

# MOVEMENT CHECK GERMANY

– Manual; Date 28.10.2022 –

## Urkunde

Fuldaer Talentcheck 2014



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Vorname: Lucas

Schule: Geschwister-Scholl Schule Fulda  
Klasse: 2b

Deine Leistungen beim Fuldaer Talentcheck 2014:



15m Schwimmen



10m Pedalofahren

73% (6,82 s)

Sternlauf

45% (40,81 s)

Tischtennis (15s Zeitbegrenzung)

100% (42 Versuche)

Fußball-Dribbling (ohne Ball)

76% (9,20 s)

Fußball-Dribbling (mit Ball)

84% (14,70 s)



Der Prozentrang 50 entspricht der mittleren Leistung aller Talentcheck-TeilnehmerInnen, Prozentrang 60 bedeutet, dass nur 40% der SchülerInnen noch besser sind. Aufgrund der gezeigten Leistungen im Bewegungs- und nun im Talentcheck besteht eine besondere Eignung für die folgenden Sportarten (aufgrund der zusätzlichen Testwerte kann sich die Empfehlung von der des Bewegungschecks deutlich unterscheiden): Golf, Tischtennis, Kanu, Ski-Alpin, Skilanglauf

Weitere Informationen zum Fuldaer Bewegungscheck im Internet unter [www.bewegungscheck-fulda.de](http://www.bewegungscheck-fulda.de)

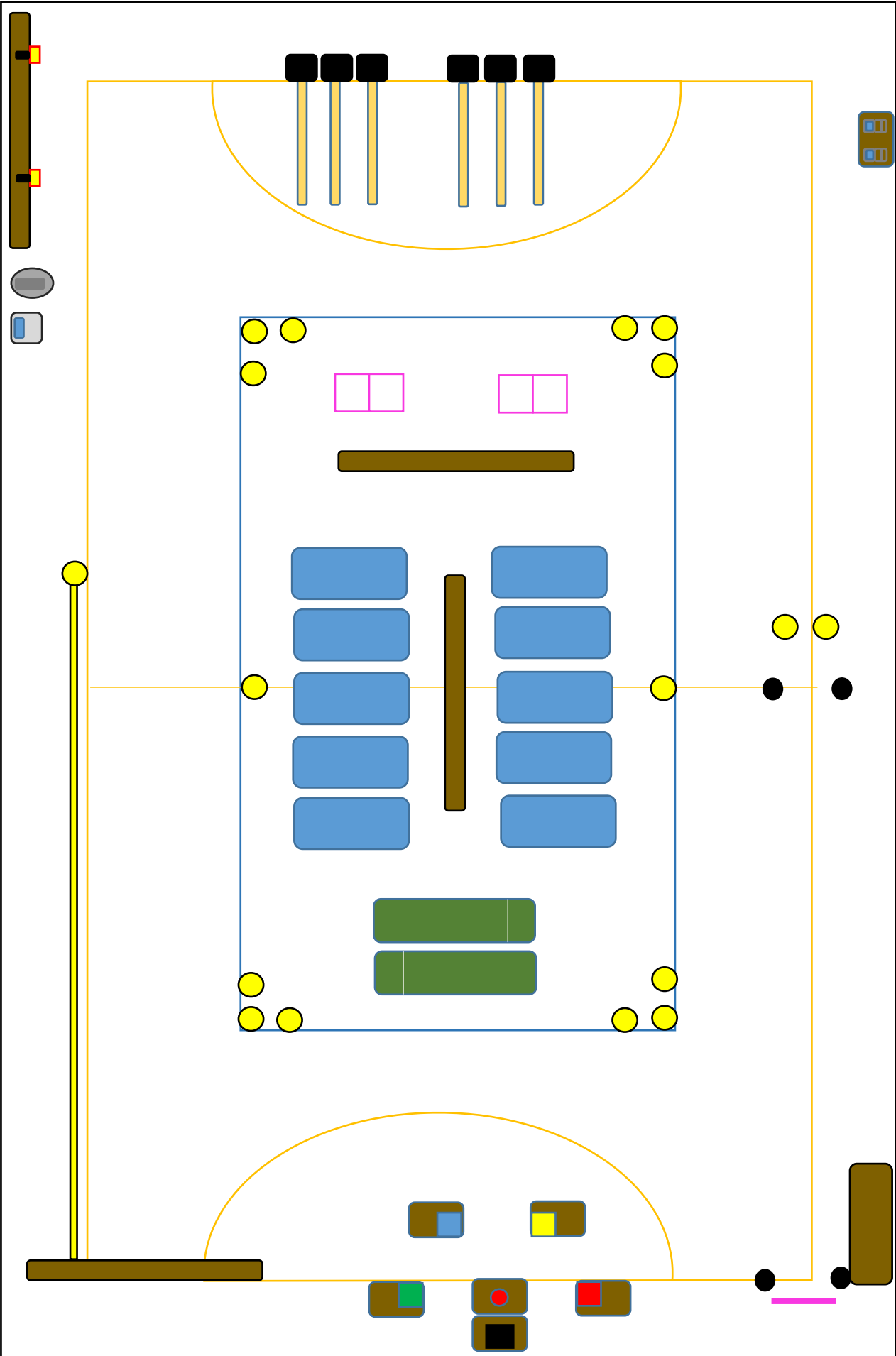
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Example of the setup of all the equipment in a sports hall



# Stations and Equipment

## 1. 20m-Sprint

Light barrier set, 20m Scale/Measuring tape, tape, several hats/cones

## 2. Ball Throwing

Bench, 50m Scale/Measuring tape, Tape, 1x hat/cone, 3x 80gr-Balls

## 3. Standing long jump

Standing long jump mats or 3m Scale/Measuring tape

## 4. Sit-Ups

5x gym mat, long bench, stopwatch (40 sec.)

## 5. Push-Ups

5x gym mat, long bench, stopwatch (40 sec.)

## 6. Sideward Jumping

50cm x 50cm wooden board (to tape around), Long bench, tape, stopwatch (15 sec.)

## 7. 6min-Run

14x cones/hats, tape

## 8. Balancing backwards

Balancing sets: each consisting of 3 beams of different thickness (3cm; 4.5cm & 6cm), 6 platforms to start from

## 9. Standing Bend Forward

Long bench, trunk bending measuring stick

## 10. Body Weight and Body Height

Scale and Stadiometer

## 11. Handforce (optional)

Hand force meter

## 12. Buzzer Test (Change of direction agility)(optional)

6x small crates/chests, buzzer test bag (normal Laptop & Buzzer), cable reel, 2m Scale/Measuring tape, tape, stopwatch

# 1 Test Manuals

## 1.1 Movement Check

### 1.1.1 20m-Sprint

**Test task:** The test person must cover a distance of 20m (actually 22.3m) in the shortest possible time. At the beginning of the test task, the test person stands in a walking position behind the starting line, which is located at a distance of 30 cm from the starting light barrier.

A start signal ("On your marks" - "Go") is given to ensure a smooth process. The test leader gives the acoustic start signal. At the height of the finish line, the time is stopped by a light barrier. However, the test person must continue to run for another 2 m to an imaginary finish line in order to prevent premature braking. The task is performed twice. There is a short break between the trials.

**Test instruction:** "The start is at this mark (test leader points to the start line). The task is to sprint as fast as possible to the finish with the little hats (test leader points to the finish mark in 22.3m) on my start signal. I will measure your time, how long you need for the distance. When you are at the finish, you can comfortably run back here on the side/on the line [test leader points to the area or a line next to the light barriers] and get back in line with the group. Everyone gets two tries."

**Typical Mistakes:** If the test person brakes before the line, the test will be explained again and the finish line may be moved backwards. If the light barrier triggers before the start signal or if a bystander crosses the running track or light barrier, the test must be repeated.

**Number of attempts:** No test attempt. Two scoring runs with a break (2–3min) between.

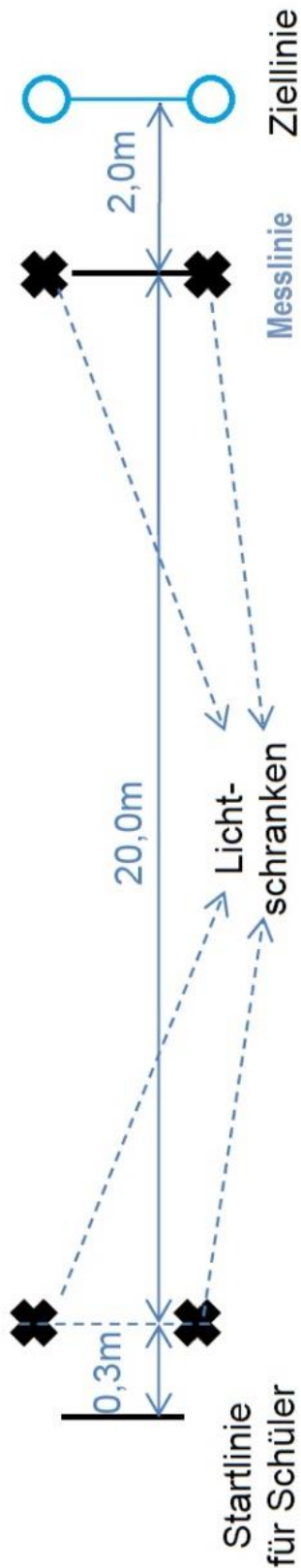
**Measured value recording:** The running time is measured in seconds to an accuracy of 1/100 seconds.

**Data processing:** Measured value is the lowest value of the two variables (metric, small is better).

**At a glance:** No trial, 2x Runs



## Setup 20m-Sprint



**Test Materials:** Light barrier set, 20m Scale/Measuring tape, tape, several hats/cones

### Test setup:

The 20m running track is marked out and its beginning and end marked with tape dots (if necessary, the baseline of the handball field [red lines] can be used as the start line and the middle line as the finish line - measure again). Roll up the measuring tape again!

The light barriers are set up at the markings (the transmitter should be at a distance of 3 m from the receiver or wall) and, if necessary, connected to the measuring/display device with the appropriate cables or the light barriers are equipped with antennas (Browsers: radio/black). The measuring/display device (for Browsers systems please equip with antenna) should be placed on a large box at the start. (Please tape off necessary cables on the ground, so that damages and accidents are avoided. If necessary, also use hats!)

Switch on measuring/display devices:

Check the system!

A start line (exactly 0.3m in front of the actual running track) and the finish line (2m behind the actual running track) are demarcated with tape and cones.

### 1.1.2 Balancing backwards

**Aim of testing** Testing coordination in precision tasks.



**Test task:** In each of two valid attempts (per test bar), the test person balances backwards over a 6 cm, 4.5 cm and 3 cm wide bar. The test always begins at the start board/platform. The number of steps until contact with the ground is counted. A trial test is performed forwards and backwards. Then two valid attempts per beam are scored. The first step on the beam is not scored. The test task is demonstrated before by the test instructor.

**Test instruction:** "Balance backwards on the beam. Every step you can balance backwards on the beam counts until you fall down. You can score a maximum of eight steps/points."

**Typical errors:** If the test person falls off the beam before the first step or if he/she is obviously disturbed in performing the test, the test must be repeated.

**Number of attempts:** One test trial forward and backward. Afterwards, two scoring trails/passes per beam width.

**Scoring:** The number of steps is counted. The first foot touching the beam is not scored. Only when the second foot leaves the starting board and touches the beam, the steps (points) are counted. The number of steps is counted until one foot touches the floor or eight points are reached. If the distance is covered with less than eight steps, eight points are to be credited.

**Data processing:** Measured value is the sum of the points from all six variables (max. 48 points [3 beams x 2 trials x 8 steps/points]; ordinal, greater is better).

**Test setup:** The three beams and starting boards/platforms are fixed to the floor to prevent slipping. In case of unevenness, the beams are underlaid so that they are stable.

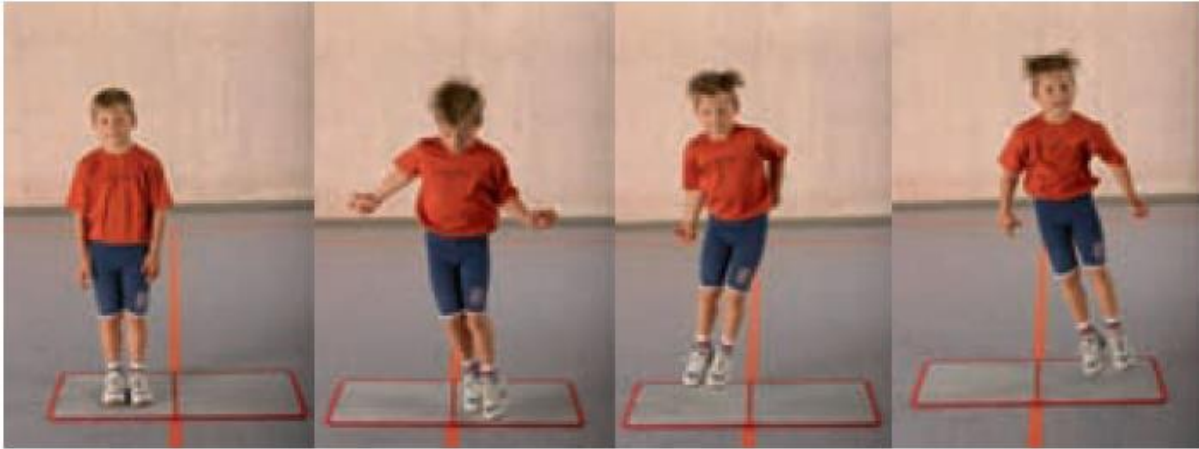
**Test materials:** Three balance beams each in 6 cm, 4.5 cm and 3 cm width. All beams are 5 cm high and 300 cm long. Three starting boards (40x40 cm and 5 cm high).

**Special instructions:** The exercise should be performed with sports shoes. A quiet atmosphere is to be ensured, as high concentration is required for the test task. Please position other persons in the back of the test person.

**At a glance:** One trial rush forward and backward. Two scores per bar. Maximum eight points per score (total 6 x 8 = 48 points).

### 1.1.3 Sideward jumping

**Aim of testing:** Testing of coordination under time pressure during jumps.



**Test task:** The task consists of jumping sideways between two 50x50 cm fields (or across the center line of an appropriate carpet mat) with both legs simultaneously as quickly as possible within 15 seconds. Before the test begins, the subject completes five trial jumps. Afterwards, the test person has two attempts. There must be a break of at least 2–3 minutes between the two test attempts. The test task is demonstrated by the test personnel at the beginning in his fastest way.

**Test instruction:** "Jump sideways, not back and forth, always from one box to the other. However, only the jumps that are performed with both legs and where you do not touch the lines count. You have a total of 15 seconds. Try to do as many jumps as possible in this time. I'll tell you when the time is up. Please look at your feet while jumping."

**Typical errors:** If the subject changes from jumping sideways to jumping forward and backward, you verbally correct them and deduct them as errors. If the subject falls over, the trial continues anyway.

**Number of trials:** Five jumps for try out. Two runs of 15 seconds each with a break between the trials.

**Recording of measured values:** Two test administrators/personell required. The first test leader records the number of jumps performed (every jump counts) per 15 seconds duration of two valid trials. The second test leader counts jumps where the test participant steps on the center line or crosses/touches one of the other side lines as well as jumps that are not performed with both legs or sideways. Thus, four values (variables) "Trial 1", "Error 1", "Trial 2" and "Error 2" (ordinal scaled variables) are recorded.

**Data processing:** Measured value is the mean value of the correctly performed jumps – e.g.,  $((\text{Trial1} - \text{Error1}) + (\text{Trial2} - \text{Error2}))/2$ ; metric, larger is better.

**Test setup:** A non-slip mat with two 50x50cm squares abutting each other, or alternatively the square with the dimensions can be taped to the hall floor.

**Test materials:** stopwatch (15sec), non-slip carpet mat (50x100cm) with center line and double-sided tape to attach the carpet mat or alternatively tape and measuring tape.

**Special instructions:** The exercise should be done with sports shoes.

**At a glance:** Five jumps to try out the test, 2x performing attempts of 15 seconds each. 2–3min break between the attempts

### 1.1.4 Standing bend forward

**Aim of testing** Testing of trunk mobility.



**Test task:** The test person stands on a long bench or a specially made wooden box. The upper body is slowly bent forward and the hands are brought down as far as possible in parallel along a scale of centimeters. The legs are parallel and stretched. The maximum stretch position that can be reached is to be held for two seconds. The scale value is read at the lowest point touched by the fingertips. The test person has two attempts. Between the first and second trials, the subject is asked to stand up briefly.

**Test instruction:** "Push the knees through to the back and straighten the legs. Now bend forward and try to get as far down the scale as possible with your fingers. Then hold the lowest position for two seconds. But do not bend your legs.

**Typical errors:** If the test person bends his legs several times after a certain depth, this point is assumed to be the deepest measuring point. The test person must not lean against or touch a wall.

**Number of attempts:** No test attempt. Two scoring passes with short straightening up in between.

**Recording of measured values:** The achieved scale value (per test) is noted down. Note that the scale is positive below sole level and negative above. The zero point is at sole level. (metric, two variables)

**Data Processing:** Measured value is the largest value of the two variables (metric, larger is better).

**Test Setup:** A centimeterskala is attached vertically to a prefabricated wooden box or long bench, displaying both positive and negative values. The zero point is at the level of the sole. Below the edge the scale is positive, above it is negative. The test person stands on the wooden box without shoes.

**Test materials:** A wooden box with an attached centimeter scale (whole and half centimeters). Alternatively, a board with a centimeter scale can be attached to a long bench.

**Special instructions:** The exercise is performed without sports shoes. Care should be taken to perform the test task slowly.

**At a glance:** No try out trial, 2x performance trials without shoes. Pay attention that the knees are not bend.



### 1.1.5 Push-Ups

**Aim of testing:** To check general coordination and strength endurance of the upper extremities.



**Test task:** The participant has to perform as many push-ups as possible within 40 seconds. In the starting position, the subject lies prone/on the ground with hands touching on the buttocks/back. He releases his hands behind her back, places them next to her shoulders and pushes his body off the floor until her arms are extended and his body (including his knees) is off the floor. Then one hand is released from the floor and touches the other hand. During this process, only the hand(s) and feet are in contact with the floor. The torso and legs are extended. A hollow back posture is to be avoided. Afterwards, the arms are bent until the body is again in prone/lying position and the starting position is assumed. Before a new push-up is performed, the test person touches his hands behind his back. The correctly performed push-ups in a period of 40 seconds are counted. That is, each time the hands touch behind the back again is counted. The test task is demonstrated at the beginning. The test person then completes two test trials for trying out the procedure.

**Test instruction:** "Lie on the ground, put the tips of your feet up and put your hands behind your back. When we are giving you the start signal, try to do as many push-ups as possible in 40 seconds. However, I can only count correctly performed push-ups."

**Typical errors:** If the test person does not touch his other hand at the highest position or while falling down the execution does not count. Also, if he pushes himself up into the push-up with the help of his legs, this execution will not be scored. If the sequence of execution was not understood by the participant, the test has to be repeated after a certain break.

**Number of attempts:** Demonstration with two subsequent joint trial repetition and a subsequent sole repetition, then a short pause. Only when the execution is correct/understood, start the scoring round. One scoring attempt with a 40 second time limit.

**Measurement:** The correctly performed push-ups (within 40 seconds) are counted (ordinal, one variable). The necessary criteria for this are:

- Only hands and feet touch the floor while push-ups
- Hand is touched off at the top
- The back is "slapped" on the ground
- Legs and upper body must leave the floor at the same time when propped up

**Data processing:** Only one measured value (ordinal, bigger is better)

**Test setup:** The test is performed on a gymnastics mat.

**Test materials:** Gymnastics mat, stopwatch

**Special instructions:** Do not begin until the task is clearly understood.

**At a glance:** Demonstration and two practice execution to check correct execution, one attempt only. 40 seconds time. Watch knees. Push-ups count when hands contact behind back.

### 1.1.6 Sit-Ups

**Aim of testing:** Testing the strength endurance of the trunk muscles.



**Test task:** The participant must complete as many sit-ups as possible in 40 seconds. During the performance, the feet are fixed by the test person and the legs are bent at the knee joint by approx. 80°. The fingertips are held against the temple and the thumb behind the earlobe. The hand position must not be changed during the test. When performing a sit-up from a lying position, the subject must straighten the upper body and touch both knees with both elbows. When lowering the upper body, both shoulder blades must touch the mat. One run is completed. The test does not count if the test person falsifies the execution by lifting the hips off the floor or by doing a hollow cross.

**Test instruction:** " Touch your ears with index finger and thumb. From your position, try to touch your knees with your elbows. Then lay down your shoulders and begin the next exercise. Make sure your butt doesn't leave the floor."

**Typical Mistakes:** Do not score repetitions in which the participant pushes up with the arms, gains momentum with a hollow back or lifting the butt, or bypasses the abdominal muscles in any other way. Please make sure that the hands are at the level of the ears and not at or behind the neck. The ears should not be held tightly (risk of injury). If the angle of the knee joint decreases or increases (80°), countermeasures must be taken accordingly.

**Number of attempts:** One (or more, possibly supported by external forces) attempt(s) to understand the execution. One scoring execution.

**Data acquisition:** All correctly performed sit-ups within 40 seconds are counted (ordinal, one variable).

**Data processing:** Measured value (ordinal, bigger is better).

**Test setup:** The test is performed on a thin gymnastics mat.

**Test materials:** Gymnastics mat, stopwatch

**Special notes:** The occurring loads for the spine are unproblematic for healthy test persons.

**At a glance:** Trial test to check correct execution, only one run. 40 seconds time. Pay attention to hollow back and hips.

### 1.1.7 Standing long jump

**Aim of testing** Testing the power of jumping.



**Test tasks:** The participant has to jump as far as possible. The jump is made on both legs and the landing is also made on both feet. When landing, the participant must not reach backwards with the hand – if the test person falls over backwards, the test has to be repeated. The test task is demonstrated at the beginning. The participants have two attempts which are scored. There is no try out trial.

**Test instruction:** "Stand exactly behind the start line and try to jump as far as possible from a standing position. You may use your arms to gain momentum. The measurement will be from the start line to your back heel, so try to stay standing after landing so I can read your distance. If you fall over backwards, we'll have to repeat the measurement."

**Typical errors:** If the subject falls over backwards, the test has to be repeated. If the participant falls over forward, the heel print of the landing is determined and measured up to there. If the test person is hindered/disturbed during the swing, the test has to be repeated.

**Number of attempts:** No test attempt. Two scoring attempts with a small break in between.

**Measuring Value:** The distance from the take-off line to the heel of the rear foot on landing is measured. The measurement is taken in centimeters (metric, two variables).

**Data Processing:** Measured value is the highest trial of the two variables (metric, bigger is better).

**Test set-up:** The test is performed on the indoor floor or on a jumping pond/stand long jump mat.

**Test materials:** Long jump mat (possibly tape measure, masking tape)

**Special notes:** The exercise should be performed with sports shoes.

**At a glance:** No try out attempt. Two measurement attempts with a short break in between. Falling over backwards leads to a retry. Measure whole centimeters.

### 1.1.8 6min-Run

**Aim of testing:** Testing the aerobic endurance capacity.



**Test tasks:** The participants should run around the volleyball court (9x18 meters) as many times as possible in six minutes. The endurance run is ideally performed in groups of up to approx. 25 test subjects. Running and walking are allowed during the six minutes. During the run, the time still to be run is indicated at one-minute intervals. At the end of the six minutes, each participant stops and sits down on the floor.

In order to give the participants a feeling for the running rhythm, a test lap is run together. Based on the average times obtained so far, a running pace of approximately 24 seconds per lap is recommended for 6-8 year old children and approximately 20 seconds per lap for 9-12 year old children.

**Test instruction:** "You have six minutes to finish as many laps as possible. Be sure to use your energy well, because six minutes is a long time. If someone can't do it anymore, walk a few meters and then start jogging again. Watch out in the turns/corners and if someone falls down, they get back up, have a quick shake and then continue. When I call 'stop,' everyone sits down where they are."

**Typical mistakes:** Mark same-looking participants with tape, if necessary. For shortened rounds, subtract an appropriate length from the remaining distance. Before starting, make sure that the shoes are fitted correctly.

**Number of trials:** One joint trial lap at optimum running speed. One evaluation session.

**Data acquisition:** The measured value for each subject is the number of laps completed in six minutes and the remaining distance in meters (two variables).

**Data processing:** total distance (number of laps \* 54m + remaining distance; metric, one variable, greater is better).

**Test setup:** The running track goes around the boundary lines of the volleyball court (9x18 meters). Marker cones/hats are placed at the corners of the field (offset 50 cm inward) and on the long sides. A running lap has the length of 54 meters.

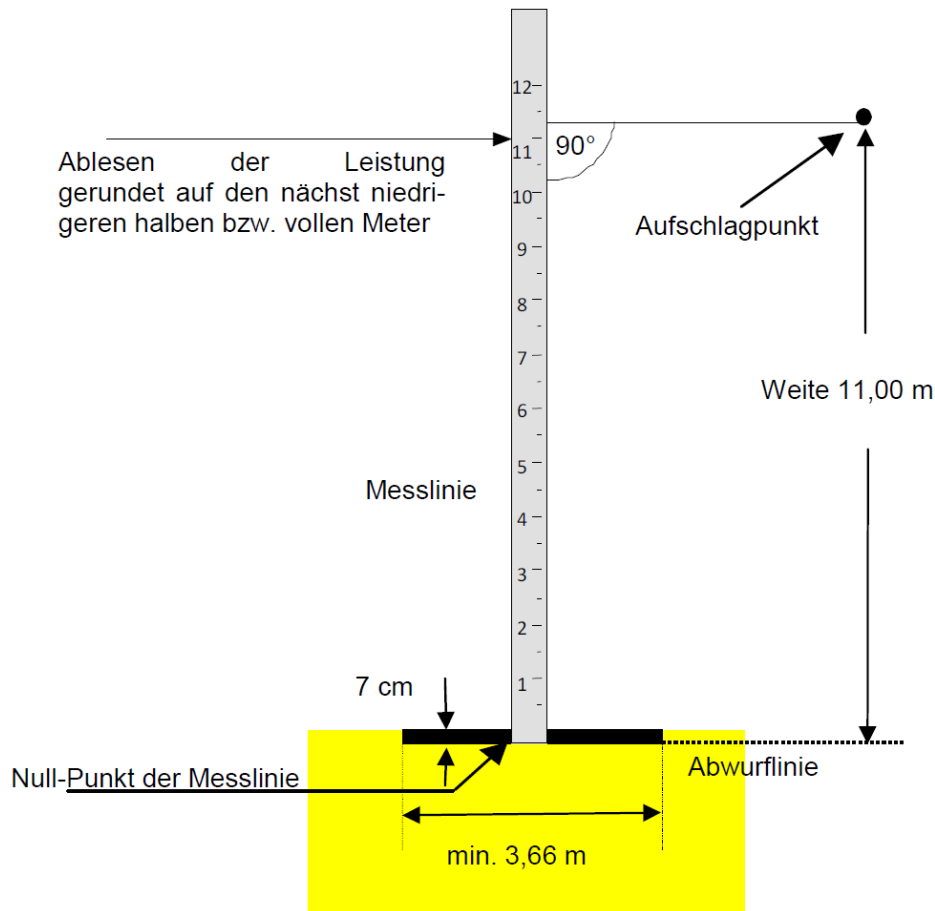
**Test materials:** stopwatch, four corner markers (Swedish boxes, flags, cones).

**Special Instructions:** The exercise should be done with athletic shoes and only at the end of the test day.

**At a glance:** One common practice round. A 6min scoring session

### 1.1.9 Ball throw

**Aim of testing:** Testing the throwing abilities (power and technic).



**Test task:** The test person tries to throw the 80g ball as far as possible using a standing long throw. To do this, the subject stands in a stride position (right-handers with the left foot further forward) behind a deflected long bench that has been made clear as a throw-off line. The opposite arm (left arm for right-handers) points in the direction of the throw (~40°). The throw is made from a standing position without a running start. The test person has one practice attempt and three successive scoring attempts. The test is repeated if the ball hits people or objects before hitting the ground, if the view of the point of impact was obscured, if the ball did not cross the drop line (thrown backwards) or if the throw was not executed properly (e.g. by skidding).

**Test instruction:** "Stand at the line in a stride position and try to throw the ball as far as you can without a run-up."

**Typical Mistakes:** If the subject throws too flat or downward, the test leader may stand in front of the subject and ask the subject to throw over him/her on the next attempt. If the wrong leg is in front, the ball is hurled or even thrown backwards, or if the ball touches something before hitting the ground, the test has to be repeated.

**Number of attempts:** One practice attempt and three scoring attempts.

**Measurement:** The throwing distance is measured (from the drop at the starting line to the touchdown of the ball; accurate to 0.1 meters) at 90° to the drop line (three variables).

**Data processing:** measured value is the largest value of the three variables (metric, larger is better).

**Test Setup:** The scale tape is fixed at the start line (0m) with tape at a square angle to the start line. An inverted long bench is also placed on the start line to prevent over stepping.

**Test materials:** 80g balls, tape measure/scale, tape, long bench.

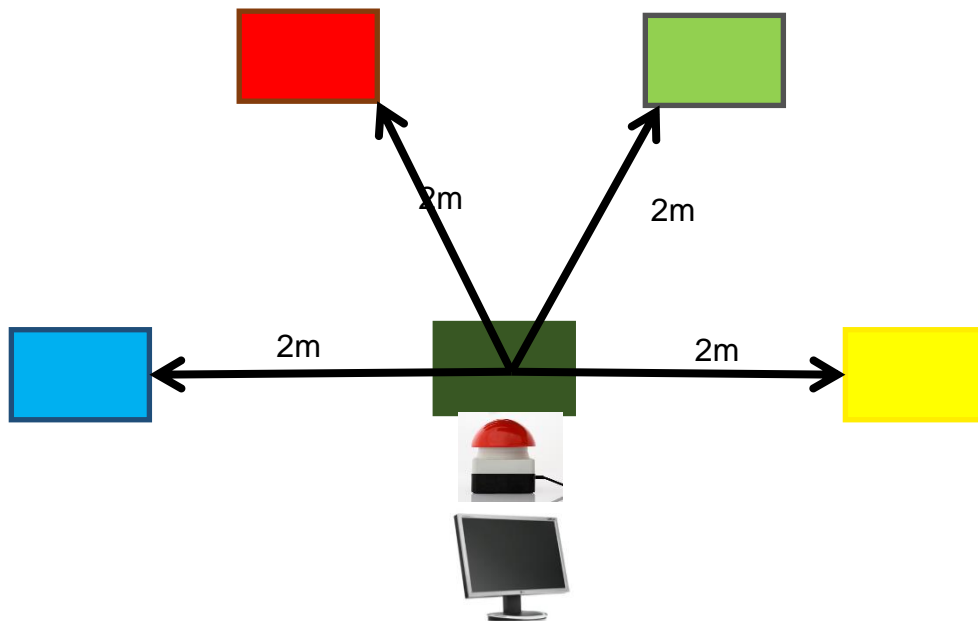
**Special Notes:** The exercise should be performed with sports shoes.

**At a glance:** Demonstration and a practice test. Three successive throws from a standing position.



### 1.1.10 Buzzer Test (Change of direction agility)(optional)

**Aim of testing:** Reactivity and orientation ability



**Test task:** The time taken by the test person to solve a movement task that is repeated ten times is measured. The participant is shown a color (red, green, blue or yellow) on a screen by pressing a buzzer. The participant must then touch as quickly as possible, according to the color shown, one of four colored boxes at a distance of 2 m from the buzzer and then press the buzzer again. The process is repeated until ten colors have been successfully reacted to and the participant triggers the buzzer again (which includes a total of eleven buzzer touches/signals with the first buzzer touch at the start of the test). Timing starts with the first color appearance and ends with the buzzer touch after the tenth color-correct box touch. There is no practice trial, but there is a self-selected orientation time before the test begins. The test starts independently by the participant pressing the buzzer and simultaneously giving the first color to reach. If a wrong box is touched, another coloring pass must be performed accordingly.

**Test instruction:** "Press the buzzer firmly and run as fast as possible to the box with the indicated color, touch the box with your hand, sprint back and press the buzzer again. Repeat this until I say 'stop'."

**Typical mistakes:** If a wrong box is touched, the number of repetitions of the box touches is increased accordingly. If the buzzer does not go off, the mechanism of the buzzer is checked/explained and the participant's entire trial has to be repeated.

**Number of trials:** no practice trial only one orientation time. One scoring run.

**Data acquisition:** The time taken to resolve the task is measured in seconds (metric, one variable).

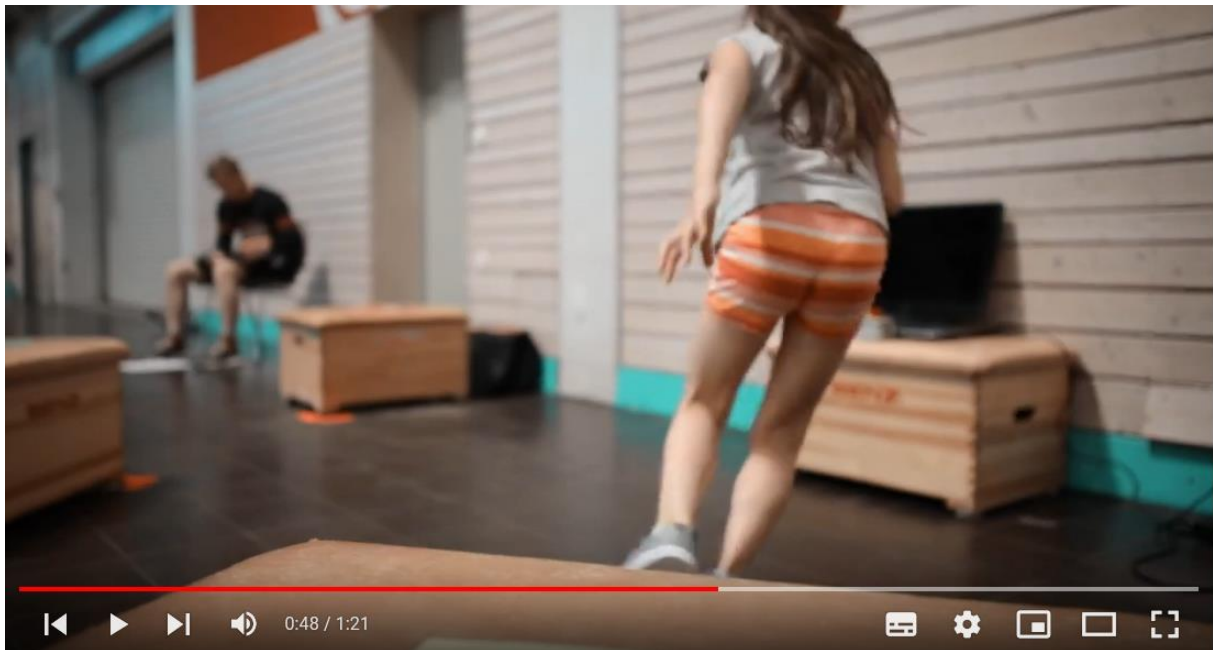
**Data processing:** Measured value (metric, one variable, smaller is better).

**Test setup:** A laptop with test software started (open Power-point on desktop) and a buzzer are placed on two boxes. From the buzzer, four boxes are placed at a distance of 2 m from the buzzer and each box is covered with a colored DIN A4 sheet of paper. The boxes are marked with adhesive tape.

**Test materials:** Six boxes, stopwatch, buzzer, laptop with software and cable drum, four colored cards (yellow, red, green, blue), double-sided tape, tape, tape measure/scale.

**Special instructions:** The exercise should be done with sports shoes. Before each run, return the boxes to their old position.

**At a glance:** Demonstration and orientation. No trial. One trial run. No verbal supports.





### 1.1.11 Hand force (optional)



**Test objective:** Checking relative body strength

**Test task:** The test person takes the force measuring device in one hand and holds it in front of his body at tail-length. The arm is bent at the elbow joint at a 90° angle. The elbow does not rest on the abdomen, but hangs freely next to the body. In this position, the test person presses down on the measuring handle with maximum hand force. The hand force of each hand is measured twice in turn.

**Test instruction:** "Hold the hand force measuring device like a pistol. Angle the upper arm 90° in the forearm. Now squeeze the measuring device with all your strength. However, you should not use the second hand for support."

**Typical errors:** the test must be repeated if a second hand is added for support, the elbow is supported at the hip, or the 90° angle of the elbow joint changes significantly.

**Number of trials:** No practice trial. Alternating right and left, two scoring trials per side (total of four scores).

**Measured value recording:** Force in kg (metric, four variables)

**Data processing:** measured value is the mean of the largest values of the left and right hand (metric, large values are better;  $(\max(\text{left}) + \max(\text{right})) / 2$ ).

**Test Setup:** The force measuring device is set to the handle distance of 1.5 markings and the adjusting wheel is fixed with an adhesive strip.

**Test materials:** Hand force meter

**Special Notes:** The grip width of 1.5 units should be checked before each run and readjusted if necessary.

**At a glance:** No practice trial. Four scoring attempts in total (right, left, right, left). Short break of 2–3min between the individual attempts.