

Overview of Brockport Physical Fitness Test

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Brockport Physical Fitness Test

- Developed by Dr. Joseph Winnick and Dr. Francis Short from the College at Brockport
- Assesses Health-Related Fitness
 - Aerobic Capacity, Body Composition, Musculoskeletal Functioning
 - Muscular Strength, Muscular Endurance, Flexibility & Range of Motion

Brockport Physical Fitness Test

- Focuses on both Physical Fitness and Functional Fitness
 - Functional Fitness refers to the ability to meet the demands of daily living
- Uses Criterion-Referenced Standards that either align with FitnessGram or have Specific Standards

Target Populations

Students Ages 10-17 with the following disabilities:

- Cerebral Palsy
- Congenital Anomalies and Amputations
- Intellectual Disability
- Spinal Cord Injuries
- Visual Impairments



Strategies for Inclusion

Including Students with Disabilities in
Fitness Testing and Fitness Education

Assessing Students with Disabilities

- ✓ Know and understand the type of disability the student has
- ✓ Review medical records and the IEP
- ✓ Know contraindications (things you should not do) that could cause harm to the student
- ✓ Consult with others who know the student well (classroom teachers, paraprofessionals, former PE teachers) to learn as much as possible about the student and his or her abilities

Assessing Students with Disabilities

- ✓ Provide incentives to motivate the student to participate
- ✓ Know Communication Methods
- ✓ Be sure student fully comprehends what is being asked
- ✓ Use picture cards and demonstrations as appropriate



Assessing Students with Disabilities

- ✓ Develop Rapport
- ✓ Take Time
- ✓ Break Tasks Down
- ✓ Use Lead-Ups
- ✓ Practice
- ✓ Create natural systems of peer interaction and support (small groups, task sheets, partner work) to aid in on-task behavior



Assessing Students with Disabilities

✓ Modify Frequency

- Reduce Repetitions

✓ Modify Intensity

- Slow down the pace;
Incorporate rest breaks

✓ Modify Time

- Reduce Time on Task

✓ Modify Distance

- ✓ Monitor and
Acknowledge
Improvements

Other Uses of Fitness Testing Data

- Data generated can be used to determine Present Level of Performance (PLP)
- Items in which standards have not been met are identified as areas of need
- Goals and Objectives are created based on areas of need to enhance the personal fitness and functional capacity of the student

Other Uses of Fitness Testing Data

- These goals can be incorporated into the student's IEP
- Appropriate Activities to promote health-related fitness, such as those found in Physical Best can be used to meet stated goals and objectives

Fitness Profile

- A Fitness Profile is developed based on the student's disability
- There are recommended and optional test items for each disability
- Instructor selects test item based on individual attributes

Aerobic Capacity	Body Composition	Strength & Endurance	Flexibility & Range of Motion
<p>*PACER (15 & 20 meter) *One Mile Walk/Run Target Aerobic Movement Test</p>	<p>*Skinfolds *Body Mass Index</p>	<p>Bench Press *Curl Up Modified Curl Up Dumbbell Press Extended Arm Hang *Flexed Arm Hang Dominant Grip Strength Isometric Push Up *Pull-Up *Modified Pull-Up *Push Up 40 meter push/walk Reverse Curl Seated Push Up *Trunk Lift Wheelchair Ramp Test</p>	<p>Modified Apley Test *Back-saver Sit & Reach *Shoulder Stretch Modified Thomas Test Target Stretch Test</p>

Time for Some Physical Fitness Testing

GRID

ID – Intellectual Disability

VI- Visual Impairment

CP – Cerebral Palsy

SCI – Spinal Cord Injury

CAA – Congenital Anomaly or Amputation



PACER (15-20 meter) – ID, VI

- ✓ Use tethers, guide, buddy, encouragement
- ✓ Line up behind the start line.
- ✓ On start command, run to the opposite line before you hear the beep.
- ✓ At the sound of the beep, run back to the start line.
- ✓ Keep running until you have missed 2 beeps or your teacher stops you.



Target Aerobic Movement Test - ID, VI, SCI, CP, CAA



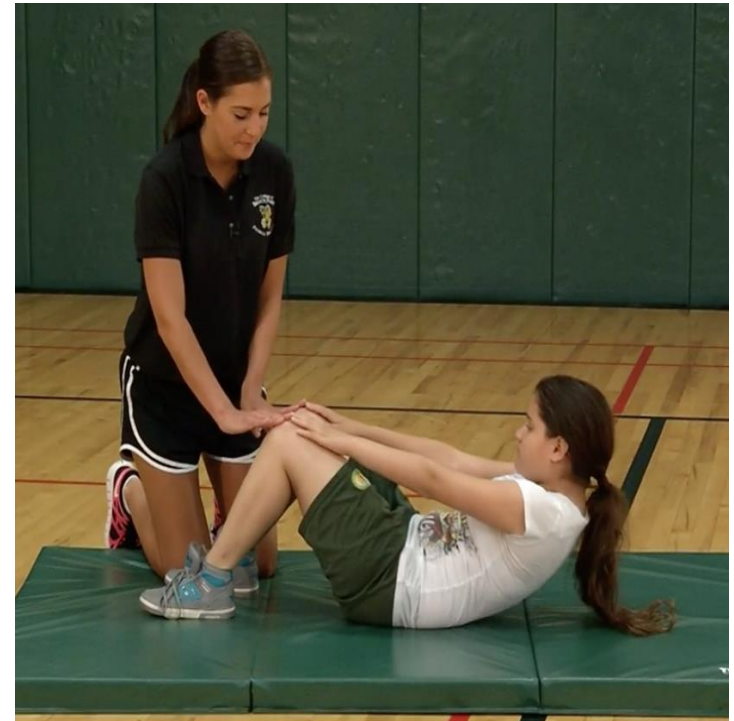
- Measures the ability of the student to exercise at 70-85% of their maximal predicted HR (140-180 BPM) for 15 minutes
- Recommended activities include running/jogging, dancing, biking, arm ergometry...
- Tester checks HR every minute
- If student fall below THR they have 1 minute to return or the test is over
- This is a pass/fail test





Modified Curl-Up - ID

- Lie on back with knees bent, extending legs as far as possible with feet flat on floor, slightly apart.
- Arms are placed on thigh.
- Curl-up and slide fingers up the thigh to the knee in rhythm with cadence (1 every 3 seconds), keeping heels on the floor.
- Back of head should touch the mat on each repetition.
- Continue assessment until student cannot maintain cadence, second mistake, or complete 75 curl-ups.



Isometric Push-Up – ID (10-12)



- Student assumes a push-up position and attempts to hold the position steady for as long as 40 seconds
- Test ends when student can no longer hold position



Reverse Curl - SCI



- Using a 1-lb dumbbell the student raises and lowers dumbbell from the thigh to a flexed arm position and holding in that position for 2 seconds
- Passing constitutes completing one reverse curl





Back-Saver Sit and Reach – ID, VI, CAA

- Remove shoes.
- Student places one foot against the base of the box, other leg is bent.
- Arms straight, hands on top of each other, fingers even, palms down.
- Reach forward with both hands even, back straight, and head up. Repeat 4 times and hold the position of the fourth reach for at least 1 second.
- Repeat with the other leg.



Modified Apley – CP, SCI. CAA

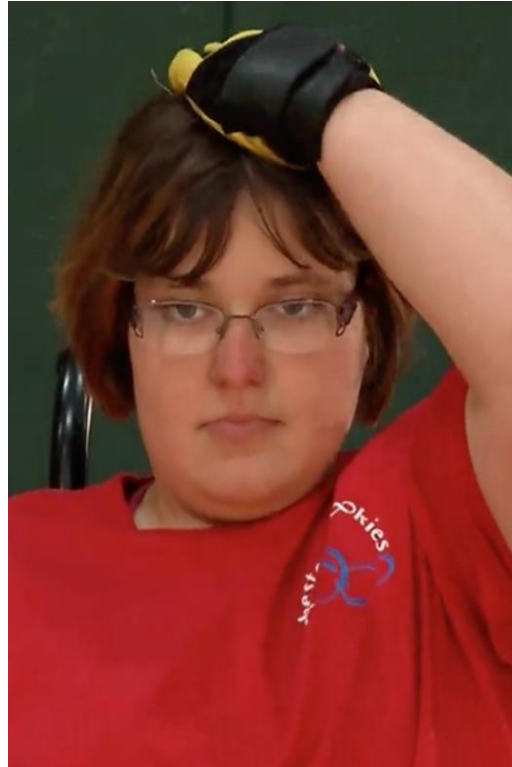


- Student attempts to reach back with one hand and touch the opposite side of the scapula.
- If successful the student scores a 3
- If the student cannot touch the scapula the student touches the top of the head.
- If successful the student scores a 2
- If the student cannot touch the head the student touches the mouth.
- If successful the student scores a 1

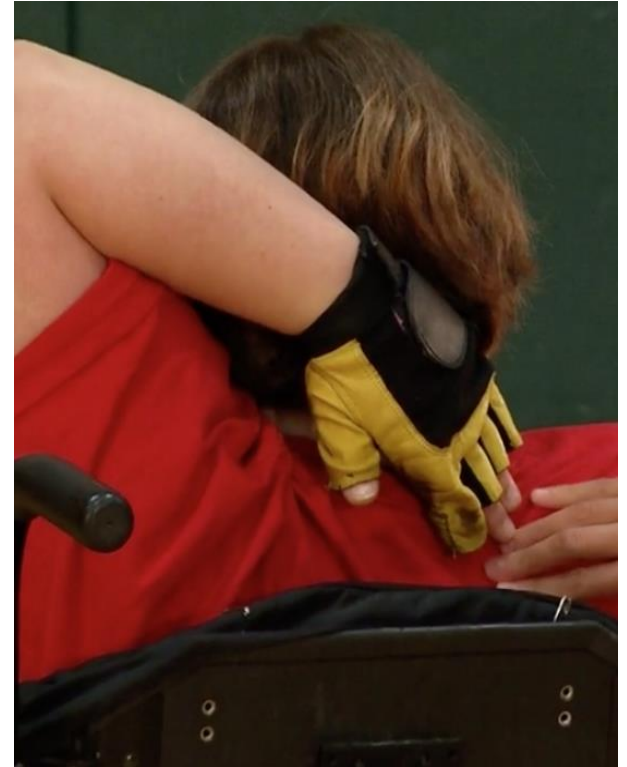
Modified Apley



1 point



2 points

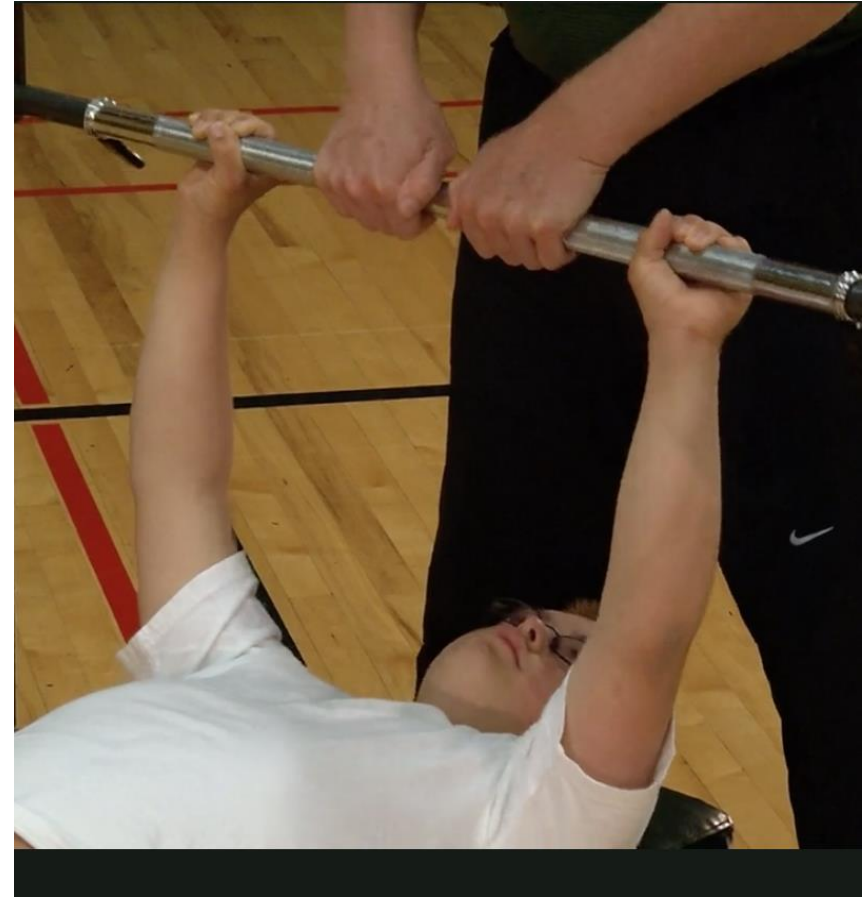


3 points

Bench Press – ID, SCI, CAA



- Student lies supine on the bench, knees bent, feet on the floor
- Student grasps bar with hands shoulder width apart and lifts and lowers 35 lbs.
- Score number of lifts and lowers the student can do independently
- Repetitions should be completed one every 3-4 seconds
- Max reps for males is 50 & females is 35



Dumbbell Press – CP. SCI, CAA



- From a sitting position (wheelchair or chair) the student grasps the **1-lb** dumbbell with one hand and presses up and down in a repetitive motion
- Score number of lifts and lowers the student can do independently
- Repetitions should be completed one every 3-4 seconds
- Max reps is 50



Extended Arm Hang – ID



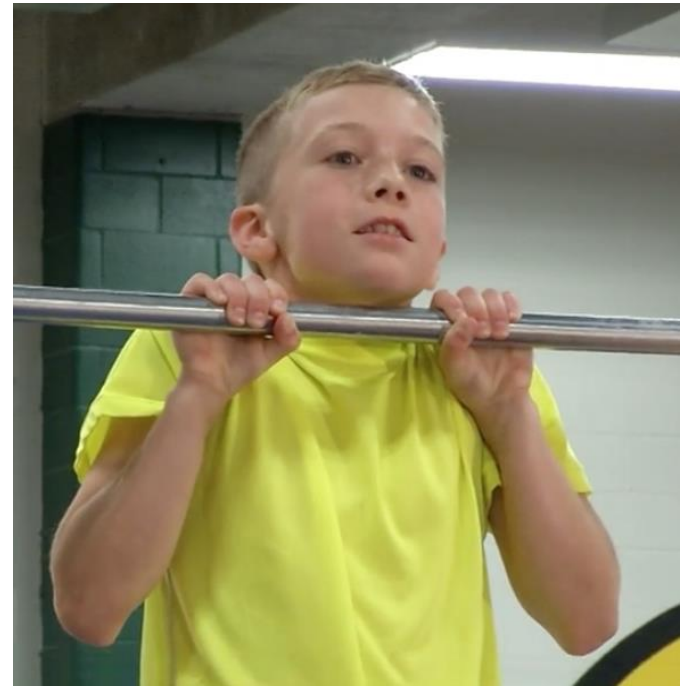
- Using an overhand grip, student grips bar and hangs from the bar
- Student maintains a fully extended position
- Score number of seconds student can maintain the position
- Max time is 40 seconds



Flexed Arm Hang – ID, VI



- Using an overhand grip, student grips bar and hangs from the bar
- Student maintains a flexed position with arms bent and chin slightly over the bar
- Score number of seconds student can maintain the position
- Max time is 40 seconds



Seated Push-Up – CP, SCI, CAA



- Student attempts to hold a seated push-up position for 20 seconds
- Can use push-up blocks or the arm rests of a wheelchair
- Student raises so that the buttocks is off the surface and arms are extended
- Score total number of seconds held up to 20 seconds



40 Meter Push/Walk - CP

- Student walks or pushes wheelchair a distance of 40 meters
- Students should not overexert themselves
- Score based on students ability to cover the distance in 60 seconds or less



Wheelchair Ramp Test - CP



- Student pushes self up the ramp one time
- Have a spotter behind the wheelchair
- Multiple trials are permitted to cover 15 feet or reach the top

Dominant Grip Strength – ID, CP, SCI, CAA



- Using a hand grip dynamometer student squeezes
- 3 trials are given, record each trial
- Middle score is recorded
- Allow 30 seconds between each trial

**Brockport Physical Fitness Test
Manual
2nd Edition**

**See Page 25
Summary of Recommended and
Optional Test Items with Available
Standards**

Physical Fitness Profile Sheet

Name: _____ Date: _____

Gender: M F Age: _____ Disability: _____

Disability classification: _____

Physical fitness profile: Considering the health-related needs of this young person, construct a profile by placing check marks beside the statements that are most relevant to the individual's fitness needs. Then select specific test items and standards for measurement and assessment.

Aerobic Functioning

Aerobic Capacity

Attain levels of aerobic capacity consistent with positive physiological health.

Aerobic Behavior

Attain levels of aerobic behavior consistent with positive functional health.

Body Composition

Percent Body Fat

Maintain levels of percent body fat consistent with positive physiological health.

Body Mass Index

Maintain a weight that is appropriate for height.

Musculoskeletal Functioning

Strength and Endurance

Acquire or maintain functional levels of upper-body strength and endurance consistent with independent living: (a) ability to grasp and lift a light weight, (b) ability to lift and transfer the body from a wheelchair, and/or (c) ability to attain functional mobility.

Acquire or maintain levels of upper-body strength and endurance for participation in physical activities.

Acquire or maintain levels of trunk-extension strength, endurance, and flexibility to reduce the risk of developing lower-back pain.

Acquire or maintain levels of abdominal strength and endurance to reduce the risk of developing lower-back pain and to participate in physical activities.

Flexibility or Range of Motion

Acquire or maintain at least functional range of motion in various joints.

Acquire or maintain functional levels or optimal levels of flexibility in one or more of the following body regions: shoulders, hips, hamstrings.

Data Entry Form

This form is a quick and easy way to record student information and develop an appropriate fitness test for students. All possible tests from the Brockport Physical Fitness Test are listed. Simply fill in data for the tests you have a student perform. You can then use this record when completing an individualized Brockport Physical Fitness Test form for analysis of each student's results.

Student name: _____ Gender: Male Female

ID No.: _____ IEP (yes or no): _____ Grade (if applicable): _____

Height (feet and inches): _____ Weight: _____ Month and year: _____

Classification (check one)

general (without disability) intellectual disability visual disability
 spinal cord injury cerebral palsy congenital anomaly or amputation

Subclassification (check subclassification necessary for test item selection and for reporting results)

Visual (check one)

runs with assistance
 runs without assistance

Spinal cord injury (check one)

low-level quadriplegia (LLQ)
 paraplegia: wheelchair (PW)
 paraplegia: ambulatory (PA)

Cerebral Palsy (check one)

C1 C2U C2L C3 C4 C5 C6 C7 C8

Congenital Anomaly (check one)

one arm only two arms only one leg only two legs only
 one arm, one leg (same side) one arm, one leg (opposite sides)

Scores

I. Aerobic Functioning

_____ Mile: run/walk time (min/sec)
_____ 20 m (laps)
_____ 15 m (laps)
_____ TAMT (P/F)

II. Body composition

_____ Height (feet and inches)
_____ Weight (lbs.)
_____ Percent body fat (%)
_____ Triceps (mm)
_____ Triceps + subscapular (mm)
_____ Triceps + calf (mm)
_____ BMI

III. Musculoskeletal Functioning

A. Strength and Endurance

- _____ Reverse curl (#)
- _____ 40 m push/walk (P/F)
- _____ Ramp test (feet)
- _____ Push-ups (#)
- _____ Seated push-ups (sec.)
- _____ Pull-ups (#)
- _____ Modified pull-ups (#)
- _____ Dumbbell press (#)
- _____ Bench press (#)
- _____ Grip strength (kg)
- _____ Isometric push-ups (sec.)
- _____ Extended-arm hang (sec.)
- _____ Flexed-arm hang (sec.)
- _____ Curl-ups (#)
- _____ Modified curl-ups (#)

B. Flexibility or Range of Motion

- _____ Trunk lift (in.)
- _____ Shoulder stretch, right (P/F)
- _____ Shoulder stretch, left (P/F)
- _____ Back-saver, right (in.)
- _____ Back-saver, left (in.)
- _____ Modified Thomas test (0-3)
- _____ Modified Apley test (0-3)
- _____ Target stretch test (0-2)

Visual Impairment Data Entry Form

Name: _____ Class: _____
 Gender: Male Female Age (yr): _____ Height: _____ Weight: _____
 Date: _____ Subclassification: N/A

Aerobic Functioning

Test item	Units of measure	Test scores	Adapted Fitness Zone (if applicable)	Healthy Fitness Zone (if applicable)
PACER 15m or 20m (10-17 yr)	# of laps			
	VO ₂ max score			
One-mile run/walk (15-17 yr)	min:sec			
	VO ₂ max score			
TAMT	min.			

Body Composition

Test item	Units of measure	Test scores	Adapted Fitness Zone (if applicable)	Healthy Fitness Zone (if applicable)
Percent body fat	mm			
Sum of triceps and calf skinfolds	(mm)			
	and/or % body fat			
Body mass index	BMI			

Musculoskeletal Functioning

Test item	Units of measure	Test scores	Adapted Fitness Zone (if applicable)	Healthy Fitness Zone (if applicable)
Curl-up	#			
Trunk lift	in.			
Push-up	#			
Pull-up	#			
Modified pull-up	#			
Flexed-arm hang	sec.			
Back-saver sit-and-reach, right	in.			
Back-saver sit-and-reach, left	in.			
Shoulder stretch, right	P/F			
Shoulder stretch, left	P/F			

Interpretation: _____

 Needs: _____

Q&A