Dr Melodie de Jager’s guide to BRAIN DEVELOPMENT MILESTONES AND LEARNING
The brain is without doubt our most fascinating organ. Parents, educators and society as a whole have tremendous power to shape the wrinkly universe inside each child’s head, and, with it, the kind of person he or she will turn out to be. We owe it to our children to help them grow the best brains possible.

LISE ELIOT

This book is dedicated to all those brave babies and children who have overcome the odds against them and their loving and supportive parents - Thank you, you have taught us a lot.
To all the medical and supporting staff, caregivers and teachers who dedicate themselves to someone else’s journey – We salute you.

BabyGym® & Mind Moves® are solely intended for educational purposes and not as diagnosis or prescription for any condition. The author and publisher can therefore not be held responsible for any misinterpretation of this information.
All the movements and activities offered in BabyGym & Mind Moves have been found safe within a person’s normal range of movement. The range may gradually be increased to develop skills and enhance performance.
Please note that it is always advisable to consult a medical practitioner before embarking on any movement programme.
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Wherever “he/him” is used to refer to “the child”, “she/her” is also implied.
Foreword

Wherever you turn it seems as if learning and behavioural problems are on the increase, despite more information and education being available to parents. The media often print articles and programmes on a variety of ‘labels’, all of which pose barriers to learning. Labels such as Attention Deficit Disorder (ADD), Attention Deficit and Hyperactive Disorder (ADHD), low muscle tone, dyslexia, dyspraxia, poor motor skills, auditory processing problems, tactile defensiveness and many other problems that create barriers to learning.

As a teacher and a developmental therapist with years of experience working with and learning from babies, young children and their parents, the question arose whether learning and behavioural problems could be prevented rather than fixed. Remediation is a costly and lengthy process and very often a casualty of this process is the child’s:

- sense of self,
- confidence, and
- self-worth.

The origin of the casualties very often is the result of the close relationship between a child’s ability to learn and his emotional and social development – how he feels about himself and how others see him. Because progress and success are rewarded with acknowledgement, admiration and a multitude of other emotional and social accolades, the child who fails to progress and succeed within the system also tends to fail to fit in socially. This sad situation may unfortunately leave a child scarred for life and growing up with an ever-decreasing expectation to succeed in any walk of life.
The flipside of the coin is that, luckily, there are many stories about children just like these who overcame their ‘problems’, succeeded and greatly exceeded their own and others’ wildest expectations. This normally happens due to an above-average drive to succeed, a caring parent or a dedicated teacher or person who believed in them at a critical time in their lives and their unfailing ability to hone in on their own brand of intelligence and to excel in applying that intelligence in a field that they are interested in.

Casualty of the limiting and negative scenario above, is the parents of children with emotional, social and learning problems and their feelings of guilt or sometimes aggression, and very often helplessness. These parents generally do anything and everything to help their children and most often stretch themselves beyond their means (emotionally, physically and financially) to give their children wings to excel.

LEARNING FROM THE MASTERS

It was the extensive research and work of Richard Bandler and John Grinder, Paul MacLean, Carla Hannaford, Carl Rogers, Paul Dennison, Jean Ayres, Peter Blythe, Sally Goddard Blythe, Candice Pert, Michel Odent and Lise Eliot that illuminated the physical building blocks of thought and behaviour on all levels (physically, emotionally, socially and intellectually). Their work pointed out the role of the development of the nervous system as the communication network of the body that is responsible for receiving information from the environment via the senses; the role of the brain in filtering, processing, storing and retrieving information; and the role of the muscles in responding appropriately to what has been perceived, processed and retrieved.

PREVENTION RATHER THAN CURE

Armed with this new approach, the BabyGym Institute was founded in South Africa in 2005 to assess whether it was possible to prevent rather than remediate developmental deficits that may have occurred during the most sensitive period in the establishment of the brain and nervous system. During the research that underpins BabyGym, many strange words and complicated terminology came to the fore to describe the cellular development of the nervous system: terms like proliferation, migration, aggregation, differentiation, synaptogenesis, remodelling and myelination. It was decided to make the research and neuroscience available in a practical and simple way for moms and dads to use, rather than in an academically impressive format. This decision resulted in the BabyGym programme. BabyGym can be defined as the mimicking of the reflexive moments a baby naturally makes while in the womb and during the first year of life to support the unfolding of the brain and nervous system.

BabyGym = Biomimicry in the field of neuro-science.
A developing brain and nervous system is evident when a baby reaches each motor milestone in sequence. At the BabyGym Institute motor milestones are viewed as beacons that indicate progress, as it is the movement of the foetus, and later the movement of the baby that structures and prunes the wiring needed for a clever brain, a willing heart and an able body to do its work properly. We recognise that every baby is unique and develops at his or her own pace and hence milestones are not cast in stone, but viewed as general trends and guidelines that indicate the progressive development of the baby’s brain and sensory-motor apparatus. Sensory refers to the senses of touch, smell, taste, hearing, seeing and balance, and motor to the use of muscles. Sensory-motor apparatus means the development of the senses and the muscles as well as the wiring that connects the senses with the brain and the brain with the muscles.

Multi-disciplinary research has indicated that an effective sensory-motor system and a developing brain are needed before the nervous system can mature enough for a child to socialise and learn with ease. Motor milestones act as beacons to indicate a maturing nervous system.

It has been found that a child’s motor milestone history is very significant in terms of the baby’s future learning ability.

BabyGym has been found to positively impact on the general development of a baby. Importantly, BabyGym does not speed up the developmental process to reach milestones earlier. It has also consistently been found that ‘BabyGym babies’ use a wider range of skilled movements during each developmental phase; they present with an upright posture and make unwavering eye contact. These findings were only consistent when parents continued to do BabyGym at home daily, until their baby could walk independently.

An independent Masters study in the field of occupational therapy also concluded that the BabyGym programme can assist HIV positive babies in children’s homes to make measurable motor progress in only six weeks. The evidence of the thousands of case studies and the above-mentioned research study bolstered our confidence to work with children with Down syndrome and cerebral palsy. Remarkable results were found in a relatively short period of time when the parents and caregivers did BabyGym with these babies and children according to a set programme.

Need for a deeper understanding of what these reflexive movements do to the brain and body, and what does not happen in the brain and body if a milestone has been skipped, led to intensive research on primitive reflexes. The ground-breaking work of Blythe and Goddard Blythe offered a link between developmental delays early in life and the echo of these delays in problems with socialisation, behaviour and learning, a few years later.

THE BRAIN, THE BODY, AND LEARNING

In an attempt to address the ever-increasing failure rate of children in schools all over South Africa, the need arose to research the occurrence of early developmental delays and aberrant primitive reflex activity in school-going children who were experiencing learning and behavioural problems. The Mind Moves Institute was established in 2006 to fulfil this function and Mind Moves was developed to simulate primitive reflexive movements similar to the BabyGym movements, but for school-going children. The difference between BabyGym movements and Mind Moves movements is that:

- BabyGym movements are done on a child by a parent or caregiver
- Mind Moves are done by the child him/herself.

Mind Moves have been found effective in both the one-on-one scenario, as well as with groups of children in a classroom in rural and urban South Africa.
A LONGTERM VIEW

The motivation for writing brain development MILESTONES & learning was to get a long-term look at brain development from the womb and the first year of life to school-going age and to understand the role of the motor milestones in this development pathway. It was also motivated by the need for a practical plan of action for parents and caregivers to optimise the most sensitive time of neurological development, as well as a practical plan of action for parents and teachers of school-going children who, as babies, had skipped a developmental milestone or completed their milestones out of sequence, thereby often continuing to be subjected to the influence of the primitive reflexes’ first call on brain activity.

brain development MILESTONES & learning does not profess to be an academic text book, but rather a practical guide for parents, caregivers and teachers to enable our children to become the happy, clever and fulfilled people they were born to be. This is only possible if somewhere along the way a child has developed and learned to learn - but not just to learn: to fall in love with learning as so eloquently expressed by Carl Rogers in 1983:

“I want to talk about learning. But not the lifeless, sterile, futile, quickly forgotten stuff that is crammed into the mind of the poor helpless individual tied into his seat by ironclad bonds of conformity! I am talking about LEARNING - the insatiable curiosity that drives the adolescent boy to absorb everything he can see or hear or read about gasoline engines in order to improve the efficiency and speed of his ‘cruiser’. I am talking about the student who says, “I am discovering, drawing in from the outside, and making that which is drawn in a real part of me.” I am talking about any learning in which the experience of the learner progresses along this line: “No, no, that’s not what I want”; “Wait! This is closer to what I am interested in and what I need”; “Ah, here it is! Now I’m grasping and comprehending what I need and what I want to know!”

May we continue to learn from and appreciate each other.

Melodie de Jager
Hands up - who doesn't want a clever child?
No parent would ever dream of having a child with problems. When you start dreaming of having a baby it is with a clear image of a healthy, happy and good baby who babbles and coos to the delight of everybody who meets them. The more engaging and endearing the baby is, the more people interact with him – making eye contact with him, touching him, playing with him, talking to him and teaching him all kinds of new ‘tricks’. Such a happy baby would easily develop a positive sense of self, spurred on by all the laughs, shining eyes and hand-clapping he receives every time he does something cute and clever.

The moments when you make eye contact with baby, touch him, feed him or change his nappy, play with him, talk to him and give him all kinds of stimulating experiences, are called developmental dates.

Developmental dates are moments of focused contact between mom, dad and baby when you lovingly and gently wake up as many of his senses and muscles as possible and engage as many parts of his brain as you can think of, while introducing him to the world around him.

ADRIANO MILANI COMPARETTI
All you need is time and the urge to succeed, because this triggers something inside you that will guide you and prompt you in doing what is best for your little one. This internal guide is your instinct or mommy brain – an innate wisdom that doesn’t know everything, but will lead you in the right direction to speak on behalf of your little one.

You see, your baby has been born into a world he knows very little about. Just like while he was in your womb and he had to learn about life in his mom’s womb, he needs to learn how to use his senses, brain and muscles to discover and conquer his world – the world of becoming a human being. He is also going to need his senses, brain and muscles to make sense of many other worlds during his life – the world of his culture, the world of making friends, of school, or sport and one day the ‘big world’ and carving out a life for himself.

Research has shown that baby’s early life experiences write a recipe that he is going to use for the rest of his life. It depends on the baby’s earliest experiences if his recipe for life (and for conquering all the different worlds he is still going to become a part of), will be as fool-proof as a Jamie Oliver or Nigella Lawson recipe or if his recipe will only develop as the result of a string of trials and errors.

Just as baby was absolutely startled into awareness of life outside the womb the moment he was born, you may also have been startled into awareness and the awe of holding someone’s life in your hands. Mom and Dad, when you held your new-born baby for the first time, you may also have felt that you had just entered into a world that you know very little about – the world of parenting. You most probably experienced a mixture of emotions ranging from awe, exhaustion, love, helplessness, confidence and excitement to clumsiness and apprehension with many other emotions in between. It is normal to feel inadequate at the moment of meeting this little person for the first time... and to feel inadequate many more times in his future. Just remember that you are the best he’s got – a mom and a dad who thinks he is the most beautiful and cutest baby that has ever been born; a baby that is going to grow up to be strong and clever and kind and make a huge impact on the world with his brilliance and personality. Mom and Dad, YOU are the shapers and moulders of this little person – it is your thoughts and feelings and actions that are going to mould and shape him into the kind of person he is going to become. You and nature ‘co-author’ 50/50 to write your baby’s life recipe.

Well, I hope this is not making you feel apprehensive about the enormous responsibility that is facing you. Rest assured – YOU CAN DO IT!
Mom, you may be unaware (even though I doubt that you don’t know) that for more or less nine months you and your baby have developed a language all of your own – a language that nobody else hears or understands. It is a language that says: “No Mom, I don’t like what you have just eaten, it makes my tummy sore”; or “No Mom, don’t sit or lie like that, you are squashing me!” Or “Yes Mom, you know just how much I like it when you rub your tummy!” Or even “Oh please Mom, walk away from these noisy shops, we need to rest a bit...”

This innate wisdom and your very special and private way of communicating, help you to create a world that is good and nurturing for your little baby. It is this instinctive wisdom that guides you to know how to take care of your baby – to know when a cry means: “I am hungry”; or when a cry means “I have a dirty nappy or I have a wind or need a cuddle”. It is this innate wisdom that is the same that prompted Michelangelo to create some of the most beautiful works of art in the world.

PARENTING IS SCULPTING

You may wonder what parenting has to do with sculpting? It becomes clear when you remember the story about a little boy who watched Michelangelo sculpt a horse from a huge piece of marble. After watching him work for quite a while and seeing a horse emerge from the block of marble, the boy asked him: “How did you know there was a horse in there?” And Michelangelo replied: “I simply chipped away everything that didn’t look like a horse.”

That’s it – parenting is about chipping away everything that does not look like a healthy, happy and developing baby. Parenting is about following your instinct when your baby uses cries and movements to talk to you. When his cries and movements indicate cramps, talk to somebody who knows about cramps; when your little one doesn’t want to suck properly – talk to some who knows about feeding; when your baby does not cry, talk to someone who knows about baby development – crying is talking. The absence of crying is not a sign of a good baby; it may be a sign that baby needs some help. If your baby is floppy, does not move a lot and is a little blue around the mouth – don’t wait, talk to your paediatrician.
Mom and Dad – you can do this - all you need is time and the urge to succeed

Mom, you need to spend time with your baby to get to know him and understand what he is saying. You need time to make eye contact and discover his little body when you bath, massage, dress and feed him. You need time to eat and relax so your body and the milk that you are producing are healthy and free of stress hormones. You need time to rock him and talk to him to develop his thinking brain. You need time to put him down in a safe and healthy environment free of smoke and noise and flickering lights so he can rest and you have time to rest too. A mom is a baby’s place of safety.

What about Dad? Are you just the wallet and equipment carrier Alan Hosking refers to this in his book “What nobody tells a new father”? No, you need time with baby too, Dad, otherwise you may feel left out. Your baby needs you because you feel, smell and sound different to mom and it is this difference that triggers the development of your baby’s brain. Dad, it is through contact with you that a bridge is built between a mom as baby’s place of safety and the real world – a bridge that takes quite a while to complete before your baby can confidently travel across that bridge to learn about the world and the people, animals and things around him. You are just as important to your baby as mom. You are also very important to mom, because she needs your strength and clarity of thought while she is feeling more than thinking...

To be a good mom, you need to feel a lot (and think a little) to stay in contact with your mommy brain. Your hormones are willing assistants to keep you relaxed and functioning from your instinctive brain, more than functioning from your thinking brain. That is why new moms often feel slow and a little out of control. It is exactly how you should feel to be able to get to know your baby. If mom is dashing here and there to look her best at 06:00 every morning, fixing breakfast, cleaning the house, and doing her normal daily routine before baby was born – there is no place for your baby. Make time for your baby. Be prepared to follow his timetable in the beginning. As the relationship between the two of you is developing, you will automatically establish rapport and once the two of you have rapport, life begins to settle into a routine.

What is rapport? Rapport is what you see when you watch a couple share a meal or have a good time. When you watch them, it is as though they ‘dance’ to a tune that nobody else can hear. They move together, laugh together, throwing their heads backwards and in sync move forward to continue the conversation. Rapport means to share a rhythm and to move and gesture in sync with somebody else. That is what you want. You want to move with your baby and you want your baby to move with you and in so doing you establish a rhythm that works for both of you. A rhythm is nothing else than a routine and a routine brings order, structure and security to your life and makes loving so much easier.
Dad, your baby needs you because you feel, smell and sound different to mom and it is this difference that triggers the development of your baby’s brain.
Generally, parents think of learning as something that starts when a child goes to school, but learning starts much earlier than that.

Learning had already started a few weeks after conception when your baby responded to touch and later to smell and taste and even later to sound and mostly after birth only, to seeing.

What is remarkable is that your baby's ability to read, write and reason six and a half years later when he enters Grade 1 is substantially developed before he is only 14 months old!
ABOUT THE BABY’S BRAIN DEVELOPMENT

During the nine months in utero and the first 14 months in life, your baby is acquiring all the tools and equipment he will need to survive, grow and develop. Unfortunately, many people confuse growth with development and believe that if they feed their baby and keep him beautifully clean, healthy and safe, that all is well. They are right, their baby will grow and the clinic sister and paediatrician will be very happy, but your baby needs more than food and a clean nappy to develop. He needs stimulation to develop and reach his potential.

A full tummy helps your baby to grow, but brain stimulation helps him to develop and to become clever. Parents seldom realise that their new baby needs to learn a lot in his first year and that he needs them to give him the opportunity and stimulation to learn those things, because stimulation builds a clever brain and a fool-proof recipe for life. Brain stimulation occurs when you gradually and gently wake up all baby’s senses and muscles in a specific sequence. No matter how clever the brain, it needs wide-awake senses and strong muscles to prompt itself into action.

Have you ever wondered why a baby is so helpless, and a calf or lamb is so much more alert, strong and independent soon after birth?

It is because human babies are actually born 18 months too early. The reason for the early birth is practical – the baby would be too big to carry and his head too big for mom’s pelvis, while his brain matures enough to be as alert, strong and independent as a new-born calf or lamb.

Why does a baby develop so slowly? Because a baby’s brain needs to develop so much more than the brains of a calf or lamb to be able to walk, eat using a spoon, talk and reason, dress himself, stack blocks, make friends and say no to strangers.

Brain stimulation occurs when you gradually and gently wake up all baby’s senses and muscles in a specific sequence. No matter how clever the brain, it needs wide-awake senses and strong muscles to prompt itself into action.

What is stimulation?
Stimulation is less about a full tummy and more about the brain.
OUTSIDE SENSES

The senses refer to the skin’s ability to feel, the nose’s ability to smell, the mouth’s ability to taste, the ears’ ability to hear and the eyes’ ability to see. These senses are also called the outside senses because it is their job to let your baby’s brain know what is happening outside his body.

The brain can’t feel, only the skin can feel; the brain cannot smell or taste, only the nose and mouth can smell and taste; the brain can’t hear, only the ears can hear; the brain can’t see, only the eyes can see. It is these outside senses that warn your baby if there is danger, if his nappy is burning his delicate skin or if a person doesn’t smell like mommy or a sound is too loud. It is also the outside senses that get overexcited when mommy goes to the mall or to a baby show and there are too many people, smells, sounds and things to see. It is also the outside senses that object when the whole family come to meet baby soon after birth and he cries the whole time. You see, at this stage he is still unable to ignore some of the messages from his senses like you do when you choose who you want to listen to or move away if you don’t like a smell or a person. A new-born baby cannot ignore input from his senses or move away yet, so all the smells, people touching him and talking at the same time is hitting his little brain all at once. That is very scary and even overwhelming for your little one and he uses the only way he knows to communicate his fear and insecurity – he cries loudly and moves in an erratic way.

While your baby is still too young to have his own gatekeeper at the entrance to his brain to choose what he wants to pay attention to and what he doesn’t want to pay attention to, he needs a wide-awake mom and dad to choose what is good and what is too much for him. A baby moves irratically and cries to show he is overwhelmed.

The same thing happened while your baby was in the womb and you ate a strange new kind of food, or if you were at a club or at a noisy and crowded place, or if you were under lots of pressure at work – your baby then kicked really hard to draw your attention. Even though he was surrounded by water, which cushioned him from too much sensory input, he was aware of what was happening due to the early functioning of his outside senses.
Pre-birth stimulation

Be careful of pre-birth stimulation especially of putting earphones on your tummy. Kate thought she was a good mommy and played beautiful music to her unborn child by placing earphones on her tummy. Her two-and-a-half-year-old little daughter came running past and pulled them off her tummy saying: it is too loud mommy! That made Kate wonder, if her daughter could remember when Kate played music to her when she was still in the womb and wondered if the music was too loud then.

Research has indicated that there is more than enough stimulation in the womb without the need for deliberate or extra stimulation during a time when baby’s senses and brain is not strong enough yet to handle lots of stimulation. Listening to your favourite music or reading your favourite quotes aloud may draw a response from your baby once he is born and that indicates that he does recognise it, but it is incidental learning, not deliberate or ‘forced’ learning. Chances are great that pre-birth stimulation may rather increase your baby’s stress level than increase his IQ.

Mimic the guidelines provided by nature – if it was good for your baby to see light and darkness before birth, there would have been a light switch in the womb. If it was good for him to learn to count or sing before birth, there would have been a PA system in the womb. Baby needs to feel protected and loved and accepted pre-and post-birth. Avoid applying the pressure to perform too soon!
Your baby has a second set of senses called the inside senses. While the outside senses help baby to know what is happening outside his body, the inside senses help baby to learn about his body - what bits and pieces he's got, what it can do and where the bits and pieces are in space.

This is a little like when you’ve sat in the same position for too long, your foot has gone to sleep and you cannot feel your foot. It is your inside senses that are saying: Mayday! Mayday! I have lost awareness of the foot. You would then use your eyes to look at your foot, use your sense of touch to tap your foot and try to feel your foot by standing on it. It is only once you are moving your foot that blood flows and awareness returns and that you can start using your foot again.

**INSIDE SENSES**

The inside senses help baby to first develop a map of his own body and a bit later to develop a map of the world around him. He desperately needs such a map or actually a series of maps so he can navigate his way, steer clear of trouble and discover and learn new things. Without such maps, he cannot find the nipple, he wouldn’t know when his tummy is full, he won’t respond to your voice or learn to roll, sit, crawl or walk. Without these maps baby feels lost and is constantly crying, begging you for help. Just think what it would feel like if someone blindfolds you and drives you to a place you don’t know and then straps you in a car on a massive roller-coaster just as the ride is about to start... Can you imagine the terror? No matter that the person is saying that it would all be all right, you will not feel all right till the ride has stopped and you are safely back in a place you know, with people who know and loves you.

Whatever your baby experiences, is fed to his brain via his inside and outside senses and help to create these maps. Maps are created every time each of the senses sends information to specific parts of the brain to create rich and multi-sensory maps of his body and the world. It is the combination of sensory wiring, and the wiring of the muscles close to the baby’s bones that play the leading role in brain mapping. If any problems occur during the wiring of the senses or muscles while in the womb or during the early months of life, this may cause difficulty in creating accurate maps and difficulty in using these maps, which can lead to developmental delays and learning difficulties later.
The human body was designed to move. It is the early experiences that lay the foundation of what follows.

CHARLES KREBBS

The senses, maps and muscles work just like a very sophisticated GPS (Global Positioning System). A good GPS automatically uses the map to pick up where you are and only needs to know where you want to go before it calculates how to get you there. If the GPS can’t pick up your current position, it cannot calculate the directions and there is no response. If the maps are outdated or faulty you cannot get where you want to be, even though it is possible for you to get there. The same applies to a baby – the absence of a body map and faulty or outdated environmental maps would prevent a baby from developing properly and reaching his milestones.

Repeated stimulation develops ‘branches’ on the nerve cells that create brain pathways.

While your baby is using his senses and his muscles, he develops billions more cells and connections than he will ever need. When he feels, smells, tastes, hears or sees the same things over and over, his brain starts pruning away the cells and connections that are not needed. This is just like you would prune or cut back trees and bushes in your garden to create structure and order. Pruning the unused cells and connections boosts the cells and connections that are really needed, to become strong and protected with myelin.

Myelin is a fatty sheath that works just like insulation tape to protect brain wiring and increase the speed at which baby can respond.

IQ (intelligence) is not about the number of brain cells a baby has. It is about the number of myelinated connections between developed cells that makes baby clever.
Nerve cells (neurons) develop at the rate of up to 250,000 per minute during foetal development.

Each neuron can have up to 100,000 branches (dendrites) depending on stimulation.

Glial cells act as ‘nursemaids’ to the neurons.

An adult’s brain can have 100 billion neurons and a million billion connections (one quadrillion).

83% of the wiring occurs after birth.

Maps and wiring develop from head to toe, which means that the map of the head and neck develop way before the map of the feet (cephalo-caudal). That is why baby’s neck needs to strengthen to carry his heavy head long before he can walk and why your hands always tend to be more sensitive and skilled than your feet.

DID YOU KNOW?

- Nerve cells (neurons) develop at the rate of up to 250,000 per minute during foetal development.
- Each neuron can have up to 100,000 branches (dendrites) depending on stimulation.
- Glial cells act as ‘nursemaids’ to the neurons.
- An adult’s brain can have 100 billion neurons and a million billion connections (one quadrillion).
- 83% of the wiring occurs after birth.

LISE ELIOT
Strange as it may seem, although the eyes are part of the head and should develop way before the hands, it actually takes more or less seven years for the eyes to develop fully, just in time for reading and writing in Grade 1.

The direction of map development is like a compass with a NORTH (head) and SOUTH (feet and toes) and EAST and WEST (arms, hands and fingers), all revolving around the ‘pin’ in the middle which is the trunk or core muscles of the baby. Head stability develops first (North) and determines the development of the rest of the body.

The question was: “Can a baby learn?”

Yes, a baby starts to learn soon after conception, but it is not learning like schoolwork learning; flashcard learning or reading and writing.

Baby learning is to learn how to use all the senses and move all the muscles to create body maps within the confined and protected space of the womb.

Once a baby has been born, advanced baby learning is to learn how to use all the senses outside the womb and freely and unhampered move around to discover his body and what it can do.

This new way of sensing and moving outside of the womb update his body maps. Once his senses have adapted enough to survive outside the womb and become curious about the world around him, and once his muscles have strengthened and become co-ordinated enough for him to become mobile and discover his environment, he is ready for baby university.

Baby university involves developing maps of people, things and the world in which he needs to play, reach motor milestones, talk and make friends.

Through repetition, babies increase the number of things they can do, develop and refine the skills involved.

MOLLIE DAVIES