

Rotation

Description

Rotation includes a variety of movement patterns that require the body to move through space and around its own axis. It includes movements such as twisting, rolling, turning and spinning. These movements are evident in everyday activities, games and most sports (e.g. pivoting in basketball, twisting and turning in tennis, forward roll in gymnastics).



Applying movement principles

Rotation: A rotary movement involves a movement in a circle around a fixed point. As the radius (length) of the circle decreases, the speed of the spin increases. In other words, the tighter the tuck, the faster the spin. To slow down the spin, extend the arms or legs.

Learning cues

- in turning/twisting activities, keep part of the body stable – the twisting action happens around this part
- to increase the speed of a turn, twist or roll, pull arms and legs close to the body
- to decrease the speed of a turn, extend arms and legs away from the body
- use the hands to support or push off evenly
- take care in rotating joints – avoid twisting/rotating hinge joints (e.g. knee, elbow)
- rotate under control

Learning phases

Discovering phase

Children enjoy exploring and discovering the many ways their body and body parts can rotate, rock and roll. Children in this phase are challenged to rock backwards, rock in a round or ball-like position in preparation for rolling, and roll with a straight body. Characteristics of the rolling/rocking action for this learning phase are:

- body tends to uncurl in rolling/rocking action
- arms are not used or are uncoordinated with rolling/rocking action
- children can't 'get over' backwards or sideways.

Developing phase

Children become more confident in controlling their body and body parts when rotating, rolling and turning. In this phase, activities focus on rolling in different directions, using the hands and arms. Characteristics of rolling at this level are:

- body is curled in a tight ball shape
- body still uncurls at end of rolling action
- hands and arms are used more
- children can perform only one roll at a time.

Consolidating phase

Children in this phase can comfortably and safely perform rotation activities that are high-risk (on equipment), can sequence and connect different skills with rotation, and can change direction or speed in unpredictable situations. Characteristics of rolling in this phase are:

- body remains in a tight ball position throughout the roll
- arms are used to push off and for balance and coordination
- momentum of the roll is carried through to the finish
- children can perform controlled consecutive rolls.

Overview

Learning phase	Activity name	Movement skills/concept	Suggested group size	Suggested space	
Discovering	Rotating the Body and Body Parts	Turning, rotation, space and body awareness, time and energy.	1	Level hard or grass area	156
	Introduction to Rocking and Rolling	Rocking forwards and backwards, body and space awareness.	1	Level hard or grass area	157
	Rotation with Equipment	Rotation, space and body awareness, relationships (with equipment), speed and flow.	1	Level hard or grass area	158
	Let's Swing	Discovering swinging, space awareness and relationships (with others).	1	Level hard or grass area	159
Developing	Turning Around a Long Axis	Turning around long axis, space awareness, body control, and time and energy.	1	Level hard or grass area	160
	Log Rolling	Rolling along a long axis, body control, space awareness and relationships (rolling with a partner).	1	Level hard or grass area	161
	Rolling Backwards	Rolling backwards and space awareness.	1	Level hard or grass area	162
	Rolling Forwards	Rolling forwards, space awareness and body control.	1	Level hard or grass area	164
	Swinging with Equipment	Swinging on equipment, body and space awareness.	1-5	Level hard or grass area	165
Consolidating	Rotating with a Partner	Rotating with a partner, cooperative balancing, rotating through long and horizontal axes at different speeds, body awareness and relationships (with others).	2	Level hard or grass area	167
	Conveyor Belt	Rolling along a long axis, relationships (with others), problem solving and timing.	4-5	Level hard or grass area	168

Discovering Rotation

Rotating the Body and Body Parts

Movement skills/concepts

Turning, rotation, space and body awareness, time and energy.

Set-up

Music.

Children are spread out freely in a defined grass or hard area.



*As a teacher/
coach children
join in*

Activity

Who can rotate, turn or circle ...?

- body parts – arms, legs, one at a time, both at a time
- whole body, upper body only, lower body only
- the body in space – up high, down low, forwards, backwards, sideways
- fast/slow, gradually increasing speed, decreasing speed
- strongly, weakly, gently, tightly, relaxed
- in a tall/small/bunched position
- while standing, sitting, kneeling, lying
- like a leaf blowing in a gentle wind, on a windy day and in a cyclone

Can you see ...?

- having fun
- care in rotating joints – no rotation/twisting of hinge joints

Variations

Add music: Turn and move in time to the music.

Add turning like a theme: Turn, spin or rotate like a merry-go-round, a drill, a clothes line.

Introduction to Rocking and Rolling

Movement skills/concepts

Rocking forwards and backwards, body and space awareness.

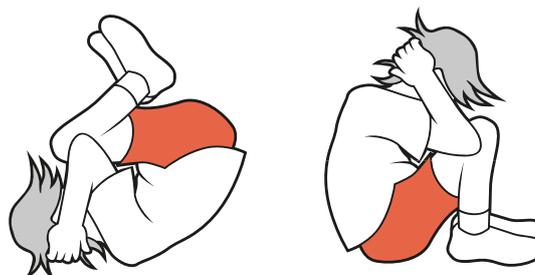
Set-up

Flat mats, wedge-shaped mats.

Children, each with access to a mat, are freely spaced.

Activity

Exploring rocking: How many ways can you rock? Try on your back/front. Can you rock forwards, backwards, side to side? Now try rocking with your feet crossed, legs straight, and now bent. Have you tried to rock side to side, standing, sitting, sitting astride a ball while rocking side to side?

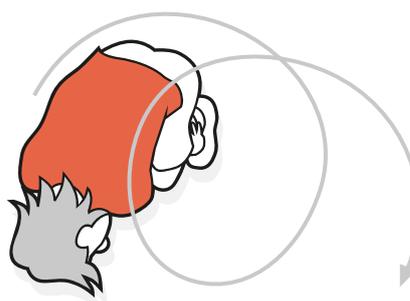


Rocking chair: Be a rocking chair. Lie on your back, bring your knees into your chest, cross your feet and hold with your hands. Your back should be round like an egg. Rock forwards and backwards. Now can you rock forwards and backwards to stand on your knees without letting go of your feet?

Rock to stand: In pairs, one child is the rocking chair, who rocks three times and then, on the third rock, rocks up and reaches out their hands to their partner who helps them to stand. After a few times, let the rocking chair try rocking to stand without any assistance.

Egg roll: Sit in your rocking chair position (knees bent, round back like an egg), with your chin tucked into your knees. Roll sideways so that you finish on your knees, push with your elbow and knees as you roll.

Circle egg roll: In the egg roll position, with your hands under the inside of your legs and your fingers locked around your ankles, try to 'egg roll' around in a circle like a rolling ball. If you get dizzy, **stop**, count to three and then roll back the other way.



Can you see ...?

- round back
- tucked position
- chin to chest
- enjoyment

You could ask ...

Which was the easiest way to roll? Why was this?

Which was the hardest? Why was this?

Rotation with Equipment

Movement skills/concepts

Rotation, space and body awareness, relationships (with equipment), speed and flow.

Set-up

Poi, hoops, ribbons, music, ropes.

Children are spread out freely in a defined area with a chosen piece of equipment.

Activity

Can you ...?

- explore different ways to rotate your piece of equipment
- vary the speed of rotation and the position of your body, (e.g. lying down, sitting, kneeling, standing)
- rotate one piece of equipment – with left and right hands
- rotate two pieces of equipment, and both simultaneously if possible
- add music, locomotion
- with one piece of equipment, explore movement in two different directions and at two different heights
- make big circles in the air, small circles, a figure 8
- be a helicopter



Try something different

Can you see ...?

- wrist action for small, fast movements
- arm action for large, slower movements
- loose grip to allow easy rotation

You could ask ...

Which activities did you enjoy the most?

What did you do to the piece of equipment to turn it faster?

Which activity was the most difficult? Why was this?

Variations

Give directions in Maori: Teki mua – in front; ki muri – behind; ki raro – below; ki runga – above.

Create a sequence: Create a short sequence or pattern.

Let's Swing

Movement skills/concepts

Discovering swinging, space awareness and relationships (with others).

Set-up

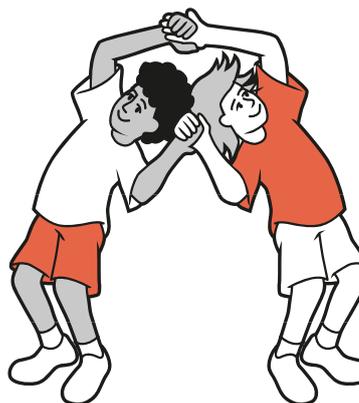
Suitable music.

Children are spread out in a defined space in a grass or hard area.

Activity

Children discover swinging.

- Which parts of your body can you swing?
- Can you swing side to side, backwards and forwards, in circles and figures of 8?
- Who can swing high, medium and low?
- Can you swing fast, slow, increasing/decreasing in speed?
- Who can make different shapes or patterns with their swing?
- Show me an animal that swings.
- Can you swing when kneeling, lying, sitting?
- Show me how you swing to music.
- Join one hand with a partner and see how many ways you can swing your joined hands.
- How else can you swing in pairs? Try washing the dishes.



Can you see ...?

- relaxed swinging
- rhythmical movements

You could ask ...

Which way of swinging did you enjoy the most?

How many different ways did you swing your body parts?

Variations

Create a sequence: Make up a swinging sequence.

Developing Rotation

Turning Around a Long Axis

Movement skills/concepts

Turning around a long axis, space awareness, body control, and time and energy.

Set-up

Music.

Children are spread out in a general space, on a floor or hard surface that is easy to turn on.

Activity

On a signal, rotate or spin around:

- on your bottom (hands, no hands)
- on your stomach
- on your back
- tall like a flagpole
- like a screwdriver turning a screw
- like a washing machine
- like a revolving door
- to 'tell the time' (e.g. jump and turn to 3 o'clock)



Standing on two feet, jump with a straight body and make: a quarter (90 degrees) turn; a half (180 degrees) turn; a three-quarter (270 degrees) turn; and a full (360 degrees) turn.

Can you see ...?

- change of focal point
- turning tall
- balance
- use of arms and legs to control turn

You could ask ...

How does extending/moving your legs out affect your turn?

What happens when you tuck/hold your body in close?

Variations

In-out game: One child is the leader making the calls. On a call of 'Out', children stand and turn with their hands out like a clothes line. On a call of 'In', they bring their hands in and spin like a ballet dancer. On a call of 'In-out-in-out', those who make a mistake move to the side of the area but continue the activity. The game continues until one child is left in the middle. Change leaders and repeat activity.

Log Rolling

Movement skills/concepts

Rolling along a long axis, body control, space awareness and relationships (rolling with a partner).

Set-up

Mats.

Children are spaced freely on a wooden floor or grass surface, sharing a mat with a partner.



Are children enjoying themselves?

Activity

Children do an individual log roll:

- lie on your back, stretched out, with your arms above your head and your hands clasped then, with a long, stiff body, roll from back to front to back
- do a log roll, one way and then the other
- do a log roll without letting your arms and legs touch the mat

Can you see ...?

- maintaining a long body position

You could ask ...

What do you need to do to keep your arms and legs off the ground when you are log rolling?

Variations

Log roll relay: In groups of 6, half are the rollers and the other half are the leapers. The two groups stand at opposite ends of a mat. On a signal, rollers (spaced apart) start log rolling down the mat. Leapers leap over the approaching rolling logs. When rollers reach the end of the mat, the rollers become the leapers and the leapers become the rollers.

Rolling Backwards

Movement skills/concepts

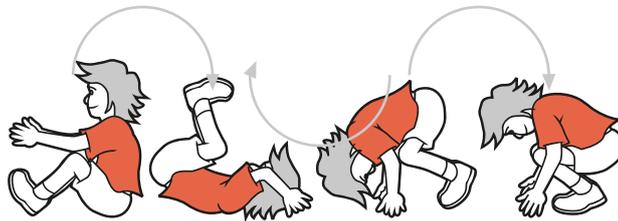
Rolling backwards, body and space awareness.

Set-up

Mats, slope, crash pads.

Activity 1: Rolling backwards over shoulder

1. Sit on a level mat with your knees bent. Raise your arms, with the palms of your hands up and your fingers pointing backwards over your shoulders. Hold this position, then rock back to balance on your shoulders, putting your hands on the floor to support yourself. Hold for 4 seconds.
2. Backward shoulder roll down a slope. Sitting on top of a slope, roll backwards with your knees bent and one arm out to the side. Rock backwards to bring one leg over your head between the side arm and head. Land on your knee and bring the other leg to follow.
3. Now try 2 from a squat position, bringing both legs to the side of one ear and arms straight along mat.
4. Repeat 2 and 3 on a ground-level mat. Practise rolling to one side, then to the other.



Activity 2: Rolling backwards

Try these on the slope first and then on a level mat.

1. Start from the sitting position, pointing your hands back behind your shoulders with palms up. Tuck your chin to your chest. Push off with your toes, keep your body tucked and your back round, roll onto your back and push off hands to land on knees, then take a squat position.
2. Repeat as above but start from a squat and progress to a straddle, then go to a standing position, finishing in the same way as you began.

Can you see ...?

- slow, controlled action
- chin to chest
- tucked body
- round back
- folding and unfolding action
- pushing arms straight

You could ask ...

Why do we need to put our chin on our chest?

What shape do you make with your back? Why is this important?

Variations

Backward roll on equipment: Try rolling on a crash pad or a box top.

Make up a sequence: Include a balance, a jump and a roll in the sequence.

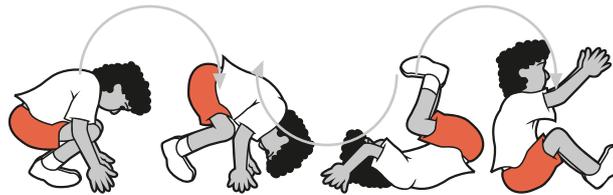
Rolling Forwards

Movement skills/concepts

Rolling forwards, space awareness and body control.

Set-up

Beat board, mats, crash pads, high box, a slope.



Activity

Start the progressions for rolling forwards on a slope and then move to a level surface on the ground.

Tip over: Begin in a low squat position with your hands on the mat and your knees between your arms. Lean forward, tuck your chin to your chest and look back under your legs. Raise your hips until you tip over, bending your arms, and roll onto your back to a sitting position.

Try this again from a straddle stand and from a stand with two feet together.

Forward roll: Begin in a crouch position, with head up. Place your hands on the mat slightly forwards of your feet, with your fingers pointing forwards. Push your toes, raise your hips and tuck your chin to your chest to round your back. Land on the tops of your shoulders and push with your hands as you roll forwards to a crouch position.

Can you see ...?

- slow, controlled movement
- chin to chest
- a natural arm bend
- back of head and shoulders contacting with the mat

You could ask ...

What do you have to do with your body to tip yourself forwards?

How do you roll forwards safely?

Variations

Roll on different surfaces: Try a forward roll on a crash pad or a box top, or on a line.

Create a forwards roll sequence: Forwards roll from a squat position, then forwards roll to straddle, forwards roll to stand? Include other rolls in the sequence as well, (e.g. backwards, egg roll, log roll).

Swinging with Equipment

Movement skills/concepts

Swinging on equipment, body and space awareness.

Set-up

Bars, ropes, playground/gymnasium equipment, desks, safety mats.

Children in small groups at each piece of equipment, with safety mats under the equipment.

Activity

Can you ...?



- swing between two desks – on forearms first, then on hands, varying body shape (e.g. from tuck to long body)



- do a long swing from a horizontal bar, keeping the bars at chest height (it is better to bend your knees than to take chances) then swing to land and stand still
- do a long swing from one or two ropes
- run and swing to land as if you are swinging across an obstacle or to reach a set boundary (e.g. the other side of a river)



Can you see ...?

- landings on toe–ball–heel and with bent knees
- soft surfaces below equipment
- sufficient strength to take the body weight
- spotting where needed
- constant hand grasp in all inverted positions – no sign of letting go or regrasping while inverted

You could ask ...

Which pieces of equipment did you enjoy swinging on the most?

What are safe ways of swinging?

Which types of swinging will you use when you are playing in the playground?

Consolidating Rotation

Rotating with a Partner

Movement skills/concepts

Rotating with a partner, cooperative balancing, rotating through long and horizontal axes at different speeds, body awareness and relationships (with others).

Set-up

Grass, floor or hard area.

Children in pairs, matched approximately for height and weight.



Activity

Clothes line: Partners face each other and each grips both of the other's wrists. Turn like a revolving clothes line on a mild/windy/gusty day. Now turn like a clothes line that has a heavy load of washing.

Partner log roll: Partners lie on their stomachs facing each other, with arms stretched out above the head. Link hands and roll in the same direction. Keep your body long and straight.

Can you roll ...?

- three times in a row
- so that your feet don't touch the mat
- with your feet locked together instead of your hands
- with a 'sock' held between your feet

Eskimo roll: Partner 1 lies on their back; Partner 2 stands facing forwards with their feet near Partner 1's shoulders. Partner 1 holds Partner 2's ankles and raises their legs so that Partner 2 can hold each leg above the ankle. Partner 2 leans forward and places Partner 1's feet on the floor and performs a forward roll. Partner 1 follows, still holding onto Partner 2's ankles.

Can you see ...?

- controlled movement when rolling with partner
- communication with partner – working together

You could ask ...

How do you and your partner work together to perform the partner log roll?

Variations

Snake in the grass: Four children on their stomachs, with straight bodies, lie in a chain on a mat. Each child holds onto the ankles of the child ahead of them. On a signal, the whole chain rolls over onto their backs and then onto their stomachs.

Conveyor Belt

Movement skills/concepts

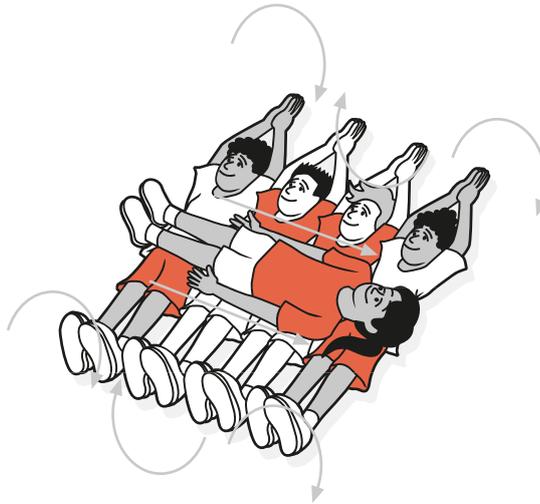
Rolling along a long axis, relationships (with others), problem solving and timing.

Set-up

Grass or tumbling mats.

Groups of four-five.

Working
together



Activity

Children lie side by side, shoulder to shoulder to form a conveyor belt. One child lies on their back across the conveyor belt. On a signal, all children in the conveyor belt rotate in the same direction, moving the top child along the conveyor belt.

How far can you travel, keeping the child on the belt?

Can you see ...?

- individuals maintaining a long, straight body
- conveyor belt staying close together

You could ask ...

What can you do to ensure you move together in the conveyor belt?

Variations

Use soft toys: Line up soft toys as the conveyor belt for the children to roll over.

Increase number of children: Make the conveyor belt longer with more children. Also make it continuous – after the top child passes over the belt, they quickly get up and add themselves to the front of the belt.