

Quick **Reference Guide**

Healthy Active Living and Obesity Research Group

2017



Acknowledgements

The financial support and expertise of the following organizations have made a significant contribution to the development of the Canadian Assessment of Physical Literacy - Second Edition:

- Active Healthy Kids Canada
- Canadian Association of Health, Physical Education, Recreation and Dance / Physical and Health Education Canada
- Canadian Institutes of Health Research
- Champlain Cardiovascular Disease Prevention Network
- Champlain Local Health Integration Network
- Children's Hospital of Eastern Ontario Research Institute
- Ontario Ministry of Health Promotion
- Ontario Physical and Health Education Association
- Ottawa Catholic School Board
- Mitacs
- ParticipACTION
- RBC
- Upper Canada District School Board

The Canadian Assessment of Physical Literacy - Second Edition Training Materials would not have been possible without the financial support from both the Government of Ontario and the Ontario Trillium Foundation.



Please note:

The views expressed within this manual are the views of the Healthy Active Living and Obesity Research Group and do not necessarily reflect the views of the listed organizations.

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Direct Assessment of **Daily Behaviour**

Objective:

To assess daily behaviour by counting the number of steps taken each day

Rationale:

Knowing how much children move over the entire day is an important element of physical literacy



How to prepare for the test

Equipment/Space Required:

Floor space for child to sit with legs extended

Sit and reach flexometer with foot surface located at the 26 cm mark of the measuring rod

Flexometer measurement rod extending from 0 to 70 cm in 0.5 cm increments

Flat floor space. If a mat is used it must be very firm and no indent under the weight of the child

Wall for sit & reach to sit against

Preparation:

Place the flexometer on the floor mat

Stabilize the flexometer measurement rod so that 26 cm is at the foot surface

How to administer the test

Each child will receive a pedometer, a log sheet and an information sheet. The pedometers should be distributed on the first testing day and collected after 7 complete days of wear (typically on the second testing day).

A presentation that explains how to wear the pedometers and how to record the results should be done after each child has been given their own pedometer. Children should put the pedometer on as they follow each step of the demonstration. Demonstrate how to put the pedometer on the waist band or belt so that it is positioned over the hip bone on the right hand side of the body. Emphasize that it should be worn in the same location each day. Once all children are wearing their pedometers, demonstrate how the case is opened and the reset button is used to return the step count to zero. Have the children enter the time of day that the pedometer is reset into the "Practice Day" line of the pedometer log. Have children close the pedometer and emphasize that it will not record steps if the case is open. Provide the children with the complete instructions for pedometer use and answer any questions that may arise.

Instructions for the Participant

Instruct each child who will wear the pedometer to:

1. Wear the pedometer for 7 full days in a row, counting the day after you receive the pedometer as Day 1 (the day that you receive and start to wear the pedometer is the “Practice Day”).
2. At the end of each day when you go to bed write down how many steps you took.
3. Take the pedometer off when you get into bed at night and place it on your bedside table. Put it back on as soon as you get out of bed in the morning.
4. Reset the pedometer to 0 every morning when you wake up.
5. Do not push the reset button any other time.
6. Never wear the pedometer in water (bath, shower, swimming pool, etc.).
7. You can wear the pedometer during sports team practices or games if your coach says it is ok for you to do so.
8. If you have to wear tight fitting clothes, like a gymnastics leotard, then you can put on a pair of shorts over the top, or wear a belt and attach the pedometer to that instead.
9. If you take the pedometer off for any reason, record the length of time that you were not wearing the pedometer on your log sheet, alongside the reason why you took it off.
10. Contact the appraiser if you have any questions.



Proper Form – Do's and Do Not's for Wearing the Pedometer

**DO**

Attach the pedometer directly to your shorts or pants, and the security strap to your pocket

**DO NOT**

Attach the pedometer to a pocket or belt loop

**DO NOT**

Hang the pedometer from the safety strap



Common questions

Question	Response
Can I wear the pedometer when playing a hockey/ soccer match (or other contact sports)	We want you to wear the pedometer as often as you can so try and wear it during all of your sport team practices and games. If your coach asks you to take the pedometer off, explain that you are participating in a physical literacy test and you are supposed to wear it as much as possible. But if your coach says you have to take it off, take the pedometer off and just record the time it was off and what you did while it was off on your log sheet.
Can I wear the pedometer when swimming?	The pedometer is not waterproof, so do not wear it if you are going to get it wet. Take it off just before you take a shower, a bath, or go swimming and then put it back on immediately after you get out of the water. Record how long the pedometer was off and what you did while it was off on your log sheet.
What if I press the reset button accidentally?	To avoid this happening, only open the pedometer at night just before you go to bed when you write down your steps. If you don't open the pedometer during the day there is no chance of you accidentally pushing the reset button and losing your steps for that day. If for some reason you do reset the pedometer to zero, write this on your log sheet, alongside how long you had worn the pedometer that day and any activities that you participated in. Please wear the pedometer an extra day to replace the missing information.
What if I have to wear dance/ gymnastics clothes and there is nowhere to put the pedometer?	You can put the pedometer on a belt or shorts that you wear over your dance/gymnastics clothes. Make sure that it is positioned in the right place (over your right hip) and that the belt is on tightly.
Will the pedometer hurt me?	The pedometer will not hurt you and will not break if you fall on it.
What if I forget to put the pedometer on in the morning? Can I put it on half way through the day?	Make sure you place the pedometer by your bedside at night so it is the first thing that you see when you get up in the morning. If you do forget to put it on first thing, put it on as soon as you remember and then record on your log sheet how long the pedometer was off for.

Pedometer Tracking Log

*Practice Day!		Time On: _____ am/pm	Time Off: _____ am/pm	# of steps taken: _____	Was the pedometer worn all day? ____ Yes, I never took it off ____ No, how many hours missing: _____
Day	Date	Wake up time in the morning	Bed time in the evening	# of steps taken	Was the pedometer worn all day?
1					____ Yes, I never took it off ____ No, how many hours missing: _____
2					____ Yes, I never took it off ____ No, how many hours missing: _____
3					____ Yes, I never took it off ____ No, how many hours missing: _____
4					____ Yes, I never took it off ____ No, how many hours missing: _____
5					____ Yes, I never took it off ____ No, how many hours missing: _____
6					____ Yes, I never took it off ____ No, how many hours missing: _____
7					____ Yes, I never took it off ____ No, how many hours missing: _____

Motor Competence

Objective:

To assess the fundamental motor skills required for participation in physically active peer play in a format that simulates typical movement and skill variation

Rationale:

Measuring fundamental movement skills contributes towards a child's physical competence to take part in active play



How to prepare for the test

Equipment/Space Required:

- Open space (15 m x 5 m) with flat floor that is safe for running and changing direction
- Gym floor tape
- 6 Hula hoops (63 cm wide) *If hoops are not available you may tape circles on the floor that are 63cm in diameter
- 6 Cones (20-30 cm tall)
- 1 Soccer ball
- 1 Squellet ball or soft ball (70 mm)
- 1 cardboard wall target (61 cm wide x 46 cm high or 24" wide x 18" high)

How to administer the test

Overview of Administration

- Before attempting the Canadian Agility and Movement Skill Assessment (CAMSA), children should watch two demonstrations. During the first demonstration of the CAMSA the appraiser moves slowly through the entire course, performing each skill perfectly so that each criterion is demonstrated. During the demonstration a verbal description of each skill is provided, emphasizing the cue words (see following pages). For the second demonstration, the appraiser completes the CAMSA at full speed while maintaining skill accuracy.
- Explain that each child will have 2 practice trials followed by 2 timed and scored trials. Emphasize that the best score will be retained if they complete the course as fast as they can while doing their best skills.
- Have each child complete 2 practice trials. Provide verbal prompts, as required by the test protocol, and immediate verbal corrections for any mistakes made.
- Have each child complete 2 timed/scored trials. Verbal cues should be provided as described in the test protocol.

Overview of Administration

Description of protocol

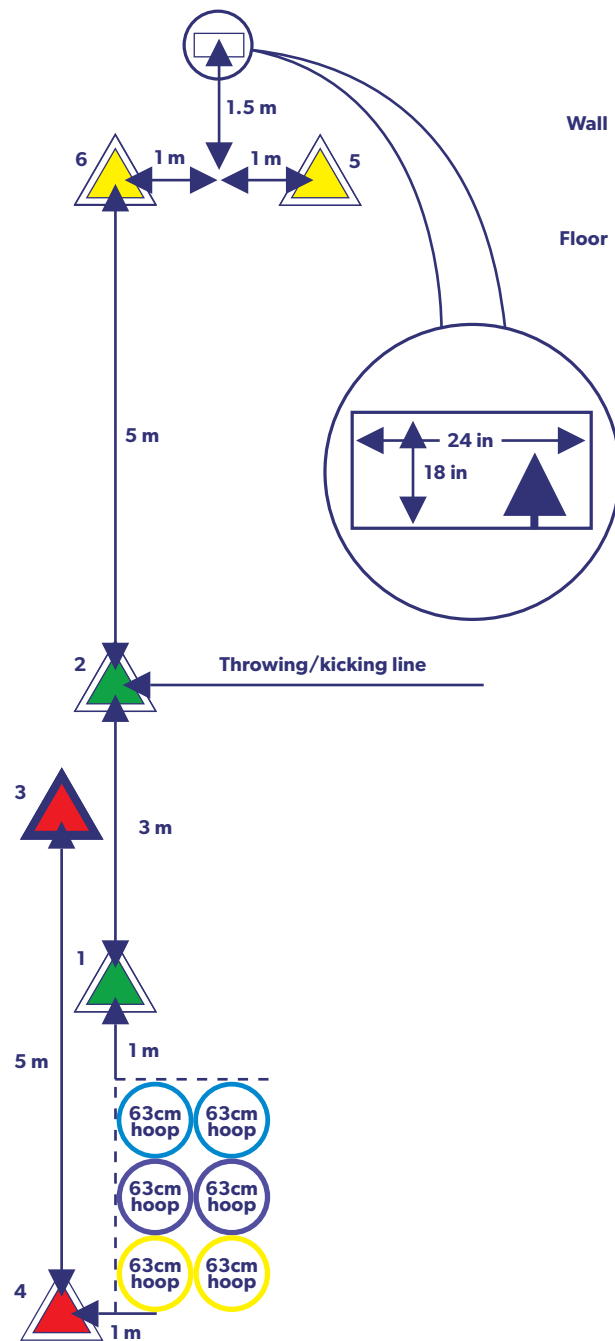
1. Appraiser #1 times the child and stands at the opposite end of the throwing line from cone #2.
2. The squellet ball and soccer ball are at hand. Appraiser #1 starts each trial by saying "ready, set, go".
3. Timing starts when the appraiser says "go" and stops when the child's foot kicks the soccer ball.
4. Appraiser #1 throws the squellet ball when the child is ready to catch after touching cone #1 and places the soccer ball on the line after the child has gone around cone #3.
5. Appraiser #2 scores the child's performance of each skill.
6. One point is awarded for each skill performed correctly.
7. It is very important that Appraiser #1 provides consistent, clear verbal prompts for each skill during performance of the CAMSA.
8. Accurate and effective prompting is essential to ensure that the score and time reflect the child's motor skill, rather than memory.
3. Measure perpendicular to the target wall a distance of 5m from cone #6. Mark this position and place cone #2 on this mark. Mark the throwing/kicking line (2m in length) on the floor so that it runs parallel to the wall target (it should cover the same distance as the space between cones #5 and #6).
4. From cone #2, continue to measure perpendicular to the target wall for an additional distance of 3m. Mark this position on the floor and position cone #1 on this mark.
5. Measure 1m from cone #1 (continuing the line that is perpendicular to the target wall) and mark this spot on the floor.
6. Align the left edge of the blue hula hoop with the line from the target wall (in line with cone #1, cone #2 and cone #6), ensuring that the front of the hula hoop is level with the marker (drawing an imaginary perpendicular line, running parallel with the wall target).
7. Place the remaining hula hoops in 3 rows of 2. To minimize changes to the hoop position and tripping hazards, join all of the hoops together and then securely fasten the hoops to the floor.

Preparation

Measure and position the CAMSA by following these steps:

1. Mount the target on the wall so that the top of the target is 1.5m above the floor (see diagram on following page).
2. Find the centre of the target. Measure 1m to the left and right of the target centre and mark these positions on the floor. Position cone #5 and #6 on top of these marks.
8. Measure 1m from centre of the left yellow hoop out towards the left of the hoop, parallel to the target wall. Mark this spot and place cone #4 on this mark.
9. Measure 5m from cone #4 back towards and perpendicular to the target wall. Mark this position and place cone #3 on this mark.

Fasten all hoops securely to the floor to maintain their position during impacts and minimize tripping hazards.



Instructions & Keys

Cueing instructions given by appraiser #1 during a child's assessment	
1. When child is standing in front of the right yellow hoop, ready to go	<i>"Ready, set, go"</i>
2. Immediately after saying "go"	<i>"2-foot jumps"</i>
3. As third jump is initiated	<i>"Slide, touch the cone"</i>
4. As they approach cone #2	<i>"Slide, touch the cone"</i>
5. As they approach cone #1	<i>"Catch the ball"</i>
6. After you have thrown the ball	<i>"Run up to the line and throw the ball at the target"</i>
7. Once the child has prepared to throw	<i>"Round the cone"</i>
8. Once the child has gone over the throwing line and is heading for cone #2	<i>"Skip"</i>
9. Once the child is halfway between cone #3 and #4	<i>"Round the cone"</i>
10. When the child is going around cone #4	<i>"1-foot hops in each hoop"</i>
11. As the final hop is completed	<i>"Run and kick the ball between the cones"</i>

CAMSA Score Sheet

Test Location: _____

Test Date: _____

Appraiser #1: _____

Appraiser #2: _____

ID Number:									
Time(s)									
Two foot jumping	3 two-foot jumps in and out of the yellow/ purple/blue hoops								
	No extra jumps and no touching of hoops								
Sliding	Body and feet are aligned sideways when sliding in one direction								
	Body and feet are aligned sideways when sliding in opposite direction								
	Touch cone with low centre of gravity and athletic position								
Catching	Catches ball (no dropping or trapping)								
Throwing	Uses overhand throw to hit target								
	Transfers weight and rotates body								
Skiping	Correct hop-step pattern								
	Uses arms appropriately (alternates arms and legs, arm swinging for balance)								
One foot hopping	Land on one foot in each hoop								
	Hops once in each hoop (no touching of hoops)								
Kicking	Smooth approach to kick ball and hit target								
	Elongated stride on last stride before impact								
Total									

Aerobic Fitness: Fitnessgram 15 m/20m PACER (Progressive Aerobic Cardiovascular Endurance Run) (Meredith & Welk, 2010)

Objective:

To assess cardiorespiratory endurance

Rationale:

Cardiorespiratory fitness contributes to knowing whether or not children have the necessary endurance to part take in active games



How to prepare for the test

Equipment/Space Required:

- Tape measure
- Gym floor tape
- Gym space (15 m or 20 m marked course plus space [1.5 m] for turning at each end)
- Stereo with CD player
- Fitnessgram PACER CD
- 20 cones

How to administer the test

Explain the test to the child as follows: "Please make sure that your shoelaces are tied up tightly. At this station we are asking you to run as long as you possibly can. There will be a CD playing that will beep. Once you hear the first beep you may leave this side and you must get to the other side before the next beep. As soon as you hear the next beep you run back to this side. Every time you hear a beep you run the other way. If you get to the line before the beep, you must wait until you hear the next beep before running back. The beeps will gradually get faster so you have to run faster to keep up. We want you to keep going as long as you can get to the other side before you hear the next beep. You need to pace yourself so that you do not get too tired too fast. The first level is easy so you do not run really fast at the start. If you run too fast at the start you will get tired too quickly and not reach the best level that you possibly can."

Instructions for the Participant

1. Stand in a running position and make sure that you are behind the start line.
2. At the sound of the first beep you should take off as soon as possible to ensure that you cross over the line at the other side before the sound of the next beep.
3. Once you get there, turn around and wait for the next beep.
4. As soon as you hear the next beep start running again to get back to the other side. Each minute the beeps will get faster and faster.
5. When you hear a triple beep, this tells you that you have completed a level and the beeps are about to get a bit faster.
6. Do NOT stop running when you hear this triple beep-keep running!
7. Continue to run back and forth until you're not able to make it over the line before the next beep.
8. We will give you a warning the first time that you don't get across the line in time.
9. When we warn you that you need to go faster, immediately turn around and run back to the next line.
10. The second time that you do not make it over the line before the beep you are finished.
11. Remember you want to keep going for as long as possible so take it easy for the first couple of speeds. Do not try to run really fast during the first level.

Proper Form

Demonstrate the test to the child by playing the recording and performing 3 or 4 runs.

1. Children run across the 15 m / 20 m distance at a pace that increases.
2. 1-foot must cross the line by the time the beep sounds.
3. Children must wait for the beep before running in the other direction.
4. The first time that a child does not reach line before the beep, he/she should stop and immediately turn around and continue running.
5. Children stop as soon as they fail to reach the line a second time.
6. Once children have completed the PACER, ensure they cool down by walking around. If a 2nd appraiser is available they should monitor the children to ensure they cool down properly.

* The PACER is an elimination activity. Document the lap # of the child when they have missed 2 beeps. When assessing a group of children, allowing children to continue running after they have missed 2 beeps makes the differences in performance less obvious to the participants. This may contribute to a more supportive social environment for the assessment.

How to Record the Score

- 1. The run from one end to the other (15 m or 20 m distance) is 1 lap
- 2. **Record the number of laps completed by the child**
- 3. Count the first lap not completed before the beep but not the 2nd
- 4. Body doesn't need to make the line as long as the foot is on the line

15 m/20 m PACER Score Sheet

Test Date: _____

Test Location: _____

Test Length (circle): 15 m 20 m

ID #	Appraiser	Lane	Laps Completed

Plank Assessment of Torso Strength (Boyer et al., 2013)

Objective:

To assess torso muscular endurance

Rationale:

Torso endurance and strength are related to back health, the ability to stabilize the body, and the function of both the upper and lower limbs



How to prepare for the test

Equipment/Space Required:

- Mat that is longer than the child's body
- Stopwatch that measures to 1 second intervals

Preparation:

- Place the mat flat on the floor
- Children should be in clothing that enables the position of the trunk and legs to be accurately evaluated. Tucking in shirts and wearing shorts or tights rather than baggy pants are recommended.

How to administer the test

Demonstrate the test procedure while providing the following explanation: "Tuck in your shirt so that I can see where your back and body are during the test. Start down on your hands and knees. Then go from your hands onto your elbows so that your elbows are straight under your shoulders. Touch your elbows with the fingertips of the opposite hand. Then unfold your arms and hold your hands together against the floor. When your elbows and hands are in the proper position, lift your knees and straighten your legs so that only your toes are on the floor. Curl your toes under your feet and keep your feet together. Look at your hands and make a perfectly straight line with your body. Once your body is straight and off the floor from your toes to your elbows the time will start. We want you to hold this position for as long as you can. Try your best to not let your hips or shoulders sag down or lift your hips way up in the air. Make sure your elbows and toes stay on the mat. You will get one short practice so that you know the position you have to maintain. After that we will time you. If your body bends we will give you one hint so that you can straighten up again, but the second time you bend we will stop timing."

Instructions for the Participant

1. Start on your hands and knees.
2. Lean on your elbows and fold your arms so that your fingertips touch your elbows.
 - **When correct elbow spacing is achieved, shoulders should be directly above the elbows.**
3. Fold your hands together against the floor and move your toes back so that you can straighten your legs.
4. Look at your hands and make a perfectly straight line from your head, through your shoulders and hips to your ankles.
 - **Correct body position as required.**
5. Do you feel how your body is straight from your ankles to your head?
6. You can relax, but remember how that straight body position felt.
 - **The trial attempt to perform the correct body position should not exceed 30 seconds. The actual assessment should occur only after an adequate rest period that is at least 4 times as long required to achieve and hold the correct position during the trial attempt.**
7. This time I am going to time how long you can keep your body perfectly straight. Lean on your elbows and fold your arms so that your fingertips touch your elbows.
8. Fold your hands together against the floor and straighten your legs.
9. Look at your hands and make a perfectly straight line with your body.
 - **Provide feedback on any changes to body position and encouragement to continue.**



Improper Form

What to look for during the test:

Hips too high



Hips too low



Feet apart



Shirt un-tucked



How to Record the Score

1. Start timing once the child is in the correct position.
2. Track the amount of time held in the correct position.
3. Give one warning to the child if there is any break from a neutral spine (either hips too high or too low), if the head moves out of alignment, if the shoulders are in front or behind the elbows or if the knees bend.
4. Timing continues to elapse while the child corrects body position.
5. A second break from the required position terminates the test. The test is also terminated if the child does not resume the correct position within 10 seconds.
6. Child holds position for as long as possible (no time limit).

Plank Torso Strength Score Sheet

Test Date: _____

Test Location: _____

ID #	Appraiser	Score (0.1 sec)



CAPL-2 Questionnaire

Knowledge and Understanding Domain and Motivation and Confidence Domain

The knowledge and understanding domain assesses a child's physical literacy knowledge. The motivation and confidence domain assesses a child's confidence in their ability to be physically active, and their motivation to participate in physical activity. The CAPL-2 questionnaire contains both of these assessments. The CAPL-2 questionnaire can be administered either using a paper and pencil format or online. In our experience to date, children have a strong preference for completing the questionnaires using the online format so it is recommended whenever available. The online version decreases time and errors when re-entering data and ensures that a response is provided for all questions. The online tool also allows children to quickly and accurately complete the questionnaire through decreased writing time and prompts for incomplete responses. It is best to familiarize yourself with the CAPL-2 Questionnaire before its administration.



Clarifying questions

Children will often ask questions about the meaning of certain words or to clarify what the question is asking. Below is a list of common questions that children ask, and guidance about how to respond without giving away the answer.

General guidance

1. For questions with multiple choice answers, tell children to work out which answers they know are incorrect and see what they are left with and then have them give their best guess.
2. If you are asked about all of the different scenarios children encounter over the course of a year (e.g., seasonal, at different houses), tell them to think about what they did last week.
3. If you are unsure how to respond, remind children that we only want to know what they think, and to give what they think is the best answer.

Question	Clarification question	Possible responses
Why are you active?	"I don't understand what I have to do"	-Often reading through the first option with the child will increase the understanding of the response required: -Re-phrase the question to be direct to the child: "Some children say they are active because being active is fun. Do you agree or disagree with that reason?"
How do you feel about being active?	See Question Above	
2	"I don't know what cardiorespiratory means"	-Cardiorespiratory fitness means the same as aerobic fitness or endurance fitness...have you heard of either of the words aerobic or endurance before? -Work out which answer you know that it IS NOT and see what you are left with. -Choose the answer that you think is best – don't worry, we only want to know what you think.
5	"I don't know what all the words mean"	-Fill in the words that you do know and see what words that you are left with. -Choose the answer that you think is best – don't worry, this is one of the hard questions for older children – remember we only want to know what you think.
6	"If I do small amounts of exercise can I add them up?"	-Yes, the question is asking on how many days you are physically active for a TOTAL of at least 60 minutes so you could exercise for 30 minutes twice in 1 day, or 4 times for 15 minutes, etc. they would all count as 60 minutes on that day.
What's most like me?	Sometimes in the paper version children answer both sides of the same question	-Look at the 2 statements and decide which statement is most like you. -Circle the statement which is most like you and then ignore the other statement. -When you have decided which statement is most like you, you then need to decide if the statement is really true for you or sort of true for you. -You should only tick one box on each horizontal line.

* CSAPPA = Children's Self-Perceptions of Adequacy in and Predilection for Physical Activity (Hay, 1992)
The "What's Most Like Me" (CSAPPA) questionnaire was developed by Dr. John Hay and is used in the Canadian Assessment of Physical Literacy with his permission. No reproduction, alteration or publication of the "What's Most Like Me" questions is permitted without express written permission from Dr. John Hay, Brock University, St. Catharines, Ontario, Canada.

Paper Questionnaire

Objective:

To measure knowledge and motivation towards physical activity

Rationale:

Children use their knowledge of physical activity to make choices about how they will achieve a healthy, active lifestyle. Children also need to be motivated to act on their knowledge and physical skills



How to prepare for the test

Equipment/Space Required:

- Table or desk for each child
- Copy of questionnaire for each child
- Pencil or pen for questionnaire responses for each child

Preparation:

- Make copies of the questionnaires
- Ensure all children have a unique identification code (ID) matched to their name

How to administer the test

The questionnaire is administered by a CAPL-2 appraiser. It can take place while in a classroom setting or while children are waiting to participate in an activity in the gym. Children are each given their own copy of the questionnaires, and they complete the questionnaires independently and at their own pace. It is important to emphasize to the children that they are to give their own opinion for each answer, there are not "right" or "wrong" answers, and that some questions are intended for older students so if they don't know how to answer a question they should make their best guess. Appraisers can help clarify questions as required as long as the clarifications do not lead children toward specific answers.

It is very important when using the paper questionnaire that the leader and group of children review the first two pages together. The leader should guide the children to respond to the sample questions on the second page. It is important that children clearly understand that each answer box requires two steps: 1) circle the statement that is most like them; and 2) check one box to indicate whether the circled statement is really true or sort of true. The online format of the questionnaire will require the children to complete this two-step response, but children using the paper format must be clearly instructed on what is required. On the last page of the paper questionnaire children may be confused by the question asking what grade they are in if the testing occurs when children are not going to school (i.e., summer vacation). If that is the case, children should be instructed to indicate the grade that they will be in on the day they return to school.

Online Questionnaire



How to prepare for the test

Equipment/Space Required:

- Computer, tablet or any other hand held device capable of supporting this online tool

Preparation:

- Verify that the computer is logged in and running correctly
- Ensure there is a connection to the internet and that the website is not blocked by the host organization

How to administer the test

The questionnaire is administered by a CAPL-2 appraiser. It can take place while in a classroom setting or while children are waiting to participate in an activity in the gym. Children are each given their own copy of the questionnaires, and they complete the questionnaires independently and at their own pace. It is important to emphasize to the child that they are to give their own opinion for each answer, there are not “right” or “wrong” answers, and that some questions are intended for older students so if they don’t know how to answer a question they should make their best guess. Appraisers can help clarify questions as required as long as the clarifications do not lead children toward specific answers.