemented surfaces
- Strong cardboard packaging to create shelters
- Pieces of fabric/ old sheets to make tents and dens
- Guttering to create water play area
- Tyres - these can be free from local garages
- Planks, logs and pieces of wood
- Signs
- Boxes and crates to build with
- Old CDs hanging at different levels
- Old pots and pans strung on a strong line between trees with spoons to play them
- Trellis – perfect for weaving thread or vines through
- Shallow trays for water
- Old wellingtons to plant in
- Spare hosepipe wound along the fence with a funnel at each end to use as a telephone
- Plastic drinks bottle filled with different substances and objects to hang or to create skittles

Babies

Babies develop at a rapid rate; however, they need to develop naturally and should not be rushed. In order to develop physically and learn new skills, babies need to develop muscle strength. Equally, their brains and nervous systems need to develop in order to send the correct messages to the required muscles.

Physical activities also stimulate the connection between mind and body. This is particularly evident when observing how children learn problem-solving skills as they try actions such as climbing up, over, in, or through.

If you use equipment in a manner that simply encourages a hastier development of milestones, this will ultimately not be of use to babies. They need a lot of time to develop their basic skills to a competent level, therefore if you support babies to learn new skills by themselves, at their own pace and to take risks, they will become more capable, self-assured and determined.

Babies are born with involuntary reflexes – for example “tracking” when their cheek is touched or automatically grasping any object placed in their hand - and need many opportunities to develop more complex skills in order to lose these reflexes. If they do not lose these involuntary reflexes, they can inhibit natural development. Consider what would happen if the involuntary grasp/palmer reflex was not adapted!

Babies need to practise important movements such as:

Reaching for and grasping objects

Playing with other people, objects and toys

Turning their head toward stimuli

Pushing and Pull Moving their eyes

Remember:

Stimulate babies' brains to grow and help develop their language

Gentle "rough and tumble" games

You are the best piece of play equipment

Babies need to move freely as much as they can in an environment full of stimulation

Make sure they are dressed in appropriate clothing to allow them to move freely

Balance

The vestibular system (which is in the inner ear) is the main contributor to balance and needs to be developed in babies and young children. Slowly and gently spinning, rocking, swinging baby and dancing to music whilst holding baby in your arms will contribute to the development of their balance. When children spin, roll and hang upside down they are developing their vestibular system and, in turn, their balance.

Tummy Time

During waking time, it is important for babies to spend time on their stomachs. This will prepare babies for crawling, strengthen their muscles and support the development of head control. It also provides many more benefits.

Helping Babies to Enjoy Tummy Time

Some babies naturally enjoy being on their stomachs but many find it uncomfortable and are reluctant at first.

Before placing babies flat on their stomachs:

- Sit with your knees slightly raised
- Place baby face down on your thighs (this will support them)
- Stroke their back
- Over a period of time, reduce the angle of your legs until baby is lying flat
- Place baby on their stomachs for a short period of time and often

- Carry baby on their stomachs
- Place baby over a cushion
- Roll up a towel and place under their chest. When babies are ready to lie flat on their stomachs, it is 6 important to create a stimulating experience for them:
- Lie in front of them and talk, sing, make different facial expressions
- Lie them in front of a mirror
- Put interesting toys in front of them
- Put stimulating objects at the each of their reach to encourage them to move and reach.

Benefits of Tummy Time

- Strengthens back, neck and torso muscles, which will support them to sit, crawl and walk
- Teaches them about the world around them and encourages them to rotate their head and body into different positions
- Helps avoid flat head syndrome (plagiocephaly), which can occur when babies lie on their backs for too long
- Babies being placed in different positions keeps their bodies and minds active
- Babies who spend time on their stomachs are less likely to develop torticollis (defined as a twisted neck where the head is tipped to one side, while the chin is turned to the other.)
- When on their stomachs, babies will learn to focus on objects, themselves and others and to track movement of those objects and people. This has an impact on visual development
- Helps to inhibit the palmer reflex (clenched fist) as babies will open their hands to push up
- Develops their senses
- Helps to develop balance (vestibular system)
- Teaches them about their body
- Interaction with others
- Develops language and communication skills
- Lifting up from the floor stretches open the baby's chest, which improves their lung and heart functions.
- Helps to improve baby's digestive system and general disposition.
- Strengthens muscles that lift the spine and pulls the shoulders back.
- Develops interaction with others and emotional bonding
- As it is recommended that babies lie on their backs when asleep to counteract the incidents of cot death, tummy time should only be provided when babies are awake.

Crawling

Crawling is an important milestone for babies, who should be showing emerging signs of crawling by around 8 months (pushing up on hands and knees, rocking, belly crawling) and be crawling by 9/10 months. Some babies find this difficult and might miss out crawling, opting for getting around via bottom shuffling or moving straight to walking. However, there are many benefits of crawling that babies will miss out on if they skip this important gross motor stage.

Benefits of Crawling

- Gross motor development – crawling helps to strengthen the shoulders, back and core muscles
- Fine motor development – crawling helps to strengthen muscles in the hand
- Supports bilateral coordination of arms and legs
- Plays a role in visual development, as they need to scan their environment with the eyes before moving.