

# Time to ...

# Move

**Physical development in the early years:  
How to observe, assess and plan for  
progress**

**TRUDI FITZHENRY, KAREN MURPHY &  
KAY MARGETTS**

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PO Box 197  
Albert Park 3206  
Australia

info@teachingsolutions.com.au  
www.teachingsolutions.com.au

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# Introduction

This is a book about the prime area of physical development in the early years, and more specifically about moving and manipulating. It is designed for educators to use in settings as an assessment tool and guide as they observe and support children's early physical development.

Physical development is a key area of learning in the Early Years Learning Framework (EYLF).

Children's learning is dynamic, complex and holistic. Physical, social, emotional, personal, spiritual, creative, cognitive and linguistic aspects of learning are all intricately interwoven and interrelated. (EYLF 2009, p. 9)

This book seeks to provide valuable guidance for educators in all early years settings. It aims to clarify and expand on ideas to support a child in each phase of development, and assists educators to support children to *have a strong sense of physical wellbeing* (Early Years Learning and Development Outcome 3).

The main objective is to provide a practical tool to enable educators to recognise and support children's physical development in an informed, exciting and innovative way.

Children's learning and physical development is evident through their movement patterns from physical dependence and reflex actions at birth, to the integration of sensory, motor and cognitive systems for organised, controlled physical activity for both purpose and enjoyment. (EYLF 2009, p. 30)



This book focuses on gross and fine motor development associated particularly with moving and holding and manipulating. Gross motor skills involve the ability to control and coordinate large bones and muscles associated with upright posture, changing position, moving from one place to another, and throwing and catching.

Fine motor skills involve controlled movements of the small muscles and bones of the body needed for reaching, grasping, releasing, carrying, and manipulating objects. The term eye-hand coordination is closely linked to fine motor development and involves the coordination of visual processing with precise hand movements to accomplish tasks such as those required for positioning puzzle pieces and writing. Physical development underpins much of a child's later educational advancement.

Physical activity and attention to fine and gross motor skills provide children with the foundations for their growing independence and satisfaction in being able to do things for themselves. (EYLF 2009, p. 30)

Fine motor skills and eye-hand coordination occur in combination with gross motor skills. Without good coordination, core stability and gross motor skills, the fine motor skills needed for tool handling and writing will not fully develop. Each aspect of physical development is interlinked with the child's future success as a learner.

As children develop increased physical control, coordination and balance, they are able to move with greater agility, flexibility and speed and their movements and ways of handling objects become more directed, precise and efficient.

It is important to remember that new movements occur when each child:

- is motivated
- has opportunities to practise their new and emerging skills
- is maturationally ready
- builds on existing skills

Children should be given:

- experiences that enable them to play with and explore their environment and the world around them use their senses, engage in open-ended activity, to 'have a go', and try new things
- time to concentrate, to practice, to persist, and to enjoy meeting challenges for their own sake rather than for external rewards or praise
- opportunities for finding new ways to do things, developing ideas about cause and effect, patterns and sequences

If the child is not achieving the development indicators within the given age range, educators should continue to provide additional appropriate opportunities for the child to become successful. They should discuss their concerns with the child's parents, asking about how the child responds at home and whether they or the child's maternal and child health nurse or GP have any concerns. If little progress is made, it may be advisable to request parental permission to seek advice from outside agencies.



# How to use this book

This book addresses gross and fine motor development that is typical within a particular age range at key stages of development. It contains clear guidance on what to observe, how to assess what is seen through both the assessment notes and progress checklists, and what to do if progress is not observed

Practical ideas to use in planning each child's individual next steps are also provided. It is intended that the progress checklists could also be used alongside a setting's current tracking system to highlight any areas of concern and demonstrate progress made.

It is important that educators are aware of their responsibility to encourage parents to contact their health professional if the child appears to be developing outside of the normative range. If there is little or no progress after they have spoken to parents and included specific interventions in the child's individual plan, then educators should seek parental permission to involve outside agencies.

This book contains practical, easy to follow suggestions linked to the ages and stages of Early Years Outcomes or milestones of development and offers clear information on what to look for in terms of physical development and how to plan for next steps.

Each chapter addresses a phase or stage of development from birth to 60+ months. Each section is colour coded and links the Early Years Outcomes to a cycle involving observation, assessment and planning.

There are additional activities that offer the busy educator a wealth of ideas to choose from linked to specific age ranges and stages of development. Each chapter includes a short glossary in which key terms are defined as they appear. These definitions explain how we intend the words and phrases to be interpreted within the book. There is a traditional alphabetical glossary of all terms used appears at the back of the book for quick reference.

The progress checklists at the end of each chapter are available for educators to use when observing children's physical development. They can be used to demonstrate progress in a specific area over time. It can be used to support the educator's professional judgement as to whether a child is at emerging, expected or exceeding level.



# Birth-11 months



## Early years outcomes

### Turns head in response to sounds and sights

e.g. the child tries to lift their head in response to a new and interesting sound, even though it is difficult. It is important that the child receives praise and encouragement for this characteristic to develop and persist.

### Gradually develops ability to hold up own head

e.g. the child keeps trying to hold up their head even though muscles may tire easily. It is important for the educator to use their professional judgement to decide how much support to give a child to encourage persistence and help them achieve the personal satisfaction of success.

*By 6 months, most children turn their heads towards the sound of a familiar voice.*



URNS HEAD

**Observation**

**What you may notice ...**

Does the child turn their head in response to different sounds?

Do they turn their head in response to different visual stimuli?

Can they follow a moving object or person with their eyes?

Does the child attempt to lift their head, e.g. when being held on your shoulder?

Does the child keep trying to lift their head and increase the length of time they are successful?



HOLDS UP HEAD

**Assessment**

**What it may signify ...**

The child is able to hear, to **process** and respond to a range of sounds. If the child does not respond, speak to parents.\*

Find out:

- How the child responds at home
- Whether the parents have any concerns
- What hearing checks the child has already had, if any

The child is able to see, to **process** and respond to sight and movement. If there is little or no response, speak to parents.\*

Find out:

- How the child responds to sounds at home
- Do parents feel there is a need for a sight check?
- Are there any underlying physical reasons that may restrict movement of the head?

The child's neck muscles are gaining strength at an appropriate rate. If the child does not attempt to lift their head, speak to parents.\*

Ask them:

- Can the child lift their head for a short time?
- When does the child attempt to lift their head?
- Are there any underlying physical reasons that may restrict movement of the head?

\*If the parents express any concerns about their child's development encourage them to speak to their health visitor or medical practitioner.

## Planning

### What you can do...

This links to sections 1 & 2 of the progress checklist on p. 19

▶ Provide a good selection of resources that offer a range of **pitch** (high/low) and **volume** (loud/soft), e.g. rattles and shakers, rain makers, sleigh bells, musical mobiles and your own voice.



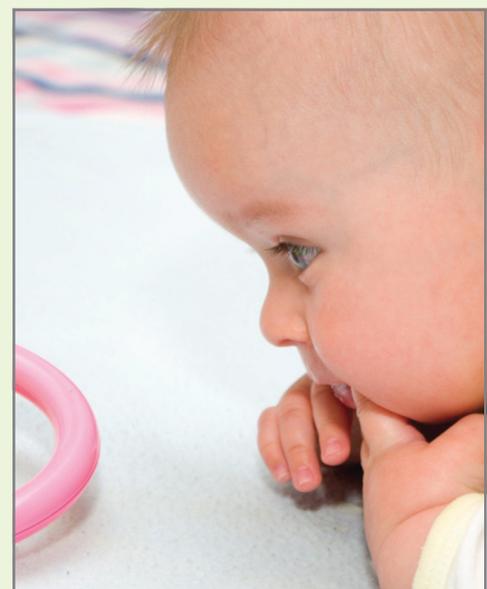
*By 3 months most children are moving their head in response to audible stimuli.*

▶ Provide a good selection of visually stimulating resources that can be used to encourage **eye tracking** and head movement, e.g. moving musical mobiles or light projectors, puppets or toys, objects that sparkle and catch the light. Remember to allow time. The child needs to hear the sound, move their eyes and then their head. Build up the length of activity gradually as initially this takes a lot of effort.



▶ Provide a good selection of visually stimulating resources that can be used to encourage lifting and holding of the head, e.g. mirrors, colour changing bubble tubes, fibre optic lights or favourite toys.

Position a child-proof mirror in front of the child when they are lying on their tummy to encourage lifting and holding of the head.



*By 1 month most children are attempting to lift their head when lying*

## Additional activities

These are additional activities to further support this stage of development.

### Here comes the buzzy bee

(child on your knee or on their back)

With the child lying on their back or sitting cradled by educator, slowly move a brightly coloured, large bumble bee toy into and out of sight while making buzzing sounds, changing the **pitch and volume** of your voice.

*Here comes the buzzy bee, buzz, buzz, buzz.*

(fly the bee into sight from left to right)

*Where is the buzzy bee? Buzz, buzz, buzz.*

(fly the bee out of sight, repeat from other directions and as often from both sides as child remains interested)

### Here comes the buzzy bee

(child on their tummy)

With the child lying on their tummy and the educator, facing them at their level.

*Here comes the buzzy bee, buzz, buzz, buzz.*

(fly the bee towards the child and upwards slightly)

*Where is the buzzy bee? Buzz, buzz, buzz.*

(fly the bee out of sight, repeat flying downwards and away from the child as often as the interest remains)

### Moving peek-a-boo

First the educator remains in one place to establish the game. They cover their face with both hands then remove them, smiling and saying 'peek-a-boo!' in a sing-song voice.

Next, the educator peeks out but from a different position, to the left or right, above or below their hands before physically moving to the left or right, or up or down. Repeat to encourage **eye tracking** and head movement.



*By 6 months most children chuckle and laugh when stimulated.*

### Look at me

Lie or sit opposite the child, at their level, and use your voice and facial expressions to encourage lifting of the head.

### Glossary

**Visual stimuli:** something that provokes a response from the eyes, e.g. a picture, toy, object or person.

**To process:** the use of internal mechanisms in the brain to make sense of what we see or hear – this often occurs without conscious effort.

**Head righting reflex:** when the head is not in upright position this reflex stimulates appropriate muscles to bring it back into an upright position.

**Pitch:** how high or low a musical note or sound is.

**Volume:** how loud or soft a sound is.

**Eye tracking:** the movement of the eyes when following an object.

## Early years outcomes

Makes movements with arms and legs which gradually become more controlled

Watches and explores hands and feet, e.g. when lying on back lifts leg to vertical position and grasps feet

e.g. the child grabs their feet and then sucks their toes using sensory exploration to learn about themselves

Reaches out for, touches and begins to hold objects

e.g. when stimulated by an object, sound or person of interest the child moves their arms and legs rapidly. It is important that educators provide positive feedback through smiles, gestures, speech and repetition to encourage and develop the child's interest and focus.



ARMS AND LEGS

**Observation**

**What you may notice ...**

- Does the child show a willingness to move their arms and legs freely?
- Does the child appear to have limited ability to move their arms and legs?

**Assessment**

**What it may signify ...**

- The child is developing **muscle tone** and strength in their arms and legs.
- If the child does not move their legs and arms freely there may be a lack of **muscle tone** and strength. Speak to their parents.\* Find out:
  - What is the child’s usual range of movement?
  - Are there any underlying physical reasons for their restricted movements?

HANDS AND FEET

Does the child show an interest in their hands and feet?

- The child is developing an interest in themselves and an awareness of **proprioceptive feedback**. Lack of interest may be due to lack of stimulation by adults, or an inability to focus the eyes or follow objects with the eyes. If the child doesn’t respond to visual stimulation, speak to their parents.\* Find out:
  - How does the child respond to visual stimulation at home?
  - Do the parents have any concerns about the child’s vision?

Can the child grasp their own feet?

If the child can grasp their feet, they are developing and increasing their core strength, which is essential for creeping and crawling. If the child can grasp other objects but not their feet, educators should consult parents\* to see if there are any physical restrictions to the child’s movement.

REACHES OUT

Does the child grasp tightly onto an object or finger, when it is placed in their hand?

This may show the presence of the **palmar reflex**.

Does the child reach out for and touch objects?

The child is developing an interest in the world around them. The **asymmetrical tonic neck reflex (ATNR)** is working to increase muscle tone and eye-hand coordination.

Does the child hold some objects?

The child is gaining some control of their hand movements and grasp.

\*If the parents express any concerns about their child’s development, encourage them to speak to their health visitor or medical practitioner.

## Planning

### What you can do...

This links to sections 3, 4 & 5 of the progress checklist on p. 19

- ▶ Encourage a variety of movements through smiling and praising the child's efforts.
- ▶ Support different ways of moving by tapping feet together; clapping hands together and providing a resistant surface (such as your hand) for them to push against. This will provide **proprioceptive feedback**. Provide opportunities for babies to kick, wave arms and move freely on their back and their front, both indoors and outdoors, e.g. on a play mat, on grass or in a paddling pool under constant supervision.
- ▶ Encourage exploration of hands and feet. Play games and sing rhymes involving fingers and toes such as This Little Piggy.
- ▶ Tap the child's hands together, then feet together, then hands and feet together, remembering to add positive facial expressions and interesting sounds while doing it.
- ▶ Place your finger or other suitable object into the child's hand for them to grasp. Encourage the child to release the object by gently moving the object.
- ▶ Ensure that a wide range of objects (some that move or make sounds when touched) are placed within sight and reach.
- ▶ Move favourite objects, or ones that make sounds, slowly in different directions but within the **visual midfield** for short periods of time.



*By 6 months most children are able to reach, grasp objects and pass between hands.*

## Additional activities

These are additional activities to further support this stage of development.

### Mobiles and lights

Suspend or position mobiles or colour-changing lights directly above a cot or mat to encourage arm and leg movement.

Place or suspend toys that make a noise or change colour when touched, within reach of hands and feet.

Provide a range of black, white and red coloured objects and books to stimulate interest.

### Baby massage

Gently massage the child's arms, legs and body to develop a sense of **proprioceptive feedback**.

### Free feet

Whenever possible allow children to have bare feet for increased sensitivity and **proprioceptive feedback**.

### Musical feet

Place a foot piano or toys that make a sound when moved, within reach of the child's feet to encourage repeated movements.

Fingers and toes

Play games and sing rhymes involving fingers and toes such as *1, 2, 3, 4, 5* and *This Little Piggy*.

### Fancy hands and feet

Attach baby wrist rattles to wrists or ankles to encourage movement and grasp.

### Round and Round the Garden

*Round and round the garden like a teddy bear* (educator sits child on their lap and they hold one of the child's hand palm up and trace circles on it); one step (educator moves their hand to the crook of the child's elbow); two steps (educator moves their hand to the child's armpit; tickle him/her under there! (educator

## Glossary

**Muscle tone:** an unconscious low level contraction of muscles at rest.

**Proprioceptive feedback:** sensory feedback that tells us where our body parts are in space without having to look, e.g. being able to put an object into our mouth. It also helps us to know how much force we need to use to do something, e.g. how hard to grip something without squashing it or how to throw a ball so that it goes far enough but not too far. Activities involving resistance give us the most feedback.

**Core strength:** the ability to use tummy and back muscles in a balanced and controlled way.

**Asymmetrical tonic neck reflex (ATNR):** this is a primitive reflex usually present up to 6 months. It is seen when the child is lying on their back and their head is turned to one side. On the same side that the head is facing, the arm should reach out and the leg straighten. The arm and leg on the opposite side should bend. This is sometimes known as the 'fencer' position.

**Palmar reflex:** a reflex response to an object being placed lightly on the palm of an infant's hand, and their whole hand closing automatically to grasp it with a palmar grasp. This reflex usually disappears by 5 or 6 months of age as muscle control develops.

**Visual midfield:** the area that both eyes can see at the same time.

**Palmar grasp/grip:** using the whole hand to hold onto and use objects.

## Early years outcomes

Rolls over from front to back and from back to front

e.g. the child can see their favourite toy or person just out of reach. As they keep on trying to stretch towards it they roll over. As they practice this new skill they come to realise that it enables them to move around and explore their world.

When lying on tummy becomes able to lift first head and then chest, supporting self with forearms and then straight arms

Explores objects with mouth, often picking up an object and holding it to mouth

e.g. the child finds out about the properties of objects by placing them in their mouth: are they hard or soft, warm or cold, rough or smooth? It is important to provide a wide variety of safe objects for exploration and ensure the child is supervised and all choking hazards are well out of reach



ROLLS

**Observation**

**What you may notice ...**

Can the child roll from front to back?



**Assessment**

**What it may signify ...**

The child is developing an interest in the world around them and beginning to develop their **core strength**.

Can the child roll from back to front?



If the child cannot roll or shows no interest in rolling, this may be due to a lack of stimulation in the environment or by adults. Speak to parents.\* Find out:

- Does the child roll or attempt to roll at home?
- When does the child do this?

TUMMY TIME

Does the child lift their head when lying on their tummy?



If the child can lift their head when lying on their tummy, their neck muscles are gaining strength. The child may be developing an interest in their surroundings.

Does the child lift their chest when lying on their tummy, supported by their forearms?



If the child can lift their chest and head when lying on their tummy, they may be developing their upper body strength.

If the child shows no interest in lifting their head or chest this may be due to lack of stimulation in the environment or by adults. Speak to parents.\* Find out:

- Does the child lift their head or chest at home?
- When does the child do this?

EXPLORES WITH MOUTH

Does the child show a willingness to explore objects with their mouth?



The child may be developing an interest in **sensory exploration**.

If the child shows no interest in exploring objects with their mouth, check they are not being discouraged by the presence of a dummy or lack of encouragement to do so. Speak to parents.\* Find out:

- Does the child mouth objects at home?
- Does the child have favourite objects or textures at home?

## Planning

### What you can do...

This links to sections 3, 4 & 6, 7 & 8 of the progress checklist on p. 19

- ▶ Encourage the child to reach first then roll – place favourite objects to the side within the child's sight but just out of reach, gradually moving them further until rolling is achieved.
- ▶ Play rolling games such as *Ten in the bed* with the adult, rolling the child to support **proprioceptive feedback** and a feeling of movement.



*Most children are able to roll from front to back by 5-6 months.*

- ▶ Provide plenty of opportunities for floor play with the child on their tummy. Keep the sessions short but interesting, gradually increasing the time as the child gains more strength and control.
- ▶ Lie or sit opposite the child and use your voice, facial expression and favourite objects to encourage lifting of the head and chest.



*Most children are able to lift head and chest when lying on their tummy. Arms may be extended and used for support with palms flat on the floor by 4-8 months.*

- ▶ Provide a wide range of interesting, yet safe, objects for the child to explore with their mouth, e.g. wooden spoons, teething rings, edges of soft comforters, plastic keys etc. Make sure objects are large enough not to be swallowed and supervise the child during play.  
Ensure that objects for mouthing offer different textures and temperatures (room, slightly chilled — but not too hot or cold).



*Most children explore objects with their mouth by 6 months.*

## Additional activities

These are additional activities to further support this stage of development.

### Make the bed

*Make the bed* – wrap the child tightly in a blanket or piece of lycra stretchy material. The child needs to be able to support their own head before engaging in this activity

*Shake the bed* – gently pat and jiggle the child within the blanket or lycra.

*Turn the blanket over* – gently roll the child from the blanket or lycra.

### Heads up

When the child is on their tummy, gently place a hand on the child's bottom – this helps them to lift their head. Initially expect one lift of the head and increase gradually.

### Exploring textures

Lie the child on their tummy on different textures, e.g. a fleecy blanket, carpet, the grass, silky material, velvet, play mats, pat mats (water filled).



## Glossary

**Core strength:** the ability to use tummy and back muscles in a balanced and controlled way.

**Sensory exploration:** using the senses (in this case the mouth) to make sense of the world.

**Proprioceptive feedback:** sensory feedback that tells us where our body parts are in space without having to look, e.g. being able to put an object into our mouth. It also helps us to know how much force we need to use to do something, e.g. how hard to grip something without squashing it or how to throw a ball so that it goes far enough but not too far. Activities involving resistance give us the most feedback.

## Progress checklist: Birth–11 months

Name:

Date						
Age in months						

Use different coloured pens to track assessments so that progress can be seen.

Tick 'yes' if the child is fully able to perform the movement.

Tick 'with some difficulty' if the child can sometimes perform the movement but not easily.

Tick 'significant difficulty' if the child rarely or never performs the movement.

		Yes	Some difficulty	Significant difficulty
1a	Turns head in response to different sounds.			
1b	Turns head when name is called – normal voice.			
1c	Turns head when name is called – whisper.			
1d	Turns head in response to slowly moving brightly coloured objects.			
1e	Turns head in response to different sights.			
2a	When lying on front able to raise head momentarily.			
2b	Able to hold head upright for a few seconds when being held.			
3ac	Able to bend and stretch arms simultaneously.			
3b	Able to 'bounce' using legs to push off when held for support.			
4a	Shows a fascination for own hands and/or feet.			
4b	When lying on back able to grasp feet.			
4c	Able to bring hands together when playing with them.			
5a	Able to close hand tightly for a few seconds when educator's finger (or suitable object) is placed on child's palm.			
5b	Able to track a slow moving object.			
5c	Able to reach for and grasp objects.			
6a	Able to roll from front to back.			
6b	Able to roll from back to front.			
7a	Able to lift head when lying on tummy.			
7b	Able to lift chest when lying on tummy.			
8a	Able to grasp an object and put in mouth.			