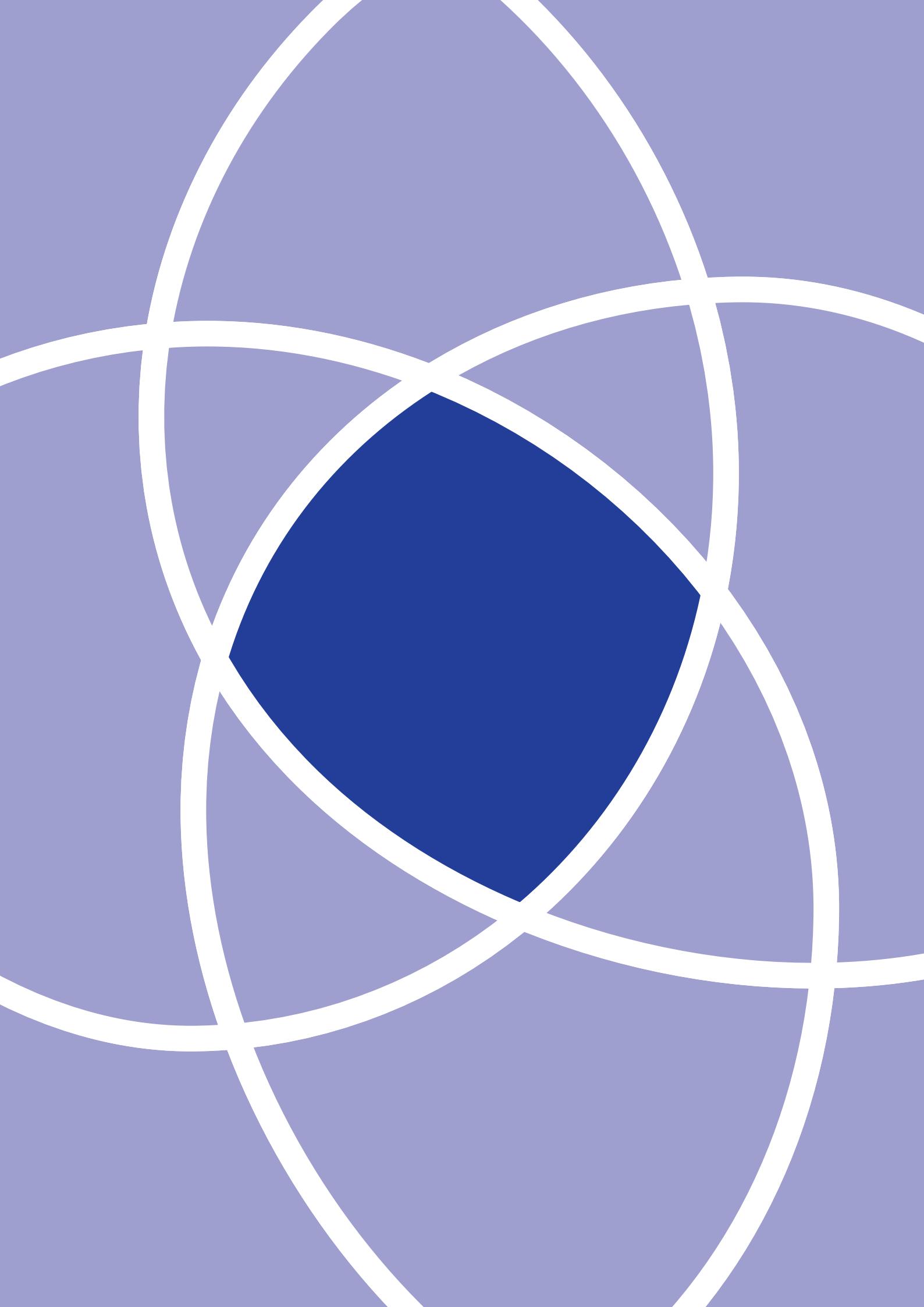
Early Support

Helping every child succeed

General overview of development



This booklet is published as part of the Early Support *Developmental journal for babies and children with visual impairment*.

It gives a general overview of development in young children. The different areas and themes of development in the Developmental journal and Activity cards are described. Advice on toys and materials and strategies for ways of helping your child to learn are also included.

The final section is for professionals and parents who wish to do further reading on the development of young children with limited vision. It explains the theoretical ideas underlying the content of the Journal and processes of development that are more vulnerable and have been given special emphasis.

Where words appear in blue, like this, they appear in the Glossary.

Where colour is used to identify different aspects of development, the colour coding follows the coding used by the Development journal.

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Development in young children with limited vision

Vision is the primary 'co-ordinating' sense for early learning. It integrates information from the other senses of hearing, touching, smelling, tasting and from muscles about position and movement. This co-ordinated sensory experience provides the basis for infant learning and the beginning of making sense of the social and physical world.

When a baby is born they have relatively poor vision, but enough to make out the image of the parent's face. This is often their first visual experience. Vision rapidly improves over the next weeks and months. Often the first thing that parents notice when their baby has difficulty with vision is that the baby doesn't look at their face and doesn't return their loving look. Parents say how hard it is when they realise that their baby does not see and that they need help as soon as possible.

The amount of visual difficulty depends on the eye condition, so some babies and children have more difficulty than others. Most babies with limited vision tend to see very little in the early months, though the vision of most will improve. The rate and degree of improvement of vision varies in each child. In a very few eye conditions it is known from early on that the child will not develop any more vision. For most children with limited vision, there is uncertainty and it is important with these children to help them develop their vision to its maximum potential.

Babies and young children have an amazing capacity to learn. Those with limited vision will need to take in information through their other senses. They'll need more help with learning than those with good vision, because they miss out on the incidental learning that comes through looking and watching.

Learning new skills is often more challenging when vision is limited. For example, being motivated and learning to walk is more difficult when you don't see other people walking or the exciting things all around you. Babies and young children need to draw on different abilities to learn particular

skills and find other routes for reaching particular goals. For example, they may need to rely on memory more and build up 'maps' of space in their minds to recall the layout of rooms in their home. Although there can be big variation between individual babies and young children with limited vision, on average they tend to acquire new skills more slowly than typical sighted children in the first years of life. The rate of learning is usually affected by the child's level of vision – children with the most limited vision tend to acquire skills at the slowest rate. There is therefore quite a strong relationship between use of vision and developmental progress and it's important to help the child use any vision available as much as possible.

In all children, development tends to progress through apparent spurts of fast change and periods of slower learning, when current skills are refined and consolidated. The child may need further maturation and growth before they're ready to move on. This uneven pattern of development may be more noticeable in children who make slower progress, including many children with limited vision. In some, the periods of apparently slower change can be quite extended and the child appears to be on a 'plateau' in their learning.

Many babies and young children with limited vision have a remarkable and creative ability to work round their vision loss and make progress and learn in all areas of development. However, there are special challenges for learning in all areas of development. These include the areas of social and emotional development, communication and language, play and learning, movement and co-ordination, and independent self-care. In light of this, all these areas of development are included in the Journal.

Early intervention and help makes a difference to how quickly babies with limited vision learn. Many of the natural ways that parents respond to their baby and young child will help their development. The Developmental journal and Activity cards are designed to help parents show their baby how the world around them works and to ensure that their development is as 'smooth' as possible.

Introduction to key areas of development

The following introductions outline the developmental processes that are covered in the developmental areas and themes of the Journal. Where vision is important in helping the growth of the developmental process in the normally sighted child, ideas are given in the Journal and associated Activity cards to help the development of the process through other routes.

Social and emotional development

Babies are born into a social world. They have to learn what other people are like and how they behave so that they can interact and develop relationships. Through interacting with others, they learn about who they are, about their own feelings and how to behave. As they grow, they learn more about other people's feelings and points of view. This is called social-emotional development. It lays the foundation for developing relationships and also for learning to communicate and later use of language.

The developmental themes in this area are:

Developing relationships

Learning about self and parent/others

Babies' first experiences are with their parents. Through these early interactions, they start learning about how and why to behave and who they are (the beginning of self-concept). They begin to understand about other people and how they behave. They learn that other people have points of view and this helps them to interact better with people. They gradually learn about other people – brothers and sisters, grandparents, other carers and children. The concept of self and others begins in the first two years of life and continues to develop into early adulthood.

Showing and understanding feelings

The first feelings babies show are those of how they feel physically, eg tiredness, hunger or contentment. Parents respond to their baby's different cries and babies learn that they can get help or comfort. Later they develop other feelings such as happiness and anger. These feelings are called emotions. As the child gets older they can express more emotions and start to understand the feelings of others.

Showing attachment to parent and familiar others

Through the early, shared experience of caring routines and play, babies and parents develop an emotional bond. This is called attachment and gives the child a secure base for finding out about the wider world. This relationship helps children to understand more about themselves and others, develop confidence and self-esteem and be prepared for developing relationships with other people besides their parents.

Behaviour and self-regulation

In the early months babies are very dependent on parents and carers to meet all their needs. As they become more active and explorative, they become more aware of what they can achieve. By the second year of life children begin to follow their own intentions and wishes. Although this is a positive growth in independence it can lead to frustration and temper tantrums when the child can't have their own way. In the early years children find it difficult to regulate their emotions and may find it difficult to calm down if upset or excited.

Social interaction

Joining in social interaction (games and rhymes)

First social contact is about being comforted and enjoying cuddles with parents. Babies realise how much fun it is to interact and play with their parents. This is first through physical or vocal games where the parent and baby adapt to and 'mirror' each other. Later the baby enjoys social games that have a familiar pattern, such as simple rhyme games. They come to recognise the game and do the actions or say the words that go with the game. Young children begin to learn the basic 'rules' of social interaction such as turn-taking and sharing.

Developing early social skills

Everyday life is organised around social scripts, which are like the scripts of a play. These help us know how to behave in everyday situations like mealtimes or when meeting new people. They help us predict how others will behave in the same situation. Young children start learning about social scripts from the first year of life. Gradually they use their knowledge to behave appropriately in social situations, eg greeting someone when they arrive, thanking someone when given something. This is the basis for developing the social skills that are important for later social relationships.

Communication, language and meaning

The foundation of communication starts in the earliest days, when babies express their feelings and parents respond to their cries or vocal sounds. This helps babies learn to influence their parents and to attract their attention. During the first year they become more purposeful in communicating their wishes and needs. This is done through vocal and emotional expressions, eye contact and/or body movements. In the second year, children start using language to communicate their wishes and needs, to request and refer to things and to draw attention to events of interest.

The foundation of language development starts in the earliest days when babies listen to their parent's voice. During the first year they begin to experiment in making and copying sounds. They hear familiar words and phrases during everyday routines and events and begin to understand what they refer to. This bringing together of language and understandings is the foundation of meaningful language, which becomes more complex and extended as the child grows through the pre-school years.

The developmental themes in this area are:

Listening and attending

Learning to listen selectively is important in a world full of different sounds. Early responses are listening to the parent's voice, which gradually extends to listening for longer and to other voices, other sounds and especially to language. This leads to pleasure in listening to nursery rhymes and familiar stories. Initially control of attention is poor and children are easily distracted, but as they develop they become able to focus and sustain attention for longer periods.

Understanding language and meaning

Linking sounds/actions/words to familiar situations

The regular patterns of daily routines, with their familiar sounds, smells, objects, actions and words, help babies learn about everyday life. The predictable routines of feeding, bath time, play and bedtime all help babies' growing understanding. The earliest understanding of language is often during these familiar routines.

Recognising what objects are for

Words are symbols that 'refer' to something. Babies and young children have first to learn about the object or thing that is being referred to – what it is, what it's used for, etc before they can make the link between the object and the word. So recognising and understanding what you do with a brush, cup, spoon (that is, the concept knowledge about objects) is important for learning meaningful language.

Understanding words

In the first year of life babies hear familiar language during everyday routines and begin to make connections between these expressions and predictable routines, actions and use of objects. This early understanding of language is called situational understanding, because the familiar situation helps the child understand the words. Gradually children learn to understand words and expressions without this extra support. Joint attention is important in helping children attend to and talk about the same thing as parents and make the link between the words they hear and the objects or events that are being referred to.

Read more about this on **page 7**

Pretend play

The earliest pretend play of a child involves trying out everyday actions and objects on themselves. Then they start doing the same actions on other people. As young children develop, they show more make-believe behaviour and pretend that objects 'represent' something else – for example, that a doll is a baby, a cube is a potato. Later children take on 'roles' and pretend to be other people, often doing this with other children. Pretend play is included in this section as it involves using 'symbols' and may support the learning of language. Playing with others also increases understanding of social interaction and communication.

Communication

Attracting attention

First attempts at gaining attention are gazing at the parent or showing distress. Later, babies vocalise or move excitedly or grab their parent's clothes. Gaining their parent's attention is one of the first steps in communication. Babies may try to attract their attention to communicate their feelings or needs, or for company and play.

Joint attention (sharing experiences)

Towards the end of the first year, babies start to show parents things or attract their attention to something that interests them. Sharing attention to something of mutual interest is called joint attention. Joining in with a baby's play will help them to share experiences and develop joint attention skills. These skills are important for developing communication and 'shared understanding' about the world.

Communicating needs

From the earliest days, babies show distress, discomfort and pleasure. They learn to show whether they want to play with their parent or to stop playing. They learn to show whether they want something or not. Through actions and later through gestures or language, they learn to communicate their wishes and their needs. These are important first steps in communication.

Expressing preferences

Even before language develops, babies can tell their parent if they're enjoying a game and if they want it repeated. They can show if they like a particular toy, food or activity. They later learn to make definite choices between two things, which gives them experience in communicating their preferences.

Expressive language – talking

Making vocal sounds

Speech begins with experimenting with sounds. These start with vocal sounds, like cooing, and then open vowel sounds like 'aah' 'uh' and squealing and blowing raspberries. This matures to consonant-vowel sounds like 'ba' and 'da' and joining these up into strings like 'aga', 'dada'.

First words, linking first words to meaning and naming objects

Babies experiment with making vocal sounds during the first year of life. Later they begin to understand some words or phrases that refer to a particular action, object or event. They begin to use one or two of these words in the appropriate situation. First words are often 'mama', 'daddy', action words like 'up', 'no', and one or two object labels. There can be quite a long period after saying a few first words before a child says more words meaningfully. Later, vocabulary may increase quicker and children start using more and more words and making word combinations.

Making conversation

In the first months babies vocalise and if the parent vocalises back, they pause and listen. This is the beginning of the earliest 'conversation' with a baby. After a time, babies start to take turns in vocalising and then to copy their parent's sounds. This is the start of learning the 'rules' of conversation. When a child starts to use words and phrases, they will need to learn how to use them as a speaker or as a listener in a spoken conversation. This includes taking turns and changing intonation and language style for different communication purposes, eg making a request, giving a command, asking a question.

Play and learning

Play is one of young children's main ways of learning about the world. Babies learn through repeated experiences and learn about their senses, their own bodies, other people and objects in their immediate world. They start to explore and experiment with objects and toys by looking, listening, feeling and tasting. They try out actions on objects and learn from feedback of their own experiments. Play is especially motivating because it's spontaneous, creative and fun. Play is also the way a child shows their understanding of the world through their interaction with their parent, with toys and everyday objects and playmates.

The developmental themes in this area are:

Making connections

Learning about sound

Babies with good vision see the parent's face when they talk and keys when they are shaken and they see that sounds come from a solid object. This is called a 'sound-object concept'. They see that different sounds come from different sources and can relate each sound to its source – for example, Mum's voice to Mum. They also see where the sound source is in relation to themself and gradually learn to find a sound source that they can't see (sound localisation).

Learning about objects

Object permanence: understanding that objects are still there when not touched or seen

Babies with good vision see the people and objects of their environment and know that objects are solid and can move. They see that the ground is a continuous base and that objects drop to the ground. Gradually babies begin to learn that when objects disappear from touch or sight they are still there. This understanding is called object permanence. Later children develop organised search strategies to help them find objects.

Cause and effect

During their early experiments, babies begin to notice what happens when they do different things with objects, eg they find out that a rattle makes a rattling sound when shaken. Through observing and experimenting, they learn that their own actions have consequences – for example, pulling the string makes the sound of the musical toy. As cause-effect play develops, children learn more about objects and their physical properties. They start using simple problem-solving techniques to work out more complex cause-effect sequences.

Understanding how objects relate

As young children grow older, they begin to relate one or more objects with another. This allows them to start learning relationships between objects, such as inside/outside (in container play) and stacking and building. They learn other ways of relating objects together such as matching similar objects and later sorting into categories of size, shape or function. Learning to relate things to one another and to identify connections and relationships helps develop important concepts that are needed to move onto more complex thinking.

Using hands

Babies with good sight watch how their parent uses their hands, then they look at their own and realise that their hands bring the world to them. They learn to co-ordinate their eyes and hands to touch and reach out accurately. Babies explore the texture and shape of objects and reach out and grasp objects. They use their hands for balance when sitting or to pull themselves up for crawling or standing. Hands are used as tools to manipulate objects and toys and to help with feeding or dressing tasks.

Learning with touch

Babies and young children learn a great deal about the world through touch. Their experience of touch is linked with input from the other senses so that it becomes integrated. Textures and substances of everyday routines, objects and experiences become recognised and meaningful. Earliest touch exploration tends to be of the parent and their face, hands and clothes.

Discovering hands

A baby first learns that they have hands through catching sight of them and they begin to watch their hands and understand that they belong to them. Once the hands have been discovered, babies use them to explore the world and find out how it works.

Co-ordinating hands and fingers

Babies in the first weeks grasp a finger pressed into the palm as a reflex. They soon start to close their fingers over their parent's finger when it touches theirs. Then they start to open their hands and grasp an object on purpose. Gradually fine finger and thumb movements develop and they use their fingers to feel and explore and to pick up small objects between their finger and thumb. This leads on to using their fingers for more complex movements, like taking a lid off a box, screwing and unscrewing and turning knobs. They learn to draw and use their fingers to feel and recognise different shapes and textures.

Releasing objects

In the early months babies let go of objects as their hand relaxes and interest is lost. Active release of objects develops after learning to grasp and is first seen as a cast of objects. This leads to practising their release by casting. Deliberately placing a toy down or releasing it on demand is a useful developmental step forward as it helps children's manipulation and experimentation with more complex toys. They learn how to carefully release toys in and out of a container or a posting box and how to place toys or blocks on top of each other to build them up.

Movement and mobility

This section looks at the skills involved in the development of movement, physical co-ordination and mobility. It focuses on how a child becomes independent through movement, exploration, and an understanding of the environment. Most of the major steps in developing skills for movement take place in the first few years of life when babies begin to control and co-ordinate their body movements and develop and discover their physical abilities.

The early reflex actions which babies are born with are replaced in the early months by purposeful and controlled movement. Children are motivated to make voluntary movements when they are interested in things beyond their own body and when they understand that they can reach and obtain these things even when they're not in direct contact with them. Motivation and growing interest in and understanding of things in the environment and regular practice is vital to help the child control the movements they make and become more independent in sitting.

The developmental themes in this area are:

Body awareness

Body awareness is part of learning to develop voluntary movement and this can be increased through experiencing movement (kinaesthetic sense), the sensory experience of the skin (touch, texture, temperature) and the touch experience of the hands, as well as through vision.

Position in space

Orientation is about understanding the three-dimensional area of space, through which we move, including the impact of gravity. Whenever a baby moves, is lifted, carried or played with, they receive messages from balance sensors in their ears (vestibular information) and from their muscles and tendons (proprioception). At the same time they see the effect of the change in their position on the environment. They naturally try to stay upright and vision helps them to make sense of the messages from their balance sensors and muscles.

Exploring the environment

A baby's first experience of exploring the world is of the surface on which they are laid. As they gain control of posture, mobility develops in a sequence of rolling, creeping, crawling and then walking. Gradually, confidence in their ability to move extends to other rooms in the house and garden, the homes of grandparents and friends, outdoor spaces such as parks and play areas and shops, and later to playgroup or nursery.

Extending movement and co-ordination

Parental play (eg bouncing on the parent's lap) is a natural way to give babies experience of movement and to practise postural control and co-ordination. During the early years of life, babies learn to roll over, sit up, creep and crawl or bottom shuffle and then walk independently and develop more advanced mobility skills.

Towards independent self-care

A child starts the long journey towards independent self-care as soon as they're born and the first steps are related to feeding. They learn about feeding, dressing, toileting, bathing and bedtime routines through daily, repeated routines and gradually participate more actively in all these areas. Learning to care for yourself develops through direct experience and also through observing or knowing that others are doing the same things.

The developmental themes in this area are:

Feeding/eating

Learning to eat and feed oneself is a complex process starting with the sucking reflex of a newborn baby and moving on to weaning from milk to eating solids from a spoon, drinking from a cup and then learning to feed using fingers and later cutlery.

Dressing

Babies have daily experience of having their clothes put on and taken off and can be gradually encouraged to become more active in helping. They will usually attempt to remove a few simple clothes before they start trying to put on clothes.

Using the toilet

Young children begin to develop greater control over their bodily functions and begin to anticipate the need to urinate or defecate during the second to third year of life. When they begin to show signs of readiness for using the potty or toilet, they can be helped to establish toileting routines.

Washing and bathing

Babies usually enjoy having a bath and it offers opportunities for learning about their body and developing washing and hygiene skills. Young children also learn to wash their hands and begin to use a toothbrush.

Bedtime

Newborn babies have short sleep/wake cycles, which are affected by their feeding needs. By the second part of the first year they're sleeping for longer periods and can be helped to develop a settled sleeping pattern through good bedtime routines. By the end of the first year of life they may be sleeping mainly through the night.

Approaches and strategies to support learning

The following are strategies that are particularly useful for supporting the learning of new skills and behaviours and by young children with limited vision. You may want to read through the following advice and draw on it when using suggestions from the Activity cards or when trying to help your child to reach a next developmental goal in the Developmental journal.

Shared discovery

Shared discovery is helping your child to discover toys with an adult and to develop joint attention – that is sharing attention and interest in a toy or activity. This is important for learning together and is a foundation for social development, play and learning and communication and language. It can start from a very young age before the child is talking. Ideas for developing this can be found in the Activity cards (under Play and learning or Language, communication and meaning).

Scaffolding

This is giving sufficient support (scaffold) to help a child achieve something successfully, without taking over control. It involves letting children take the lead in trying to do something and giving sufficient and sensitive help when needed. The aim is to provide sufficient help to enable the child to succeed and not get frustrated while not taking over control. The child is helped to achieve success and act as independently as possible.

Breaking into small steps

This is breaking down a task or activity into smaller steps for learning, especially tasks which involve a sequence of actions. If the child finds learning one of these steps too much, the step can be broken down further into smaller steps. The steps need to be the right size for the child, so that it doesn't take too long to learn and success and mastery are achieved. Backward and forward chaining are methods for doing this:

- Backward chaining
  Break the task down into smaller steps. Then start with assisting the last step to complete the task (1. Put spoon into mouth). Then work backwards, assisting learning step by step (2. Lift spoon up towards mouth, 3. Scoop up food in the bowl). Start a next step only when the previous one has been achieved. This is often successful for learning a skill as it provides a motivating end – the child gets a reward from the beginning.

- Forward chaining
  Break the task down into smaller steps. Then start with assisting the first step in the sequence to complete the task. For example, if helping the child learn how to put a ball in a posting box, start with 1. Put the ball on the lid, 2. Find the hole, 3. Push the ball through and 4. Take the lid off and find the ball inside. This is a useful way of learning a more complex sequence, starting with the first step and adding each one only after the previous one has been achieved.

Reinforcement or reward technique

Children are more motivated to learn if they find the activity rewarding. Often the pleasure and mastery of learning a new skill is sufficient reward. If a child seems less motivated or interested, motivation can be increased by making the task more interesting – for example, by adding a sound cue to the activity. Following the task immediately with something that the child especially enjoys is also motivating. This is called reinforcement, since it increases the child's motivation to do the action or activity again – it reinforces the action. Reinforcement can be anything that the child especially enjoys – a favourite food, a toy, music from a favourite CD, and praise and a cuddle.

Praise positive behaviour, don't 'reinforce' inappropriate behaviour

Adult attention is so important to young children that sometimes inappropriate behaviour is encouraged without this being intended. Even getting the attention of an angry parent who is trying to stop them doing something is sometimes 'reinforcing' to a child. Plenty of attention and praise to all appropriate, positive behaviours is important. If your child is doing something you don't want to encourage, calmly stop the behaviour and move them on to something more appropriate. Ignoring may also be important if the child appears to be doing something to get attention. As children get older, a firm 'no' and simple explanation lets them know what is acceptable and what is not.

Key messages for helping your child learn

The following are strategies and techniques that are useful for supporting the learning of new skills and behaviours by young children. You may want to read through the following advice and draw on it when using suggestions from the Activity cards or when trying to support your child to reach a next developmental goal in the Developmental journal.

- Be spontaneous and flexible.
- Keep appropriate play items nearby and equipment for daily routines set up and ready to use.

- Think about the activity from the child's point of view to understand how to help them. For example, what might a hairbrush on the head feel like if you didn't know what it is?
- Reduce distractions and noise from TV, music and busy environments when doing an activity.
- Let your child experiment with a new toy and be ready to help them discover how it works.
- Think about different positions. For self-care activities, it may be easier for you to assist your child from behind. However, you may want to be in front or alongside for social interaction, communication and most other play.
- Give guiding support through guiding hands or sharing discovery together (see Activity cards). This follows the child's lead or gives gentle guidance, without taking over.
- Show your child how to do it by taking them through the action, when this is appropriate.
- Break down a task into smaller steps to help support learning in manageable chunks.
- Give your child enough time to try and do the activity for themselves, before giving your assistance.
- Give enough support to prevent frustration.
- Gradually reduce the help that you give.
- Give feedback through language when your child can understand what you're saying.
- Show that you're interested through joint attention (see Activity cards).
- Try and ensure that both you and other carers are consistent in the way that you introduce and assist activities.
- Praise your child and show pleasure in achievements.
- Give your child the opportunity to use new skills regularly.

Advice about toys and materials

The following gives general advice for parents about toys and materials and safety considerations when playing with your child. More detailed advice on suitable toys and materials to use for your child's vision level can be found on the Visual environment and visual materials cards.

- You don't need any specialist or expensive toys to help your child.
- All toys and materials mentioned in the Developmental journal can be found at home, can be home-made or can be bought from ordinary toy shops, eg children love to play in cupboards with pots and pans and plastic tubs and containers.
- Brightly coloured toys and toys where the different parts have strong colour contrasts will ensure your child will be able to make the most of their vision and learn from their play. The Visual environment and visual materials cards give ideas about what sort of toys to use depending on your child's level of vision.
- Choose sound-making toys with a variety of different sounds, such as a bell, rattle, squeaker, xylophone, drum, music box, keyboard or electronic music toy. Variety is important to encourage listening to different sounds and enjoying sound-making.
- Toys that are silent where the challenge is in what you can do with the toy or materials and there is no distraction from sounds and music will also help your child learn.
- It's a good idea to keep toys in a familiar place, like a toy box or toy corner, so that your child knows where to find them.
- Putting toys away at the end of playtime will not only help your child learn about where to find them the next time but will also ensure that your child doesn't trip over them later when they start walking.

Safety issues

- Before purchasing any toy for your child, check that it reaches European standards for safety and also that it's suitable for your child's age, according to the manufacturer's recommendations.
- Any paints, crayons, pens, bubbles used with children should be non-toxic and suitable for them.
- If using everyday objects in play, check that they're safe and don't have sharp points or edges or loose parts that can come away.
- Objects with long handles and sticks, like wooden spoons, drum beaters, should not be left with the child when they are playing alone, in case they are poked into the mouth, eyes or ears.
- Young children often put things in their mouth and they should not be left alone with small parts, like beads, small bricks, which they could choke on.
- Ensure that all rooms used by your child are safe from hazards.
- In addition to precautions recommended for all children, check that furniture and other edges have corner or edge protectors on and monitor each room for hazards as your child grows in height. Tables and chairs that were too high at one age, become accessible or hazardous as children grow. If furniture is moved or new items are added, make sure your child is shown and told about it, and given a chance to explore it thoroughly.
- Children of this age should always be supervised in the kitchen and bathroom.

Development of babies and young children with limited vision for professionals and parents

This section outlines the theoretical ideas that underpin the design of the Journal. It may be helpful for professionals supporting young children and for parents who wish to do further reading.

These theoretical ideas draw on the clinical and research experience of researchers over the last 30 years and in particular, on the work of the Developmental Vision Team (Great Ormond Street Hospital). This team has shown that there may be challenges in all areas of development for babies and young children with limited vision. There is still a great deal to be learned about the development of these babies and young children, so the following ideas are within the limits of current knowledge.

The theoretical ideas used in the Journal relate both to general development and specifically to babies and young children with limited vision:

General development

Development is continuous

- It is a continually unfolding process from birth to adulthood and beyond.
- It is cumulative or like 'building blocks', with each skill or ability building on those acquired earlier.

Development is holistic

- It is a whole process with each area of development progressing at the same time as other areas and with complex relationships between them.

Development is dynamic and two-way

- It is a dynamic two-way process between the child's maturation and environmental influences. Parents and carers help shape children's experiences and also respond to children and so have a direct impact on the learning environment.

Development is the framework for learning

- Developing new abilities can only be done when a child is developmentally ready. Moving forward is made possible by being developmentally ready, having appropriate opportunities for learning and engaging in and interacting with learning opportunities.

Development in babies and young children with limited vision

Development is potentially constrained

- Development in all areas is potentially constrained, particularly in children with more limited vision. Early assistance is needed to help overcome these potential constraints.

Rate of learning varies

- This varies widely in individual children, from those who develop quickly and achieve at a roughly similar level to fully sighted children to those who develop slowly. There is no middle cluster of children with limited vision that we can call 'average' or 'typical'.
- Most children acquire skills at a slower rate than children who are fully sighted.
- In general, children with more profound levels of limited vision tend to acquire skills more slowly.
- Rate of learning is influenced by the child's maturation, level of vision, general abilities and learning experiences, and also whether a child has additional learning, motor or other sensory difficulties.

- Different areas of development often progress at different rates in individual children, leading to an uneven profile of development.

Development has specific patterns and needs

- Development follows roughly the same sequence as in fully sighted children.
- However, children may use alternative pathways and follow specific developmental patterns in order to achieve certain endpoints.
- Certain patterns require specific kinds of support to assist their progress.
- Some behaviours differ from, but appear to be 'functionally equivalent' to other behaviours in fully sighted children.

Development is vulnerable

- Some developmental processes are especially vulnerable and are more prone to getting 'stuck' than others.

Read more about this in the **Getting stuck?** booklet

Vulnerable processes

The following developmental processes have been found to be particularly vulnerable and particularly in children with the most limited vision. They have therefore been given special emphasis in the Journal:

- Integrating the senses in the first year of life
  If vision is not available to co-ordinate the different senses, the sensory information from touch, sound, and the other senses can remain separate, as if compartmentalised in different boxes. Fragments of sensory experience do not allow a baby to make sense of what they're hearing, feeling or tasting. It's vitally important that a baby is helped to integrate their different sensory experiences from as early as possible, in order to make their experiences informative and meaningful.

- Becoming social and communicative
  Much of early social behaviour and communication is achieved through behaviours that depend on vision, like eye contact. If vision is not available, babies and parents may find it difficult to relate to each other and to find ways of communicating. Alternative means of relating to one another are needed to establish an effective way of communicating.
- Becoming aware of their movement potential
  Babies move for the purpose of reaching something or someone that interests them. Without vision, babies may not know that there is something to reach or how to reach it. They tend to lie passively, unaware of their potential for movement. They need to be helped to realise that things are there and that they can reach for them and so discover their movement potential.
- Sharing attention (joint attention)
  Babies see that their parent is looking at them and is interested in what they're doing. As they develop, they share their interests and point out or show things to their parent. This sharing of attention related to something of mutual interest is called joint attention. Babies with limited vision may be unaware of their parent's regard and interest in what they're doing. They're less likely to try and attract their parent's attention to something that interests them. This risks the development of a 'shared understanding' of the world, which is the foundation for communication and meaningful language. Tactile and verbal means of achieving joint attention are important to compensate for the lack of shared visual attention.

- Making their world meaningful
  Much early learning about the social and physical world moves forward through incidental learning when children look at people and things. Without vision, babies and young children may not have access to the immediate world or understand how it's organised. This is a particular risk for pre-verbal children, because they can't yet understand verbal explanations. Bringing experiences to the child and making them meaningful is very important for helping the young child build up appropriate concepts of the social and physical world.

- Linking language to meaning
  Children see what adults are referring to when they're talking and this helps them understand the concept of the spoken word. Children with limited vision may not make this association and words become 'empty' sound concepts. A child may use language to imitate others, even when they don't understand what the words mean. From the first year of life it's important to embed language in the child's direct experiences and familiar routines, actions and objects so that they learn to link language to its meaning.

  Understanding the significance of these processes for children with limited vision and giving appropriate early developmental assistance is critical to overcoming the challenges. Help is needed from the earliest days and throughout the early years. Since these processes are more vulnerable in children with the most limited vision, promotion of vision is also important, since any useful vision could be beneficial.

  Practical guidance and advice is given in the Activity cards which go with the Developmental journal and in the Development of vision activity cards which go with the Record of developing vision. The Getting Stuck? booklet provides further suggestions and advice if children are having difficulty making progress in any of these areas.

Focusing on the whole of development

Theoretical ideas stress the importance of thinking about babies and children's development as a whole process.

Development described in the different 'areas' of the Journal often overlaps and is related. Developmental goals listed in one area could be listed in another area but they are not written again to avoid repetition. This is especially the case in the first year of life, but also later. For example, playing social rhyme games draws on skills in social and emotional development, language and communication, play and even motor co-ordination.

Achieving a particular developmental goal often depends on building up underlying skills in different developmental areas. For example, beginning to walk independently requires motivation to reach people (social and emotional development), skill in sound localisation (play and learning), spatial awareness and postural control and co-ordination (movement and mobility).

The Journal has been divided into the manageable chunks of 'developmental areas' and 'stages' for practical reasons. Each 'developmental area' includes processes and abilities that appear closely related for achieving particular developmental goals. Each 'stage' includes goals that are likely to be achieved within a particular age period.

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E P Scott, E J James and R D Freeman
PRO-ED, Austin Texas

This booklet is published as part of the *Developmental journal for babies and children with visual impairment*. Copies of the Journal can be obtained from:

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