

# CHAPTER 2

# Integrated Movement Approach



## 2.1 CREATING AN ACTIVE ENVIRONMENT

The school environment plays a significant role in shaping children’s physical activity behaviours and their gross motor skills (1,2). Preschools should make it a priority to establish an active environment that encourages movement throughout the day and promote physical activity in a variety of environments, including both indoor and outdoor spaces.

One approach to encouraging physical activity in children is to make minor adjustments to indoor spaces such as classrooms and corridors, as well as utilising outdoor structures like playgrounds and walking paths. Additionally, movement can be incorporated into lessons and transitions, which can serve as a starting point for instilling a lifelong habit of physical activity participation in children. Some important factors to consider when creating an active environment include:

### THE PHYSICAL ENVIRONMENT

Access to open play areas, playgrounds, and more space per child are positively associated with physical activity levels in children attending preschool (3). In local context, space constraints, size of playgrounds, and the weather are barriers to active play (4,5).

To tackle these barriers, creative solutions are needed to intentionally design indoor and outdoor spaces to provide greater opportunities for movement.

### EDUCATORS AS ROLE MODELS

It is important for adults in charge to provide a supportive environment that encourages active play and exploration. Educators should serve as role models by modelling movement as a way of life, which is an indirect reinforcement for children to be active (6). Small actions to encourage a variety of movement include jumping or skipping instead of walking to the toilet, balancing on the side of the walking path, or even doing a small dance or stretch if children are restless in class.

### MOVEMENT AS A WAY OF LIFE

The “every activity counts” principle from SPAG supports the overall goal of integrating physical activity into children’s daily routines through small, habitual actions that require minimal effort. This principle recognises that any physical activity, no matter how brief or low intensity, can contribute to a child’s overall health and well-being (7).

By adopting this approach, the concepts presented in this guide aim to make movement accessible and assist preschools in fulfilling ECDA’s regulatory standards for outdoor learning experiences and gross motor activities<sup>1</sup>. It also enables children to accumulate and meet the recommended levels of physical activity throughout the day. With consistent effort, regular movement can become an effortless part of a child’s lifestyle, making movement a way of life.

<sup>1</sup> According to ECDA’s early childhood development centre regulatory standards (2021), full day services are required to allocate 1 hour of gross motor activities of which at least 30 minutes must be outdoors daily, or 45 minutes must be outdoor thrice a week. For half-day services, a total of 30 minutes of gross motor activities should be conducted thrice a week, with at least one session per week outdoors.



## 2.2 WAYS TO INTEGRATE MOVEMENT THROUGHOUT THE DAY

Let us dive into the exciting part of creating an active environment! This section will explore practical and specific ways to incorporate movement into a child's school day. The movement strategies outlined below can be easily implemented, regardless of the resources at your disposal.

By implementing these simple and practical strategies, children not only have fun during physical activities, but also have ample opportunities to practise their gross motor skills. This enables them to enjoy participating in a variety of physical activities while demonstrating control, coordination, and balance. These are aligned with the learning goals for Health, Safety, and Motor Skills Development as outlined in the Nurturing Early Learners Framework (8).

The theme of **"Learning to Move, Moving to Learn"** allows for the categorisation of strategies to incorporate movement throughout the day into two distinct categories: Self-directed and Directed.

**Self-directed strategies** involve creating learning environments and opportunities that grant children the autonomy to explore movement independently, fostering their ability of **"learning to move"**. They provide children with the physical environment to explore movement at their own pace. Self-directed strategies can include creating spaces like Active Navigation Routes (ANR) or Active Play Corners (APC) that encourage children to move and play freely.

Conversely, **directed strategies** involve activities that are facilitated by an educator and can often be integrated into curriculum time. As movement has been shown to improve attention and cognitive function, these strategies enhance children's capacity to learn academically and thus reinforce the concept of **"moving to learn"**. These practical strategies, including activities such as Brain Breaks and Integrated Learning, are specifically designed to enable educators to incorporate movement into classroom routines without compromising teaching time.



[go.gov.sg/sportsg-integrated-movement-approach](https://go.gov.sg/sportsg-integrated-movement-approach)

SCAN THE QR CODE TO  
WATCH HOW MOVEMENT  
CAN BE INTEGRATED INTO  
A CHILD'S SCHOOL DAY



## 2.2.1 ACTIVE NAVIGATION ROUTES

Transforming the mundane task of moving around the school into an exciting adventure is easier than you think! With an ANR, children can explore new ways of moving using the familiar paths they take every day. You can also spice up the journey by adding colourful visual cues on the ground, or by giving them a set of easy-to-follow instructions like a “movement of the day”.

The key idea is to offer children plenty of opportunities to move in different ways and to empower them to move on their own to develop a sense of independence while having fun.

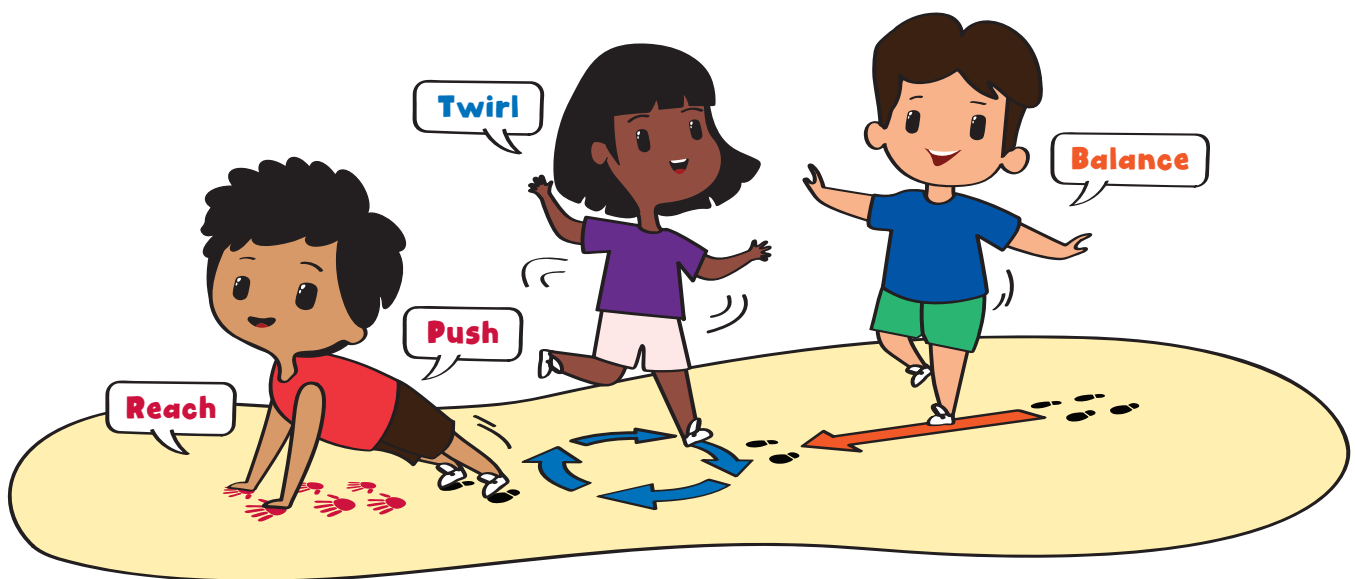
### WITH VISUAL AIDS

Get creative with visual aids – you can either explore online shops for fun stickers, or visit your local hardware store for some colourful electrical tape. No matter which option you go with, the children will have fun watching a dull space transform into a vibrant playground!

Here are some examples of ANRs with visual aids:

### Routes That Specify Movements

Instructions to children: Follow the foot/handprints to get across.



### Routes That Are Open-Ended

Instructions to children: Choose a colour and follow the line/circles to get across in any way you like.



## WITHOUT VISUAL AIDS

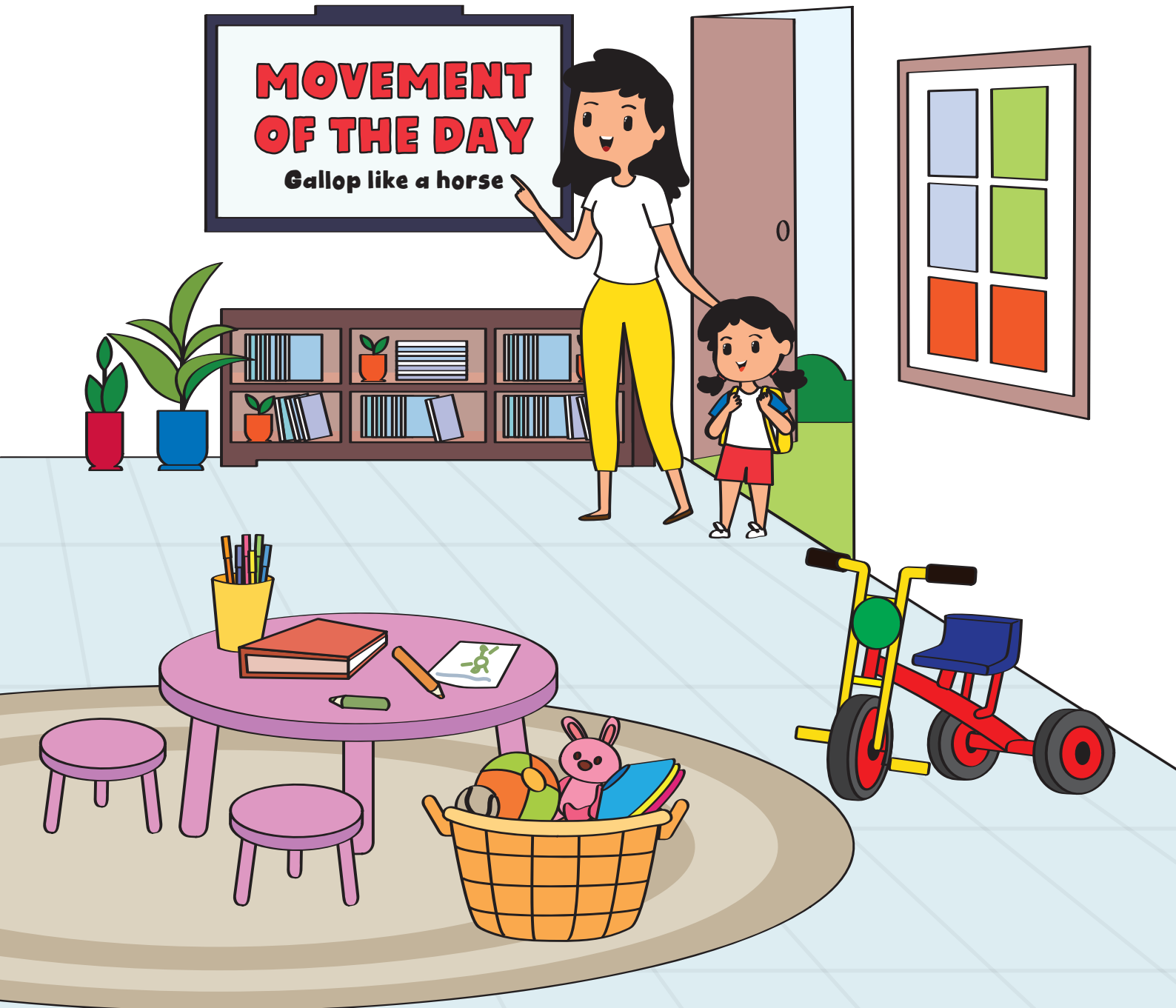
You can also design an ANR without having to attach anything to the floor. For preschools with limited space or resources, you can create an interactive route simply by providing verbal or written instructions.

Here are some examples of achieving an ANR using **verbal instructions**:

1. *Children, shall we move like a kangaroo when we go from place to place today? Can anyone demonstrate how a kangaroo moves?*
2. *Children, shall we hop like a bunny whenever we go to the toilet today?*

Here is another example of achieving an ANR using **written instructions** placed at the same location in the preschool, and changed regularly:

## Written Instructions



Here are some interesting ANRs executed at the following preschools:

### PCF Sparkletots @ Bukit Panjang Blk 226



Child using his feet to push the car to move along the navigation route from one point to another.

### E-Bridge Pre-School Rivervale Crescent



Infant following the arrows and footprints as guided by educator to move around the classroom.

### MOE Kindergarten @ Fernvale



Children jumping along the alphabet star navigation route to move along the corridor.



Children hopping on the numerical animal-themed navigation route to get across.

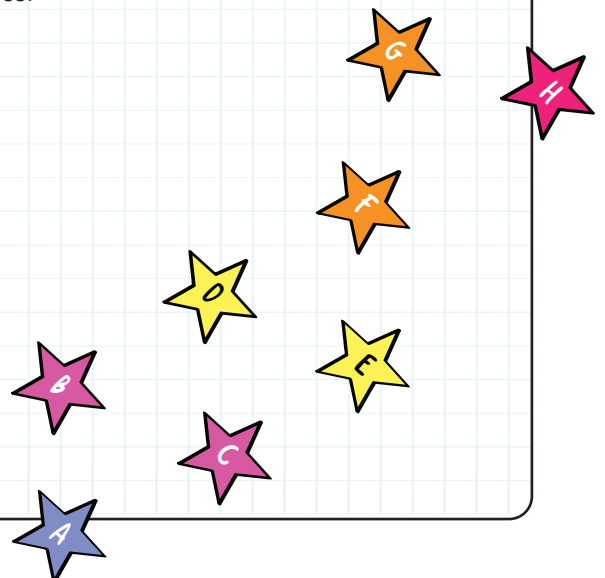


Children balancing on the lines to return to their classrooms.



[go.gov.sg/sportsg-active-navigation-routes](https://go.gov.sg/sportsg-active-navigation-routes)

SCAN THE QR CODE TO LEARN MORE ABOUT ACTIVE NAVIGATION ROUTES AND ADDITIONAL RESOURCES



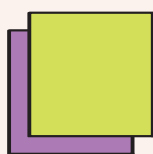
## 2.2.2 ACTIVE PLAY CORNERS

An APC is a designated area within a preschool where children can play independently using various resources provided. It serves as a movement-focused learning corner that promotes safe and engaging physical activities. This space can be utilised during free play time or while waiting to be picked up, allowing children to choose activities and play with friends. Additionally, it can also be integrated into the Numeracy or Literacy learning corner for a multi-functional space. The primary objective is to encourage children to explore movement independently and creatively in a fun and safe environment. The two activity examples outlined below (Movement Dice and Giant Board Game) showcase just how easy you can set up an APC in your preschool.

### Movement Dice and Spinner

All you need is a dice or spinner with faces clearly labelled with types of movements, and a simple instruction card.

#### Materials Needed (to create the dice)



**Card Stock**

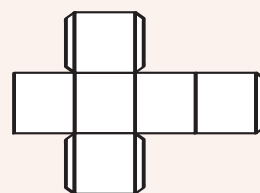
(thicker, more durable paper)



**Glue**



**Scissors**



**Dice Template**

#### How to Play

Step 1: Roll Dice 1 to find out which animal movement to follow.

Step 2: Roll Dice 2 to see how many times to move like the animal.



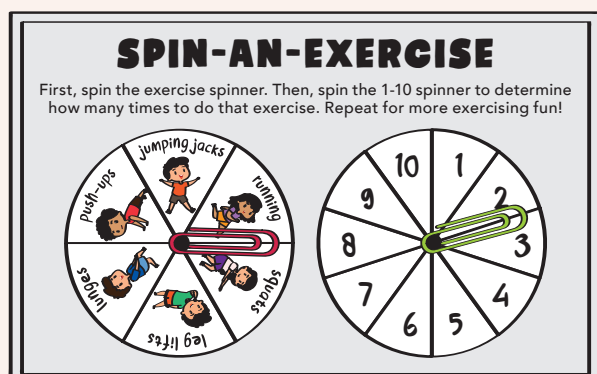
**Example of Dice 1**



**Example of Dice 2**



A movement spinner works the same way as the dice, except that the children will be spinning an arrow instead of throwing a die.



What is exciting about using dice or spinners in class is the ability to mix things up and keep things interesting for the children. You can use them strategically to reinforce what they have learnt in Motor Skills Development classes, or incorporate them into a recent story you have read in class. It is a fun and engaging way to keep children on their toes and actively participating.

## Giant Board Game

If you have available space in your preschool (just 2m x 2m is sufficient), consider setting up a play corner with giant board games. Alternatively, you may consider a fun and versatile play mat that can easily be folded up and put away. Either way, creating a dedicated space for your little ones to play and move around in is sure to keep them happy, healthy, and engaged!

Games you can create include hopscotch, snakes and ladders, and number line.

Take a look at how E-Bridge Pre-School Rivervale Crescent managed to design all three games, complete with integration into other learning areas:



### Active Play Corner 1 Number Line Exercise

Children throwing the dice and moving along the number line according to the number and action on the dice.



### Active Play Corner 2 Hopscotch Sight Words

Children hopping on the hopscotch sight words while verbalising the words.



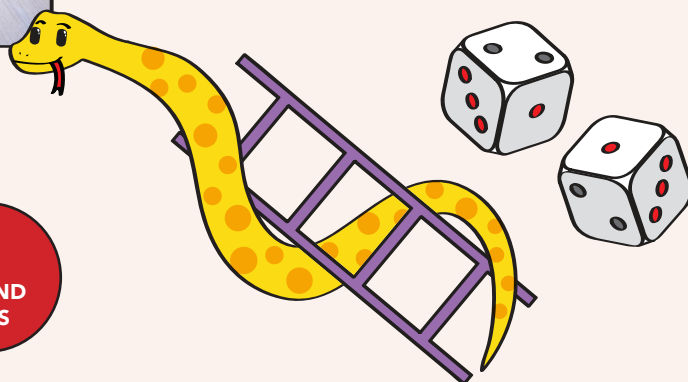
### Active Play Corner 3 Snakes and Ladders

Children playing with DIY-ed snakes and ladders.



SCAN THE QR CODE TO  
LEARN MORE ABOUT  
ACTIVE PLAY CORNERS AND  
ADDITIONAL RESOURCES

[go.gov.sg/sportsg-active-play-corners](https://go.gov.sg/sportsg-active-play-corners)





## 2.2.3 BRAIN BREAKS

Brain Breaks are a practical application of research findings demonstrating that cognitive function can improve through movement, regardless of whether the movement is related to the academic subject matter (9,10).

Brain Breaks are activities that can be implemented throughout the day as a transition from one lesson to another, or to break a lesson up when children start getting fidgety. In essence, Brain Breaks are activities that:

Are  
< 5 Minutes

Are Easy to Implement With  
Minimal Set Up or Materials

Require Children to Get  
Out of Their Seats to Move

Involve Every Child

Here are some examples of Brain Breaks you can try:

### Stretching

Get children up and breathing deeper with a simple stretch. Choose a static pose like a star or mountain, or go dynamic with a rocket ship pose. Let the child pick the pose or appoint a leader for maximum engagement!



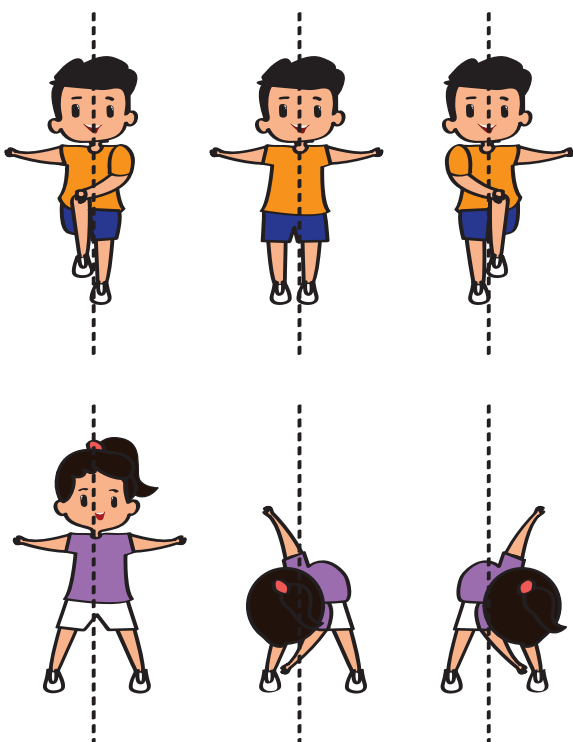
### Music and Movement

Pick a few songs that the children are familiar with and have the children dance along to their favourite tunes!



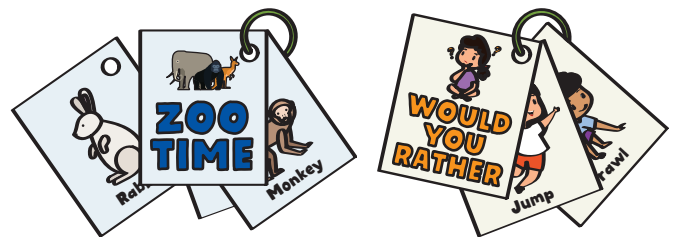
### Cross-Lateral Movement

Cross-lateral movements enhance focus and stimulate the brain's function by facilitating communication between the two hemispheres of the brain. This occurs when arms and legs cross the midline of the body.



### Quick Games

Here are some examples:



#### Zoo Time

Children will pretend to be whatever animal the educator calls out.

#### Would You Rather

Ask the class a series of "would you rather..." questions and the children will make their selection by either standing, or sitting.

#### Rock, Paper, Scissors

A pair of children will stand opposite each other and form rock, paper, or scissors with their bodies.

Here are some Brain Break ideas from the following preschools:

### MOE Kindergarten @ Fernvale



Brain Breaks placed on ice cream sticks for the children to pick.

### PCF Sparkletots - Bukit Panjang Blk 226



In this game of "Follow the Leader", a child will take on the role of a leader and do an action, while the other children will mimic accordingly.



[go.gov.sg/sportsg-brain-breaks](https://go.gov.sg/sportsg-brain-breaks)

SCAN THE QR CODE TO LEARN MORE ABOUT BRAIN BREAKS AND ADDITIONAL RESOURCES



## 2.2.4 INTEGRATED LEARNING

According to Shoval et al.'s (11) study, integrating movement into academic learning can work wonders in the classroom. Try having children form letters with their bodies, spell out words using various movements, or walk to form shapes like circles, squares, and triangles. You can also use song and dance to teach grammar or throwing and catching to reinforce addition and subtraction skills.

While it may not be possible to integrate movement into every lesson, these activities are perfect for introducing new concepts or wrapping up a topic!

Look at how this preschool conducts integrated learning activities with the children:

### PCF Sparkletots - Bukit Panjang Blk 226



Children stretching different parts of their body to form different letters of the alphabet.



[go.gov.sg/sportsg-integrated-learning](https://go.gov.sg/sportsg-integrated-learning)

SCAN THE QR CODE TO LEARN MORE ABOUT INTEGRATED LEARNING AND ADDITIONAL RESOURCES

## 2.2.5 OTHER WAYS TO INCORPORATE MOVEMENT

Try to think outside the box – incorporating movement does not have to fit into self-directed or directed strategies. There are plenty of other ways to incorporate physical activity throughout the day.

Below are some examples of creative movement opportunities that may at first glance seem incidental but in fact, require intentional effort to ensure their fruition. By modelling movement as a way of life, it can become a natural part of children's routines.

### Helping to keep equipment



### Helping to water the plants



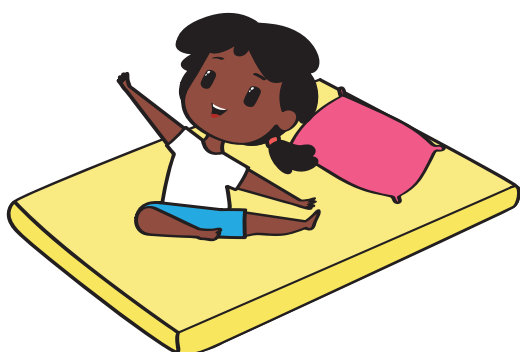
### Helping to serve meals or collecting crockery



### Jumping high-fives when arriving at or leaving preschools



### Stretching after nap time



### Performing action songs before meals



## 2.3 UTILISING OUTDOOR SPACES TO FACILITATE MOVEMENT

Experience endless learning opportunities of outdoor exploration with children! From discovering natural elements to embracing open spaces, the outdoors offer a unique platform for holistic growth and development. The constantly changing environment, natural elements, and open spaces provide stimuli for them to explore, discover, and learn in, about, and through the outdoors (12). Playing outdoors not only promotes their overall health and well-being, but also fosters a sense of wonder and curiosity in the little ones!

The physical environment, particularly outdoor spaces and playgrounds, plays a crucial role in determining children's physical activity levels. Evidence suggests that **spending time outdoors promotes physical activity in children**, providing them with opportunities for **moderate-to-vigorous activity** through active play and organised activities (13,14).

## 2.3.1 IDENTIFYING OUTDOOR OPPORTUNITIES FOR LEARNING

Preschools in Singapore may not have ample outdoor space and facilities within their premises, but you may utilise nearby neighbourhood outdoor spaces for children to engage in physical activities. With creativity and imagination, the outdoors can provide endless opportunities for children's physical growth and development.

This section offers ideas on how physical structures and features of common outdoor spaces like void decks, green spaces, and playgrounds can help develop fundamental movement skills.

Below are some examples of encouraging **learning to move** and **moving to learn** using common outdoor spaces and corresponding features to discover the benefits of taking learning outdoors.

### Identifying Opportunities

As you walk around the neighbourhood, look out for:

- Lines or patterns on the ground that children can walk and balance on, jump or leap across.
- Fixed structures such as tables, chairs, pillars, or stairs that children can use to practise aiming (e.g., throwing or rolling to a target) or walking up.
- Open spaces with different surfaces such as cement floors, grass, or sand for children to run, jump, skip on, and explore different ways of moving.



### Guiding Questions

1. What features, structures, and spaces around the neighbourhood are safe for children to engage with?
2. What movement skills can be learnt through these features, structures, or spaces?
3. How can the existing features/structures/spaces be modified to challenge children further?



### FIXED STRUCTURES: VOID DECK WITH TABLES/CHAIRS, PILLARS

#### Possible Activities

- Throwing beanbag onto the bench or table
- Dribbling cardboard box with foot, around pillars

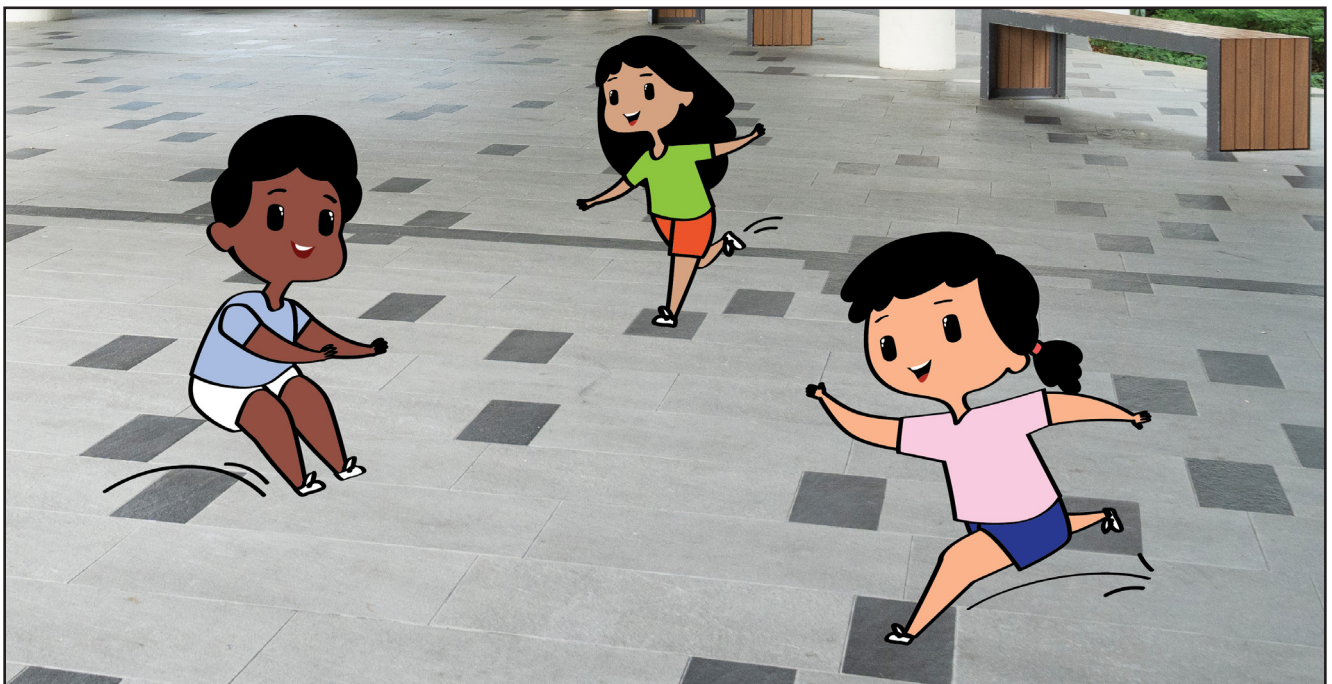




### **FIXED STRUCTURES: STAIRCASE LANDING**

#### **Possible Activities**

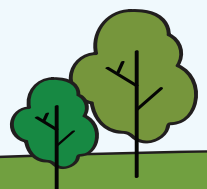
- Climbing up the stairs
- Jumping off a low height, either from the lowest step or from the void deck curb



### **OPEN SPACE: MULTI-PURPOSE HALL WITH PATTERNS AND LINES ON THE GROUND**

#### **Possible Activities**

- Leaping or hopping from tile to tile
- Jumping over tiles





**OPEN SPACE:  
OUTDOOR OPEN AREA WITH PATTERNS AND LINES ON THE GROUND**

**Possible Activities**

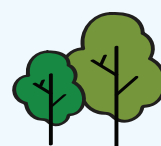
- Over/underarm throwing of beanbag to the middle of the circle
- Skipping along line of the outer circle



**OPEN SPACE: WALKWAY WITH PATTERNS AND LINES ON THE GROUND**

**Possible Activities**

- Walking across or balancing on lines
- Jumping over squares
- Bouncing a ball within a square

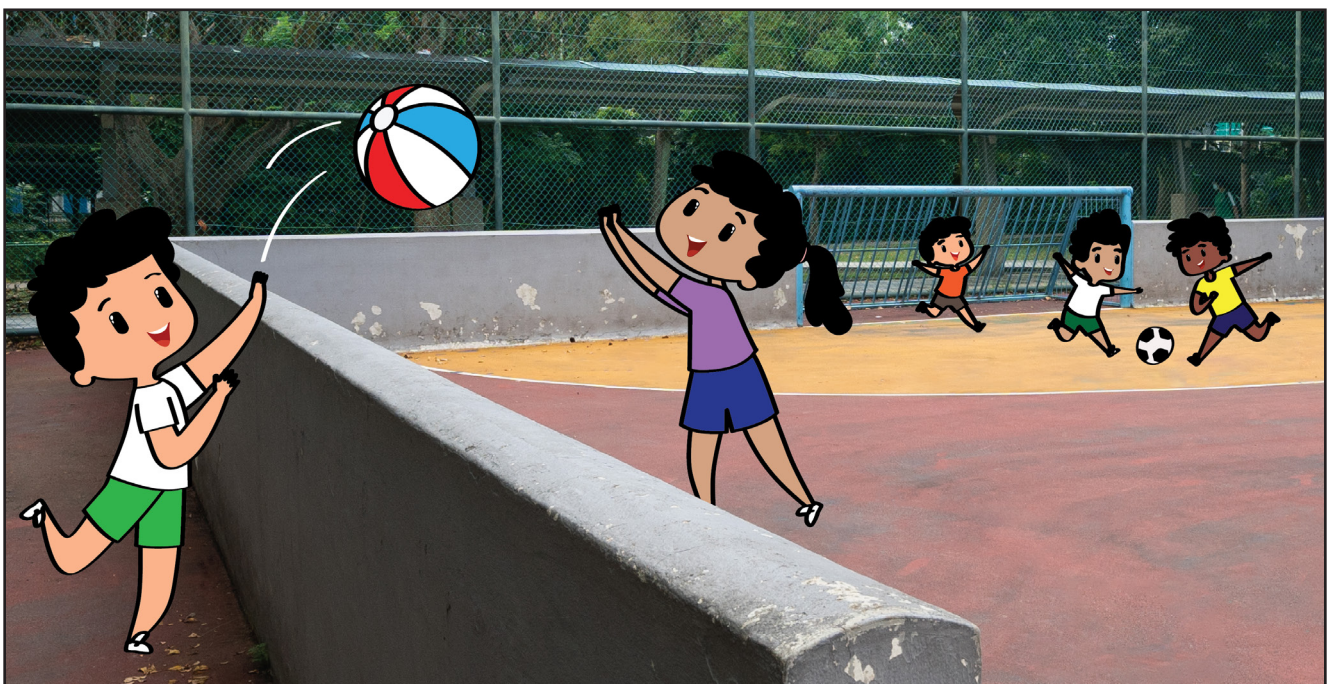
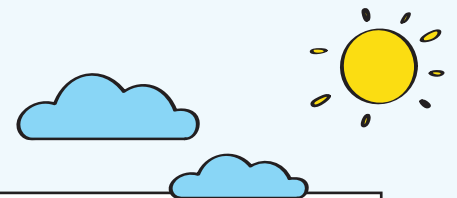




**OPEN SPACE: FOOTPATH WITH SIDE CURB**

**Possible Activities**

- Balancing on curb



**OPEN SPACE AND FIXED STRUCTURES:  
HARD COURTS/BASKETBALL COURTS WITH FENCE AND LOW WALL**

**Possible Activities**

- Throwing and catching a ball over a low wall
- Kicking a ball in the court

**Other activities:** Balancing on lines in the court, jumping for height to reach objects pasted on the fence



**OPEN SPACE: OPEN GRASS AREA**

**Possible Activities**

- Running and chasing one another
- Running and bending down to pick up leaves
- Counting, sorting, and creating patterns with leaves and twigs



**FEATURE: BOULDERS IN OPEN SPACE**

**Possible Activities**

- Climbing and balancing on boulders







### **FIXED STRUCTURES: TRELLIS WITH BENCHES**

#### **Possible Activities**

- Jumping and striking balloons
- Rolling a ball under the bench



## 2.3.2 NEIGHBOURHOOD PLAYGROUNDS TO ENCOURAGE ACTIVE PLAY

Neighbourhood playgrounds offer a multitude of opportunities for children to engage in active play, contributing to their daily dose of physical activity and movement. Their unique features and structures provide a diverse range of movement possibilities, allowing children to navigate through the space and interact with its features (15). Active play at the playground thus facilitates the development of fundamental movement skills and gross motor skills, and builds children's coordination, balance, strength, and endurance.

Here are how some common playground features can be used to help children practise and develop these skills:

### Playground Feature

### Active Play

#### Climbing ropes and structures

- Stretching and twisting to get up and across
- Strengthening of upper body, arms, legs, and fingers

#### Lines/Patterns

- Jumping, hopping, leaping, and balancing on/over lines or patterns on playground floor

#### Merry-Go-Round

- Stimulating and developing the vestibular system to provide sense of balance
- Running to push

#### Open spaces in playground

- Running, jumping, and hopping during playground games

#### Playground steps

- Coordinating alternate feet to walk up and down steps
- Jumping on/off steps

#### Slides

- Squatting to sit
- Coordinating limbs to scoot forward and push off to slide down
- Shifting weight around to have a smooth slide

#### Spring riders/ Seesaws

- Coordinating body movements with other children:
  - Spring riders: moving back and forth
  - Seesaws: pushing off the ground

#### Stepping stones/ Balance beams

- Balancing while moving across a narrow base which develops dynamic balance, core control, and strengthens lower body

#### Swings

- Coordinating body movements to get higher
- Pushing others on the swing

#### Tunnels

- Coordinating arms and legs to crawl through the tunnel
- Bending, twisting, and manoeuvring the body to get through the tunnel



[go.gov.sg/sportsg-outdoors](https://go.gov.sg/sportsg-outdoors)

SCAN THE QR CODE TO  
WATCH HOW CHILDREN  
CAN ENGAGE IN ACTIVE  
PLAY AT THE PLAYGROUND

Playing at the playground is not only about physical development but also social-emotional and cognitive growth. Children can learn by observing and interacting with those of different ages. They may learn how to climb a structure or figure out how to play on a seesaw by watching and learning from others.

At the playground, children have the liberty to choose their activities and freely navigate through the environment during unstructured play. They can also create their own games and rules, which often involve running around and chasing one another.

It is recommended that children spend at least 180 minutes daily doing a variety of physical activities, of which at least 60 minutes should be moderate-to-vigorous intensity activities. These include muscle- and bone-strengthening activities like climbing, jumping, and running. Educators may need to facilitate active play occasionally to help children meet these recommendations.

Here are some suggestions on how you can increase physical activity levels in children and facilitate their development of fundamental movement skills:

**Design a challenge by incorporating playground equipment and floor markings to create an obstacle course, and transform it into a group competition.**

**Introduce games with simple rules, such as Catching/Tag, Freeze-Tag, and The Floor is Lava, incorporating different locomotor skills like running, jumping, and hopping.**

**Modify playground structures by adding challenges, such as hanging balloons for children to jump and reach.**

**Bring equipment such as beanbags or balls to practise throwing or rolling under, over, or through playground features.**



The following are examples of playground features and possible activities for children to engage in active play:



**PLAYGROUND FEATURES: STEPPING STONES, SLIDES, CLIMBING FEATURES**

**Possible Activities**

- Balancing on stepping stones
- Jumping off the bottom of a slide
- Climbing up playground structures (walls, other structures)



**PLAYGROUND FEATURES: CLIMBING NETS, PLAYGROUND STEPS, SEESAWS**

**Possible Activities**

- Climbing up playground structures (nets, ladders)
- Jumping across lines
- Playing on seesaws

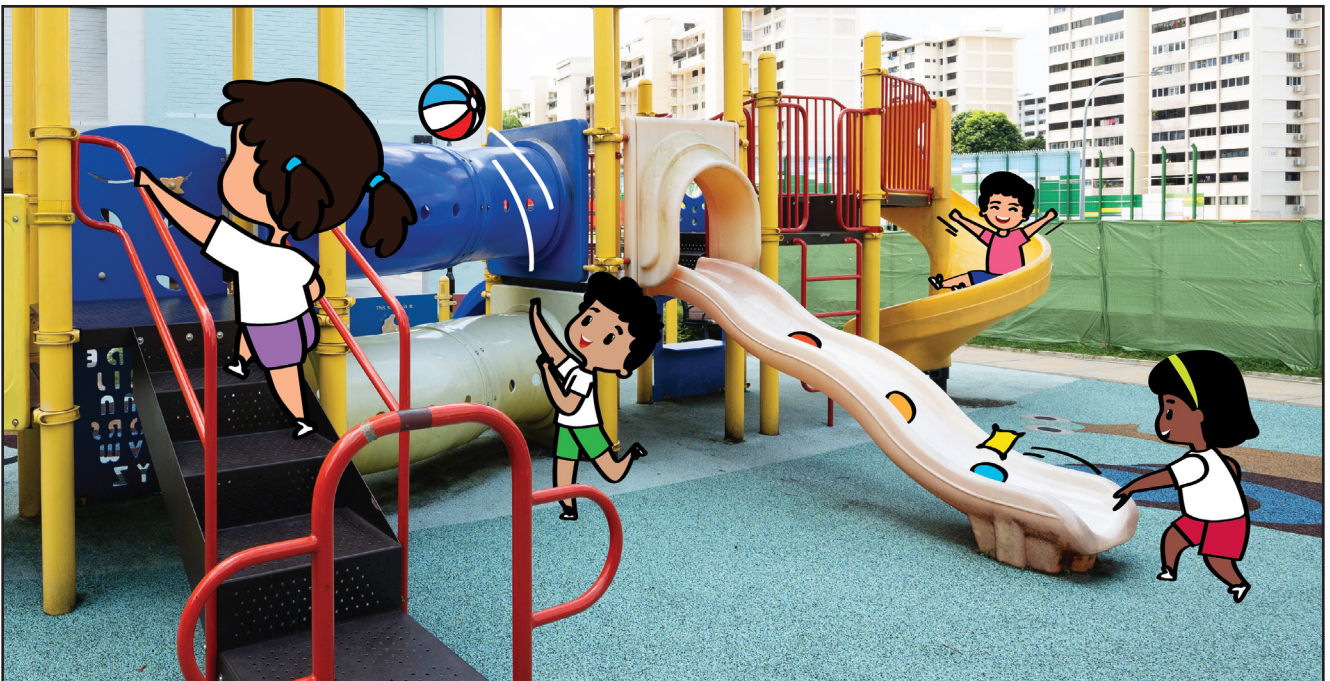




**PLAYGROUND FEATURES: CLIMBING NETS, LINES**

**Possible Activities**

- Climbing up playground structures (nets, other structures)
- Hanging on bars
- Balancing on lines



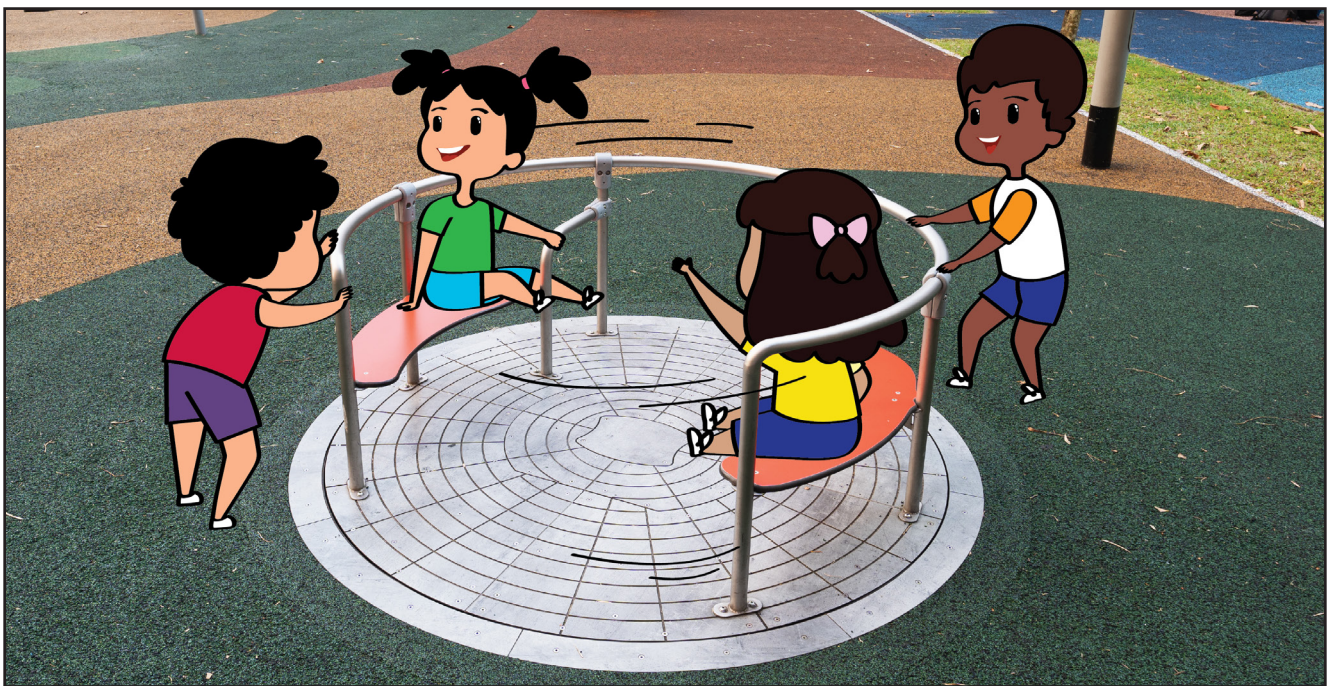
**PLAYGROUND FEATURES: STEPS, TUNNELS, SLIDES (SPIRAL AND STRAIGHT)**

**Possible Activities**

- Walking up stairs
- Sliding down slides
- Throwing and aiming at targets of different heights on a slide
- Throwing over tunnels



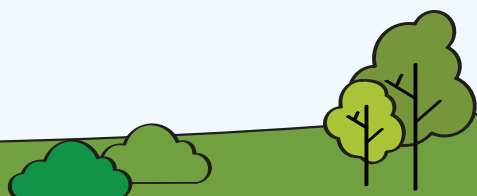
**PLAYGROUND FEATURES: SWINGS, SPRING RIDERS, OPEN SPACES**



**PLAYGROUND FEATURES: MERRY-GO-ROUND**

**Possible Activities**

- Pushing the merry-go-round with other children sitting in it
- Running and chasing one another in a game of tag
- Playing on spring riders and swings



To sum up this chapter, the example below presents a day in the life of an active 5-year-old to illustrate how children can learn to move and move to learn throughout the day. Remember – every activity counts!

# My School Day



**8.15am**

Walking to school with my mum



**8.30am**

Arriving at school and starting off with "Morning Circle Time" (Music and Movement)



**9.00am**

Outdoor playground time – Practising climbing, kicking, and throwing to targets through the "Feeding Frenzy" game



**10.00am**

Phonics lesson time followed by my favourite Brain Break – Rock Paper Scissors



**11.00am**

Mother Tongue lesson time – Learning new words today with a song and dance



**12.00pm**

Healthy lunch time



**12.45pm**

Clean up time – Today it is my turn to wipe the tables and keep the chairs



**1.00pm**

Nap time



**3.00pm**

Waking up with "Good Morning Stretch" and it is tea time



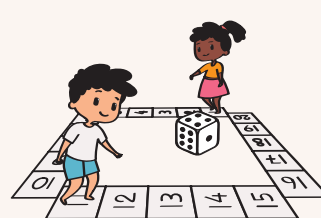
**3.30pm**

Learning the words beginning with the "th" sound using a throwing game



**4.15pm**

Toilet break – Today we are "Jumping Like A Kangaroo" to the toilet



**4.30pm**

Free play time – Playing the Number Line Exercise with my friends at the Active Play Corner



**6.00pm**

School ended. Scooting home with my grandfather!