

CUSTOMIZING PHYSICAL EDUCATION FOR STUDENTS WITH SPECIAL NEEDS

MINDS Schools
Physical Education Curriculum

minds

MINDS Schools Vision

School of excellence where every individual matters

MINDS Schools Mission

To provide a vibrant learning environment that inspires students towards independence and integration into society



MINDS Schools PE Curriculum

Students learn skills, knowledge and values that will enable them to enjoy a physically active and healthy lifestyle.

(MINDS Schools PE Curriculum, 2022, p7)



MOE SPED PE AIMS

Students acquire knowledge, skills and attitudes to engage safely and confidently in daily activities and participate in physical recreational activities and sports within the community.

(MOE SPED PE Curriculum, to be implemented in 2025, p13)

MINDS SPED PE Curriculum Standards

Within the context of a student's disability, students will:

Standard 1: Demonstrate competency in a variety of fundamental movement skills needed to safely perform a variety of physical activities.

Standard 2: Demonstrate understanding and application of movement and games concepts in a variety of sports activities.

Standard 3: Demonstrate safe practices during physical fitness and sports activities with respect to self, others and the environment.

Standard 4: Demonstrate responsible and appropriate personal and social behaviour during physical fitness and sports activities.

Standard 5: Acquire knowledge and skills for health and wellness.

FOCUS LEARNING AREA/ COMPONENT	OVERALL GOAL	SUPPORTS
Swimming (Elective)	<p>Students will:</p> <ul style="list-style-type: none"> Develop locomotor & non-locomotor skills in a non-weight bearing environment; and Integrate into a water-based environment/ community with water survival/ safety and water confidence skills and knowledge (float; thread; possible style; etc.). 	S1 & S3
Educational Gymnastics/ Dance	<p>Students will:</p> <ul style="list-style-type: none"> Develop body management and control skills; Be able to combine locomotor and non-locomotor patterns/ skills (inclusive of BSER); and Have ease of transition between movement patterns and gymnastic actions. 	S1 & S3
Physical Health and Fitness	<p>Students will:</p> <ul style="list-style-type: none"> Generate knowledge of health and fitness; Maintain health and fitness through personal logs on fitness testing/ tracking; and Develop the endurance and strength needed to support manual work activities in employment. 	S1, S3 & S5
Outdoor Education	<p>Students will:</p> <ul style="list-style-type: none"> Appreciate and respect the environment; Engage and enjoy outdoor activities; through exploration; and integration into the environment and community through travelling activities, learning journeys, camping; orienteering/navigation, etc. Develop an awareness in assessing and managing risk in the outdoors. 	S3 & S4
Games and Sports	<p>Students will:</p> <ul style="list-style-type: none"> Acquire manipulative skills that will enable their participation in the selected core games and sports; Develop cognitive understanding of basic games concepts for target, territorial-invasion and net-barrier games; and Play modified versions of core sports meaningfully and safely – Badminton; Football; Basketball; Bocce, Athletics and Bowling 	S1, S2, S3 & S4

Scope & Sequence

DESIGN AND IMPLEMENTATION

Scope & Sequence

FOCUS LEARNING AREA/ COMPONENT	CONTENT	STUDENT LEARNING OUTCOMES	
		Level 1	Level 5
Educational Gymnastics/ Dance Behaviour Condition Criteria	<ul style="list-style-type: none"> • Locomotor Skills – walk, run, jump, slide, gallop, leap, hop, jump, skip • Non-locomotor Skills – curl, stretch, twist, turn, push, pull, balance (points & patches with combinations of symmetry or asymmetry, counter-balance; counter-tension) • Pathways (Straight, zigzag, curved) • Rotation Skills - log roll, shoulder roll, side roll, side straddle roll, egg roll • Mounting/Dismounting – forward straddle, forward tuck, side flank • Rhythm to stimuli/ music • Expression to music 	<ol style="list-style-type: none"> 1. Perform a combination of at least 2 locomotor movements in 2 different pathways with change in directions in timing to the rhythm of music/ stimuli 2. Jump using one foot and two feet take-off for distance and height and land with control on two feet 3. Balance on 1 – 2 body parts with control with a support apparatus/ spotter for a duration of 2secs 4. Rock using the shape of round-tuck and coming out of the rock in various body positions and body shapes 5. Flowers (Theme) – perform non-locomotor movements to flowers blooming 	<ol style="list-style-type: none"> 1. Perform in groups of three to music a combination of at least 5 different movements which includes a locomotor movement; a non-locomotor movement inclusive of different pathways; balances and one rotation in good form 2. Jump over a medium-height apparatus using a side flank transferring weight from feet to hands and back landing with two feet with control 3. Perform in groups of three a combination of 2 balances for 3secs each with smooth transition and control in good form 4. Perform a shoulder roll in good form and recover in a standing position 5. Perform the CEIMO CEIMO with good rhythm and form

Scope & Sequence

FOCUS LEARNING AREA/ COMPONENT	CONTENT	STUDENT LEARNING OUTCOMES	
		Level 1	Level 5
Physical Health and Fitness	<ul style="list-style-type: none"> •Aerobic Exercises in a timed sequence e.g. Tabata •Fitness Test Items – Pacer, modified curl-up, isometric push-up, sit & reach •Tracking heartrate, fitness level/ score & weight/ height/ BMI/ diet •Knowledge of Healthy Lifestyle Activities/ Log 	<ol style="list-style-type: none"> 1. Perform aerobic exercises to music for 4mins. 2. Walk/ run 5 laps to the start signal from a whistle for at least 3mins. 3. Perform an inclined isometric push-up, from a standing position against a wall, in good form (body in straight inclined position). 4. Perform static legs, arms and trunk stretching exercises, at a duration of 8 secs per exercise (e.g. seated hamstring stretch, quad stretch) for at least 3 secs. 5. Identify, by word or gesture, personal height and weight after measurement. 	<ol style="list-style-type: none"> 1. Run, around a 160m route at a regular pace, for 15mins. 2. Walk/ Climb stairs, carrying an object weighing 3kg, for at least 3mins. 3. Perform dynamic legs, arms and trunk stretching exercises, at a duration of 3 secs per exercise for 8 repetitions each, of at least 3 secs. 4. Record personal height and weight and use an online BMI calculator (linked to HPB online calculator) to check risk range. 5. Record a personal log, of exercises done each day, for at least 5 days. 6. Complete the Physical Fitness Test items, with at least a basic level of fitness.



Isometric Push-Up



Curl-Up



Modified Curl-Up

Minimum Score Required		
	Male	Female
15m Pacer	25 laps	13 laps
Mod. Curl-up	7	7
Iso Push-up	20sec	13sec
Backsaver S&R	10cm	12cm
Maximum Score Required		
	Male	Female
Pacer	> 25 laps	> 13 laps
Mod. Curl-up	14	11
Iso Push-up	40sec	40sec
Backsaver S&R	≥ 20cm	≥ 23cm

*Based on Brockport Physical Fitness Test
Winnick & Short (2014)*

Infusing Affective Learning

VALUE (MINDS Core Values)	WHAT DOES IT LOOK LIKE?	WHAT DOES IT LOOK LIKE IN PE?	21 st CENTURY COMPETENCIES/ SOCIAL EMOTIONAL COMPETENCIES (Adapted from MOE 21CC Framework)	
			Level 1	Level 4
RESILIENCE <i>Striving for and giving of our best with passion and commitment</i>	Student consistently tries to achieve his/her personal best despite challenges and difficulties he/she may face.	Student recognises his/ her skill competency level and strives to improve on it to reach and/ or exceed targets set despite challenges and difficulties.	SEL 1.1.1b & 1.1.2b The Student recognises that everyone is unique in his/her own way. He/ she can identify his/ her abilities	CIT 3.1b The student identifies essential elements of multiple tasks/ roles, stays focused on them and perseveres when he/ she encounters difficulties



Pedagogical Strategies/ Styles.....

Student Profile: ASD-ID/ MSID

- ☐ Command Style – Teacher-led and controlled
- ☐ Guided Discovery – Introduces exploration by students while guided by Teacher
- ☐ Practice Style – Student-controlled; Teacher provides feedback
- ☐ Reciprocal Style – Peer teaching/ learning
- ☐ MLE – Mediated Learning Experience (Combination)

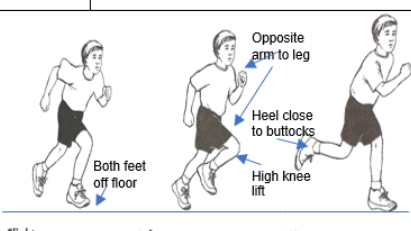
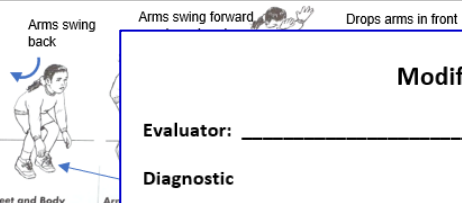
Table 6.4: Sample Peer Assessment for Rotation in Educational Gymnastics/ Dance

Name:			
Class:		Date:	

Skill	Key Cues	✓ if Yes X if No
	Straight body	
	Legs together	
	Hands together	

Assessment for Learning

Rubric for Diagnostic Testing

Test Item	Test Description	Skill Level			
		1	2	3	4
Run	<ul style="list-style-type: none"> 10m distance marked by 2 cones 2 trials 	<ul style="list-style-type: none"> Walks with rapid increased pace for at least 1.5m Quick up and down movement of the knee 	<ul style="list-style-type: none"> Holds arms in slightly bent position with hands at approx. waist level Arms move in opposition Swings knee when bringing leg forward, appearance of toes out (duck-toed) Requires broad base support 	<ul style="list-style-type: none"> Holds arms in bent position with hands just below shoulder, swings 	<ul style="list-style-type: none"> Moves arms at rt angles in opposition of legs Heel to pass close to
Broad Jump	<ul style="list-style-type: none"> Start line Place A4 paper breadthwise and lengthwise just in front of start line 2 trials 	<ul style="list-style-type: none"> Can't jump on level ground Can jump off edge of a step using 2-footed take-off and landing independently 	<ul style="list-style-type: none"> Uses 2-footed take-off, looks like jump in place Arms bent at sides during jump, little or no arm action Jumps a short distance 	<ul style="list-style-type: none"> U la to ap Sy ba 	

Rubrics for Gymnastics

Level	Balance	Roll	Transition
4	Able to hold for at least 3 sec in good form	Smooth with <u>good form</u> and ability to maintain control throughout (force applied to keep the body always aligned with direction of travel)	No stops or breaks; slight hesitation (not enough to cause a visible disruption to the flow of movement) in the gymnastics sequence
3	Able to hold for at least 2 sec in good form	Smooth with <u>good form</u> and ability to maintain control most of the time (force is not always applied causing body to move out of direction of travel once or twice during sequence)	A few brief hesitations (results in slight pause in flow of motion excluding holding time for balances) in the gymnastics sequence
2	Able to hold for less than 2 sec in good form	Form breaks/errors appear in at least one skill and lacks control most of the time (force applied is insufficient to continue momentum in direction of travel)	Some hesitations (not a stop or complete break in motion) in the gymnastics sequence which cause lack of fluidity
1	Able to hold for less than 2 sec in good form	Form breaks/errors appear in all skills and lacks control all of the time (very little force applied, often unable to generate momentum to move in direction of travel)	Frequent stops and breaks between skills (exclude holding time for balance) in the gymnastics sequence

Modified GPAI for APE Games & Sports (Net/Barrier)

Evaluator: _____

Diagnostic

- Skill Execution 1 Criteria: Varies types of throws/ catch used for offen
- Skill Execution 2 Criteria: Varies types of throws/ catch used for defen
- Court Play Criteria: Targets open space to gain advantage/ score



	Skill Execution 1		Skill Execution 2		Court Paly	
Name	A	IA	A	IA	A	IA

Key A = appropriate IA = inappropriate E = efficient IE = inefficient

PE Curriculum Design and Implementation

Currently:

1. Research Project (3-year study) – Physical Fitness Testing (Results to be presented at International Association for the Scientific Study of Intellectual and Developmental Disabilities 5th Asia-Pacific Congress in Singapore); and
2. Resources
 - i. ICT – for student fitness and skill data/ reporting (pending research results)
 - ii. Equipment to support implementation (SGD \$10,000/ school given)
 - iii. Manpower
 - All teaching staff trained in Adapted PE to support teaching and learning (Implementation Workshops; Train-The-Trainer Workshops); and
 - Certificate for Teaching Physical Education to Students with Special Needs (NIE) – develop specialist PE department for quality delivery of PE and students' safety.

REFERENCES

- Ministry of Education, Singapore. (2016). MOE Physical Education Teaching and Learning Syllabus. Singapore, SG: Student Development Curriculum Division, MOE
- Gallahue, D. L., & Donnelly, F. C. (2003). Movement skill acquisition. Developmental Physical Education for All Children. (4th ed.). Champaign, IL: Human Kinetics, 257-75.
- Rink, J. (2010). Teaching physical education for learning. (6th ed.). McGraw-Hill.
- Mitchell, S. A., Oslin, J. L., & Griffin, L. L. (2006). Teaching Sport Concepts and Skills: A Tactical Games Approach. (2nd ed.). Champaign, IL: Human Kinetics.
- Block, M.E. (2007). A Teacher's Guide to Including Students with Disabilities in General Physical Education (3rd ed.). Baltimore, Maryland: Brookes Publishing Co.
- Lieberman, L.J., Houston-Wilson C. (2018). Strategies for Inclusion: Physical Education for Everyone (3rd ed.). Champaign, IL: Human Kinetics.
- Winnick, J., Short, F. (2014). Brockport Physical Fitness Test Manual with Web Resource: A Health-Related Assessment for Youngsters With Disabilities (2nd ed). Champaign, IL: Human Kinetics.
- Hellison, D. (2011). Teaching personal and social responsibility through physical activity (3rd ed.). Champaign, IL: Human Kinetics.
- Krathwohl, D. (2002). A revision of Bloom's taxonomy: An overview. Theory into Practice, 41, 212-218.
- Krathwohl, D., Bloom, B., & Masia, B. (1964). Taxonomy of educational objectives: Handbook II. Affective domain. New York, NY: McKay.
- MINDS Core Values
- Ministry of Education, Singapore. (2016). Enhancing 21st Century Competencies in Physical Education, Art and Music: PAM Research Report. Singapore, SG: Physical Education and Sports Teacher Academy (PESTA) & Singapore Teachers' Academy for the aRts (STAR)



THANK YOU

minds