

PISTE

REQUIREMENTS

PROGNOSTIC INTEGRATIVE SYSTEMATIC TRAINER ESTIMATION

SEASON 2023-2024

Introduction

In Artistic Swimming PISTE is used as a tool to detect future talents of the sport for the selection of regional and national team members. The PISTE test serves as the basis for obtaining the Swiss Olympic Talent Card. PISTE stands for Prognostic Integrative Systematic Trainer Estimation.

PISTE CATEGORIES

The athletes are divided into 4 categories according to the year of birth of a swimmer. The PISTE 2024 serves as the basis for the distribution of the Swiss Olympic Cards 2024-2025 and national team selection 2024-2025. Junior swimmers fulfilling the minimum year of birth can participate in PISTE Junior and Elite.

Season	KIDS (J3)	YOUTH (J2)	JUNIOR (J1)	ELITE	Selection for national team and SOTC
2023-24	2013 & younger	2012-2011-2010	2009-2008-2007-2006	2008 & older	2024-2025
2024-25	2014 & younger	2013-2012-2011	2010-2009-2008-2007	2009 & older	2025-2026

To take part in the PISTE 2024 the swimmers must have the following test level the **latest by 31.08.2024**:

KIDS (J3)	YOUTH (J2)	JUNIOR (J1)/ELITE
3	4	5

SWISS OLYMPIC TALENT CARDS

Swiss Olympic Cards are distributed to the swimmers that fulfill the given requirements. Cardholders can profit from various benefits from different partners and easy access to certain athletic infrastructures and sports schools. More information regarding the Swiss Olympic Cards can be found on their website: <https://www.swissolympic.ch/athleten-trainer/swiss-olympic-card>

Swiss Olympic Card Elite: distributed to elite national team members.

Swiss Olympic Talent Card National: distributed to the national team members.

Swiss Olympic Talent Card Regional: distributed to regional team members and/or athletes that reach the minimum required points.

NATIONAL TEAM SELECTION

National teams are selected according to the selection process and selection policy of Swiss Aquatics - Artistic Swimming. Athletes that preselected to the national team 2024-2025 and do not need to take part in the PISTE 2024.

REQUIREMENTS PISTE 2024

The PISTE Requirements have been reviewed in collaboration with Swiss Olympic. The goal was to introduce additional factors to the land and water exercises and competition results. So far only the current performance of an athlete was taken into account. Newly the environment of an athlete will be considered as a prognostic factor. The Relative Age and Biological State of Development of a swimmer will be measured, and their results will be corrected accordingly. The review of the PISTE concept will be continued after the PISTE 2024. For the PISTE 2024 two pilot factors are introduced: Performance development and performance-oriented behavior of an athlete. Those factors might be introduced for the PISTE 2025.

- 1 Land and Water Tests
- 2 Competition results
- 3 Environment
- 4 Relative Age and Biological State of Development
- 5 *Performance development (Pilot)*
- 6 *Performance-oriented behaviour (Pilot)*

CALCULATION OF RESULTS

The following formula and table provide an overview of how the results of the various PISTE parts are calculated.

Final Result per athlete = [(Land test_{weighted} + Water tests_{weighted} + Competition results_{weighted}) * Factor Environment * Correction factor of Biological State of Development (BSD) and Relative Age (RA)

Category	Land tests	Water tests	Competition results	Environment	Correction BSD** and RA*
ELITE & JUNIORS	40%	60%	-	1.1	correction per age*
YOUTH	30%	40%	30%	1.05	correction per age*
KIDS	30%	40%	30%	1.01	correction per age*

* Mean value from scientific studies, see also ranking tool PISTE Swiss Olympic.




In the judged water tests, no marks “zero” are given, instead a penalty of -2 is attributed in such cases.

1. LAND AND WATER TESTS



1.1. LAND TESTS KIDS

1.1.1. UPPER BODY COMBINATION

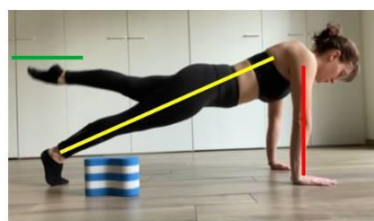
A) **20 seconds** plank with straight leg kicks

- Shoulders, hips and heels in a line 
- Hands and shoulders in line 
- Foot and Leg need to reach the horizontal line of the shoulders 

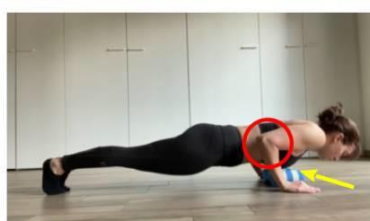
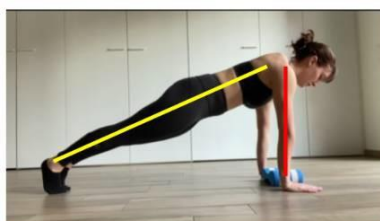
B) **10 seconds** triceps push ups

- Check touching pull boy 
- Elbows touching the body 

a) plank with legs kicks



b) triceps push-ups



A) Plank position + leg kicks evaluation: Mark for execution from 0-10 (steps by 1)

- 10: Correct and stable execution
- 8: Slight loss of line between shoulders and hands and/or slight loss of core control
- 5: Significant loss of core control, loss of extension of elbows and/or knees, loss of line between shoulders and wrists, loss of line between head and shoulders
- 3: Evident instability of position and inability to maintain position without noticeable changes
- 0: No execution

B) Triceps push-ups Evaluation: max 10 points (= 1 repetition per second)

Repetitions	Score	Repetitions	Score	Repetitions	Score
≥ 10	10.0	6	6.0	2	2.0
9	9.0	5	5.0	1	1.0
8	8.0	4	4.0	0	0.0
7	7.0	3	3.0		

Only well executed repetitions will be counted.

1.1.2. Lower Body Combination

- A) 30 seconds jump rope
- B) 15 seconds squats
- 80°-90° between thighs and tibias
 - Arms in line with the shoulders
- C) 10 seconds jumps
- C) legs open
 - D) 90° or less between thighs and tibias
 - E) hand touch the floor
 - F) arms vertical up
 - G) pointing toes



A) Jump rope evaluation → max 10 points (= 1 repetition per second)

# of stops	Score	# of stops	Score
0	10.0	3	4.0
1	8.0	4	2.0
2	6.0	5	0.0

B) squats evaluation → max 10 points (= 1 repetition per second)

Repetitions	Score	Repetitions	Score	Repetitions	Score	Repetitions	Score
≥ 15	10.0	11	8.0	7	6.0	3	3.0
14	9.5	10	7.5	6	5.5	2	2.0
13	9.0	9	7.0	5	5.0	1	1.0
12	8.5	8	6.5	4	4.5	0	0.0

C) jumps evaluation → max 10 points (= 1 repetition per second)

Repetitions	Score	Repetitions	Score	Repetitions	Score
≥ 10	10.0	6	6.0	2	2.0
9	9.0	5	5.0	1	1.0
8	8.0	4	4.0	0	0.0
7	7.0	3	3.0		

Only well executed repetitions will be counted.

1.1.3. Right, left, and middle splits on land

1 to 6 kickboards on both feet. 1 score for each split (right, left and side)

- Extended knees (both legs)
- Position of the back leg (no rotation)
- Hips on the floor
- Hips, shoulders, and head on one vertical line
- Right and left: straight arms behind the hips
- Side: elbows on the floor



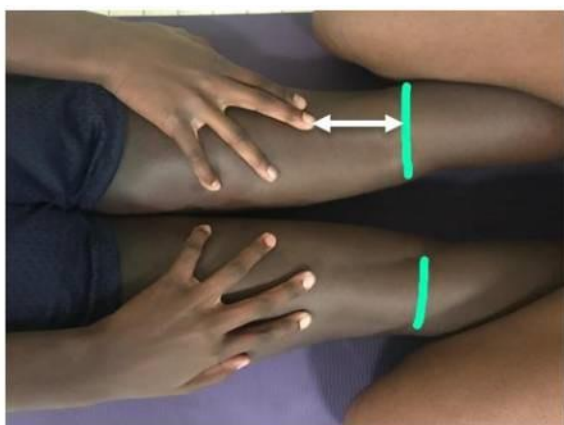
Kickboards height = 3.0 cm

Kickboards	Score	Kickboards	Score
6	10.0	2	6.0
5	9.0	1	5.0
4	8.0	0	4.0
3	7.0	Not flat	2.0

1.1.4. Arch (active back flexibility)

Maintain the arch position for **5 seconds**.

The distance between the fingers and the natural line behind the knee is measured.



Distance	Score	Distance	Score	Distance	Score
-15.0 cm	10.0	4.0 cm	6.5	11.0 cm	3.0
-10.0 cm	9.5	5.0 cm	6.0	12.0cm	2.5
-7.0 cm	9.0	6.0 cm	5.5	13.0 cm	2.0
-4.0 cm	8.5	7.0 cm	5.0	14.0 cm	1.5
-1.0 cm	8.0	8.0 cm	4.5	15.0 cm	1.0
2.0 cm	7.5	9.0 cm	4.0	16.0 cm	0.5
3.0 cm	7.0	10.0 cm	3.5	≥ 17.0 cm	0.0

1.1.5. Feet and legs extension

Sitting in a pike position (straight back, head, shoulders, and hips in a vertical line), maximum extension of the legs and feet. The 2 distances will be measured:

A) Between the floor and the heels



Distance	Score	Distance	Score	Distance	Score
≥ 7.0 cm	10.0	4.5 cm	7.5	2.0 cm	5.0
6.5 cm	9.5	4.0 cm	7.0	1.5 cm	4.5
6.0 cm	9.0	3.5 cm	6.5	1.0 cm	4.0
5.5 cm	8.5	3.0 cm	6.0	0.5 cm	3.5
5.0 cm	8.0	2.5 cm	5.5	0.0 cm	3.0

B) Between the floor and big toe



Distance	Score	Distance	Score	Distance	Score
≤ 1.0 cm	10.0	6.0 cm	7.5	11.0 cm	5.0
2.0 cm	9.5	7.0 cm	7.0	12.0 cm	4.5
3.0 cm	9.0	8.0 cm	6.5	13.0 cm	4.0
4.0 cm	8.5	9.0 cm	6.0	14.0 cm	3.5
5.0 cm	8.0	10.0 cm	5.5	≥ 15.0 cm	3.0

1.2. WATER TESTS KIDS

1.2.1. Propulsion combination (50m without breaks)

The swimmer performs without breaks:

A) 12.5 meters Torpedo

- beginning of the lap: starting in tub position, extension to back lay out position
- end of 12.5m: turning 180° in tub position, stretch directly to ballet leg position from tub position

B) 12.5 meters Ballet Leg (right or left leg is free)

- end of the lap: touch the wall with the head
- rise down the leg passing through the bent knee layout position

C) 12.5 meters FRONT Eggbeater

- beginning of the lap: leg push from the wall is NOT allowed, lap needs to be started with exit from under water
- arms in the water (small movements are allowed)

D) 12.5m of side flutter kick (right or left is free)

- at 12.5m kick into side position, start side flutter kick
- arms at the surface
- end of lap: transition into Pike Position

E) Transition into Pike Position

- Hold the Pike Position for 20 sculls

1 mark (0.25) for execution will be given for each part (A-E) respecting the following criteria. The average will be taken.

Torpedo

- Legs: Extension of legs, position of legs at the surface
- Core: correct position of hips (no seated position, no rotation), control of core
- Upper Body: shoulders pushing down and back, shoulder blades together, long and extended neck position, only the face out of the water-not the whole head, chin pointing at the ceiling.
- Sculling: efficiency of sculling, regular rhythm and pressure of sculls
- Arms: elbows don't move, lower arms and hands move in horizontal line/no push-ups, flat palms and angle between palm and lower arm is 90°, angle between upper arm and lower arm is 45°

Ballet Leg

- Legs: Extension of legs, angle between legs needs to be 90°, lower foot dry at the surface
- Upper body: shoulders pushing down and back, shoulder blades together, long and extended neck position, only the face out of the water-not the whole head, chin pointing at the vertical position, chest is at the surface
- Core: Hips near the surface
- Sculling: efficiency of sculling, regular rhythm and pressure of sculls
- Arms: elbows don't move, lower arms and hands move in horizontal line/no "up and down", flat palms-not breaking the surface-no splash

FRONT Eggbeater

- Legs: knees close to the surface, position of knee does not move, upper legs stay-lower legs move
- Movement of legs: circle movement, no extension
- Posture: shoulders pushing down and back, shoulder blades together, long and extended neck position, lifted chin position, chest is open

Side flutter kick

- Upper body: straight on the surface, head on the surface looking straight at the wall
- Legs: legs and body build one straight line, legs move symmetrically: same angle of front and back leg towards the body, leg position need to be close to the surface
- Arms: straight and extended arms, palms facing down

Transition into Pike Position

- Pike Position: Angle between upper body and legs 90° degrees
- Legs dry at the surface
- Entrance with extended back
- Hips need to arrive at the starting point of the head

1.2.2. Body Boost Barracudas

The swimmers will perform without break:

- 1 Body boost (without arms up)
- 1 Barracuda
- 1 Body boost (without arms up)
- 1 Barracuda

1 mark (0.1) will be given for each body boost and each barracuda following the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025. The average will be taken. Mark starts from the height; deduction will be made according to execution.

1.2.3. Height

Metronome 150 beats per minute

- A) Start in a vertical position under water
- B) Up until maximum height (tempo free but minimum 4 counts)
- C) 10 counts in a support scull vertical position
- D) Down until the heels reach the surface (tempo free but minimum 4 counts)
- E) Up until maximum height (tempo free but minimum 4 counts)
- F) 10 counts in a support scull vertical position
- G) Down until under water

Following the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025, as well as the guiding scale for height, **1 mark** will be given for each vertical **c)** and **f)**. The lowest level of the 10 counts will be taken into consideration for the evaluation of the height. Lines will be drawn on the thighs of the swimmers respecting the levels mentioned in the AQUA manual.

1.2.4. Routine Set

The swimmer swims the Routine Set KIDS as described and shown on the video on the website

<https://www.swiss-aquatics.ch/leistungssport/artistic-swimming/piste/>

The swimmer must travel 17m during the Routine Set. Marks will be placed to show where to start and where to finish. If the 17m are not reached a deduction of 0.5 points will be made from the final score. No goggles are allowed.

1 mark (0.25) will be given for the execution for each hybrid, execution for all transitional movements and performance following the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025. The average will be taken.




1.2.5. Flexibility in the Water



The swimmers hold the right, left and middle split position for 15 sculls with a break of 15 seconds (breathing allowed) in between the split positions. Walkout is performed at rapid pace after either left or right split position, at arch position swimmers stop and hold the position of 15 sculls. Afterwards the walkout is continued.

1 mark (0.1) will be given for each split position and the arch position following the criteria “guiding scale for splits” of the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025.

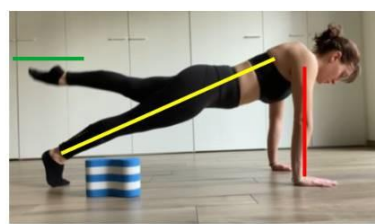
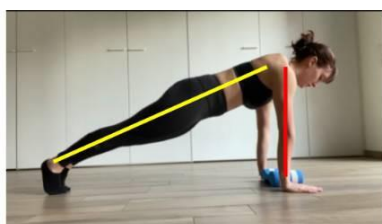
1.3. LAND TESTS YOUTH

1.3.1. UPPER BODY COMBINATION

- A) **30 seconds** plank with straight leg kicks
- Shoulders, hips and heels in a line 
 - Hands and shoulders in line 
 - Foot and Legs need to reach the horizontal line of the shoulders 

- B) **15 seconds** triceps push ups
- Check touching pull boy 
 - Elbows touching the body 

a) plank with legs kicks



b) triceps push-ups



- A) Plank position + leg kicks evaluation: Mark for execution from 0-10 (steps by 1)
- 10: Correct and stable execution
 - 8: Slight loss of line between shoulders and hands and/or slight loss of core control
 - 5: Significant loss of core control, loss of extension of elbows and/or knees, loss of line between shoulders and wrists, loss of line between head and shoulders
 - 3: Evident instability of position and inability to maintain position without noticeable changes
 - 0: No execution

B) Triceps push-ups Evaluation: max 10 points (= 1 repetition per second)

Repetitions	Score	Repetitions	Score	Repetitions	Score
≥ 15	10.0	9	7.0	3	3.0
14	9.5	8	6.5	2	2.0
13	9.0	7	6.0	1	1.0
12	8.5	6	5.5	0	0.0
11	8.0	5	5.0		
10	7.5	4	4.5		

Only well executed repetitions will be counted.

1.3.2. Lower Body combination

A) 45 seconds jump rope with 150BPM metronom

B) 20 seconds squats

- 80°-90° between thighs and tibias
- Arms in line with the shoulders

C) 15 seconds jumps

- legs open
- 90° or less between thighs and tibias
- hand touch the floor down
- arms vertical up
- pointing toes



A) Jump rope evaluation → max 10 points (= 1 repetition per second)

# of stops	Score	# of stops	Score
0	10.0	3	4.0
1	8.0	4	2.0
2	6.0	5	0.0

B) squats evaluation → max 10 points (= 1 repetition per second)

Reps	Score	Reps	Score	Reps	Score	Reps	Score	Reps	Score
≥ 20	10.0	16	8.0	12	6.0	8	4.0	4	0.0
19	9.5	15	7.5	11	5.5	7	3.0		
18	9.0	14	7.0	10	5.0	6	2.0		
17	8.5	13	6.5	9	4.5	5	1.0		

C) jumps evaluation → max 10 points (= 1 repetition per second)

Reps	Score	Reps	Score	Reps	Score	Reps	Score
≥ 15	10.0	11	8.0	7	6.0	3	3.0
14	9.5	10	7.5	6	5.5	2	2.0
13	9.0	9	7.0	5	5.0	1	1.0
12	8.5	8	6.5	4	4.5	0	0.0

Only well executed repetitions will be counted.

1.3.3. Right, left, and middle splits on land

1 to 6 kickboards on both feet. 1 score for each split (right, left and side)

- Extended knees (both legs)
- Position of the back leg (no rotation)
- Hips on the floor
- Hips, shoulders, and head on one vertical line
- Right and left: straight arms behind the hips
- Side: elbows on the floor



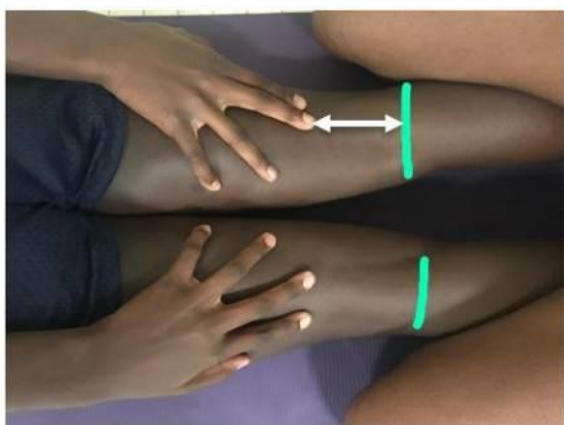
Kickboards height = 3.0 cm

Kickboards	Score	Kickboards	Score
6	10.0	2	6.0
5	9.0	1	5.0
4	8.0	0	4.0
3	7.0	Not flat	2.0

1.3.4. Arch (active back flexibility)

Maintain the arch position for **5 seconds**.

The distance between the fingers and the natural line behind the knee is measured.



Distance	Score	Distance	Score	Distance	Score
-15.0 cm	10.0	4.0 cm	6.5	11.0 cm	3.0
-10.0 cm	9.5	5.0 cm	6.0	12.0cm	2.5
-7.0 cm	9.0	6.0 cm	5.5	13.0 cm	2.0
-4.0 cm	8.5	7.0 cm	5.0	14.0 cm	1.5
-1.0 cm	8.0	8.0 cm	4.5	15.0 cm	1.0
2.0 cm	7.5	9.0 cm	4.0	16.0 cm	0.5
3.0 cm	7.0	10.0 cm	3.5	≥ 17.0 cm	0.0

1.3.5. Feet and legs extension

Sitting in a pike position (straight back, head, shoulders, and hips in a vertical line), maximum extension of the legs and feet. The 2 distances will be measured:

A) Between the floor and the heels



Distance	Score	Distance	Score	Distance	Score
≥ 7.0 cm	10.0	4.5 cm	7.5	2.0 cm	5.0
6.5 cm	9.5	4.0 cm	7.0	1.5 cm	4.5
6.0 cm	9.0	3.5 cm	6.5	1.0 cm	4.0
5.5 cm	8.5	3.0 cm	6.0	0.5 cm	3.5
5.0 cm	8.0	2.5 cm	5.5	0.0 cm	3.0

B) Between the floor and big toe



Distance	Score	Distance	Score	Distance	Score
≤ 1.0 cm	10.0	6.0 cm	7.5	11.0 cm	5.0
2.0 cm	9.5	7.0 cm	7.0	12.0 cm	4.5
3.0 cm	9.0	8.0 cm	6.5	13.0 cm	4.0
4.0 cm	8.5	9.0 cm	6.0	14.0 cm	3.5
5.0 cm	8.0	10.0 cm	5.5	≥ 15.0 cm	3.0

1.4. WATER TESTS YOUTH

1.4.1. Propulsion combination (100 m without break)

The swimmer performs without breaks:

A) 25 meters Torpedo

- beginning of the lap: starting from tub position, extension to back layout position
- end of distance: feet touch the wall

B) 25 meters Ballet Leg (right of left leg is free)

- rise up the leg passing through the bent knee layout position
- end of the lap: touch the wall with the head
- rise down the leg passing through the bent knee layout position

C) 12.5 meters LATERAL Eggbeater (right or left is free) + 12.5 meters LATERAL Eggbeater Arm at 45° (right or left is free)

- beginning of the lap: leg push from the wall is NOT allowed, lap needs to be started with resurfacing from under water
- opposite arm than direction of movement straight at the surface (small movements with remaining arm are allowed)
- at 12.5m kick to reach side position, lift arm at 45° off the surface, remaining arm straight at the surface
- end of lap: lower arm straight down, body turns 270° around body axis in eggbeater

D) 12.5 meters FRONT Eggbeater + 12.5m of side flutter kick arm at 45° (right or left is free)

- beginning of the lap: leg push from the wall is NOT allowed
- arms in the water (small movements are allowed)
- at 12.5m kick to reach side position, start flutter kick
- arm in direction of movement straight at the surface, arm in opposite direction of movement at 45° off the surface
- end of lap: lower the arm in opposite direction to surface, Transition into Pike Position

E) Transition into Pike Position

- Hold the Pike Position for 20 sculls

1 mark (0.25) for execution will be given for each part (A-E) respecting the following criteria. The average will be taken.

Torpedo

- Legs: Extension of legs, position of legs at the surface
- Core: correct position of hips (no seated position, no rotation), control of core
- Upper Body: shoulders pushing down and back, shoulder blades together, long and extended neck position, only the face out of the water-not the whole head, chin pointing at the ceiling
- Sculling: efficiency of sculling, regular rhythm and pressure of skulls
- Arms: elbows don't move, lower arms and hands move in horizontal line/no push-ups, flat palms and angle between palm and lower arm is 90°, angle between upper arm and lower arm is 45°

Ballet Leg

- Legs: Extension of legs, angle between legs needs to be 90°, lower foot dry at the surface
- Upper body: shoulders pushing down and back, shoulder blades together, long and extended neck position, only the face out of the water-not the whole head, chin pointing at the vertical position, chest is at the surface
- Core: Hips near the surface
- Sculling: efficiency of sculling, regular rhythm and pressure of skulls
- Arms: elbows don't move, lower arms and hands move in horizontal line/no "up and down", flat palms-not breaking the surface-no splash

LATERAL Eggbeater + LATERAL Eggbeater Arm at 45°

- Legs: knees close to the surface, position of knee does not move, upper leg stay-lower legs move
- Movement of legs: circle movement, no extension
- Posture: shoulders pushing down and back, shoulder blades together, long and extended neck position, lifted chin position, chest is open
- Arms: opposite arm than direction of movement in a straight and stretched position

FRONT Eggbeater

- Legs: knees close to the surface, position of knee does not move, upper leg stay-lower legs move
- Movement of legs: circle movement, no extension
- Posture: shoulders pushing down and back, shoulder blades together, long and extended neck position, lifted chin position, chest is open

Side flutter kick Arm at 45°

- Upper body: straight on the surface, head on the surface looking straight at the wall
- Legs: legs and body build one straight line, legs move symmetrically: same angle of front and back leg towards the body, leg position need to be close to the surface
- Arms: straight and extended arms, palm of lifted arm facing in opposite direction of movement

Transition into Pike Position

- Pike Position: Angle 90° degrees
- Legs dry at the surface
- Entrance with back extended, shoulders rotating from side position to horizontal front position
- Hips need to arrive at the starting point of the head

1.4.2. Body Boost Barracudas

The swimmers will perform without break:

- 1 Body boost without arms up
- 1 Barracuda
- 1 Body boost 2 arms up
- 1 Barracuda 360°

1 mark will be given for each body boost and each barracuda following the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025. The average will be taken.

Mark starts from height; deduction will be made according to execution.

1.4.3. Height

Metronome 150 beats per minute

- A) Start in a vertical position under water
- B) Up in support scull until maximum height (tempo free but minimum 4 counts)
- C) 10 counts in support scull vertical position
- D) Down until the heels reach the surface (tempo free but minimum 4 counts)
- E) Up in torpedo scull until maximum height (tempo free but minimum 4 counts)
- F) 10 counts in torpedo scull vertical position
- G) Down until the heels reach the surface (tempo free but minimum 4 counts)
- H) Up in support scull until maximum height (tempo free but minimum 4 counts)
- I) 10 counts in a support scull until maximum height vertical position
- J) Down until under water

Following the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025, as well as Guiding scale for height, 1 mark will be given for each vertical **c)**, **f)** and **i)**. The lowest level of the 10 counts will be taken into consideration for the evaluation of the height. Lines will be drawn on the thighs of the swimmers respecting the levels mentioned in the AQUA manual.

1.4.4. Routine Set

The swimmer swims the Routine Set YOUTH as described and shown on the video on the website

<https://www.swiss-aquatics.ch/leistungssport/artistic-swimming/piste/>

The swimmer must travel 20m during the Routine Set. Marks will be placed to show where to start and where to finish. If the 20m are not reached a deduction of 0.5 points will be made from the final score. No goggles are allowed.

1 mark (0.25) will be given for the execution for each hybrid, execution for all transitional movements and performance following the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025. The average will be taken.

1.4.5. Flexibility in the Water




The swimmers hold the right, left and middle split position for 15 sculls with a break of 15 seconds (breathing allowed) in between the split positions. Walkout is performed at rapid pace after either left or right split position, at arch position swimmers stop and hold the position of 15 sculls. Afterwards the walkout is continued.

1 mark (0.1) will be given for each split position and the arch position following the criteria “guiding scale for splits” of the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025.



1.5.LAND TESTS JUNIOR AND ELITE

1.5.1. UPPER BODY COMBINATION

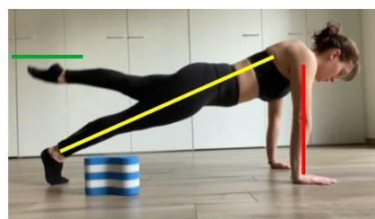
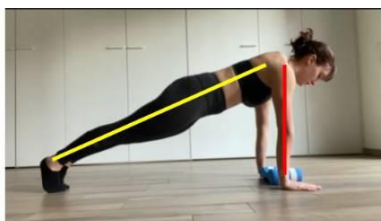
A) **45 seconds** plank with straight leg kicks

- Shoulders, hips and heels in a line 
- Hands and shoulders in line 
- Foot and legs need to reach the horizontal line of shoulders 

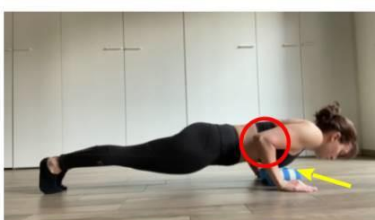
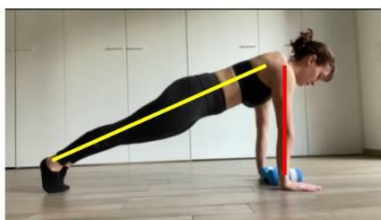
B) **20 seconds** triceps push ups

- Check touching pull boy 
- Elbows touching the body 

a) plank with legs kicks



b) triceps push-ups



A) Plank position + leg kicks evaluation: Mark for execution from 0-10 (steps by 1)

- 10: Correct and stable execution
- 8: Slight loss of line between shoulders and hands and/or slight loss of core control
- 5: Significant loss of core control, loss of extension of elbows and/or knees, loss of line between shoulders and wrists, loss of line between head and shoulders
- 3: Evident instability of position and inability to maintain position without noticeable changes
- 0: No execution

B) Triceps push-ups Evaluation: max 10 points (= 1 repetition per second)

Repetitions	Score	Repetitions	Score	Repetitions	Score
≥ 20	10.0	14	7.0	8	4.0
19	9.5	13	6.5	7	3.0
18	9.0	12	6.0	6	2.0
17	8.5	11	5.5	5	1.0
16	8.0	10	5.0	4	0.0
15	7.5	9	4.5		

Only well executed repetitions will be counted.

1.5.2. Lower Body combination

- A) 60 seconds jump rope with 160BPM metronom
- B) 30 seconds squats
- 80°-90° between thighs and tibias
 - Arms in line with the shoulders
- C) 20 seconds jumps
- C) legs open
 - D) 90° or less between thighs and tibias
 - E) hand touch the floor down
 - F) arms vertical up
 - G) pointing toes



A) Jump rope evaluation → max 10 points (= 1 repetition per second)

# of stops	Score	# of stops	Score
0	10.0	3	4.0
1	8.0	4	2.0
2	6.0	5	0.0

B) squats evaluation → max 10 points (= 1 repetition per second)

Reps	Score	Reps	Score	Reps	Score	Reps	Score	Reps	Score
≥ 30	10.0	23 – 22	8.0	15 – 14	6.0	7 – 6	4.0	0	0.0
29 – 28	9.5	21 – 20	7.5	13 – 12	5.5	5 – 4	3.0		
27 – 26	9.0	19 – 18	7.0	11 – 10	5.0	3 – 2	2.0		
25 – 24	8.5	17 – 16	6.5	9 – 8	4.5	1	1.0		

C) jumps evaluation → max 10 points (= 1 repetition per second)

Reps	Score	Reps	Score	Reps	Score	Reps	Score
≥ 20	10.0	15	7.5	10	5.0	5	1.0
19	9.5	14	7.0	9	4.5	4	0.0
18	9.0	13	6.5	8	4.0		
17	8.5	12	6.0	7	3.0		
16	8.0	11	5.5	6	2.0		

Only well executed repetitions will be counted.

1.5.3. Right, left, and middle splits on land

1 to 6 kickboards on both feet. 1 score for each split (right, left and side)

- Extended knees (both legs)
- Position of the back leg (no rotation)
- Hips on the floor
- Hips, shoulders, and head on one vertical line
- Right and left: straight arms behind the hips
- Side: elbows on the floor



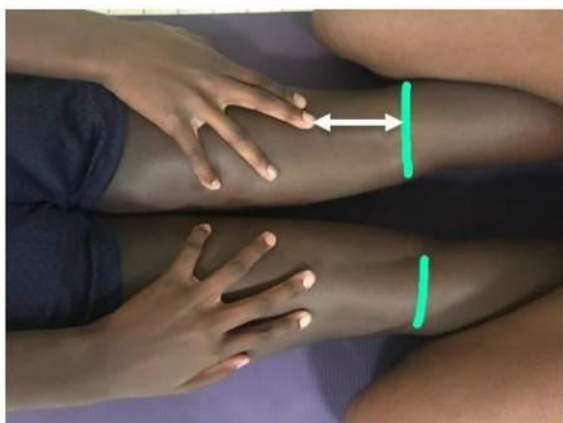
Kickboards height = 3.0 cm

Kickboards	Score	Kickboards	Score
6	10.0	2	6.0
5	9.0	1	5.0
4	8.0	0	4.0
3	7.0	Not flat	2.0

1.5.4. Arch (active back flexibility)

Maintain the arch position for **5 seconds**.

The distance between the fingers and the natural line behind the knee is measured.



Distance	Score	Distance	Score	Distance	Score
-15.0 cm	10.0	4.0 cm	6.5	11.0 cm	3.0
-10.0 cm	9.5	5.0 cm	6.0	12.0cm	2.5
-7.0 cm	9.0	6.0 cm	5.5	13.0 cm	2.0
-4.0 cm	8.5	7.0 cm	5.0	14.0 cm	1.5
-1.0 cm	8.0	8.0 cm	4.5	15.0 cm	1.0
2.0 cm	7.5	9.0 cm	4.0	16.0 cm	0.5
3.0 cm	7.0	10.0 cm	3.5	≥ 17.0 cm	0.0

1.5.5. Feet and legs extension

Sitting in a pike position (straight back, head, shoulders, and hips in a vertical line), maximum extension of the legs and feet. The 2 distances will be measured:

A) Between the floor and the heels



Distance	Score	Distance	Score	Distance	Score
≥ 7.0 cm	10.0	4.5 cm	7.5	2.0 cm	5.0
6.5 cm	9.5	4.0 cm	7.0	1.5 cm	4.5
6.0 cm	9.0	3.5 cm	6.5	1.0 cm	4.0
5.5 cm	8.5	3.0 cm	6.0	0.5 cm	3.5
5.0 cm	8.0	2.5 cm	5.5	0.0 cm	3.0

B) Between the floor and big toe



Distance	Score	Distance	Score	Distance	Score
≤ 1.0 cm	10.0	6.0 cm	7.5	11.0 cm	5.0
2.0 cm	9.5	7.0 cm	7.0	12.0 cm	4.5
3.0 cm	9.0	8.0 cm	6.5	13.0 cm	4.0
4.0 cm	8.5	9.0 cm	6.0	14.0 cm	3.5
5.0 cm	8.0	10.0 cm	5.5	≥ 15.0 cm	3.0

1.6. WATER TESTS JUNIOR AND ELITE

1.6.1. Propulsion combination (100 m without breaks)

The swimmer performs without breaks:

A) 25 meters Torpedo

- beginning of the lap: start in tub position, then extend to back lay out position
- end of lap: the big toes touch the wall

B) 15 meters Ballet Leg (right or leg is free) + 10m Double Ballet Leg

- rise up the STRAIGHT leg
- passage from Ballet Leg to Double Ballet Leg is free, but without bending the upper leg
- end of the lap: touch the wall with the head
- lower down the both legs

C) 12.5 meters LATERAL Eggbeater + 12.5 meters Lateral Eggbeater Arm at 90° (right or left is free)

- beginning of the lap: leg push from the wall is NOT allowed, lap needs to be started with resurfacing from under water
- opposite arm than direction of movement at the surface, palm facing down (small movements with remaining arm are allowed)
- at 12.5m swimmers brings arm straight up to 90°, palm is facing inside-in the direction of the head
- end of the lap: lower the arm, turn in eggbeater

D) 12.5 meters FRONT Eggbeater Double Arm + 12.5 meters Side Flutter Kick (right or left is free)

- beginning of the lap: leg push from the wall is NOT allowed, bring both arms up
- arms up straight up, in the line of the ears
- straight hands connected, one hand next to the other, no fists allowed, thumbs are not connected, touching each other.
- at 12.5m swimmer lowers arms, kicks to reach side position
- arm in direction of movement straight at the surface, arm in opposite direction of movement at 45° off the surface
- end of lap: lower the arm in opposite direction to surface, transition into Pike Position

E) Transition to Front Pike

- Hold the Pike Position for 20 sculls

1 mark (0.25) for execution will be given for each part (A-E) respecting the following criteria. The average will be taken.

Torpedo

- Legs: Extension of legs, position of legs at the surface
- Core: correct position of hips (no seated position, no rotation), control of core
- Upper Body: shoulders pushing down and back, shoulder blades together, long and extended neck position, only the face out of the water-not the whole head, chin pointing at ceiling
- Sculling: efficiency of sculling, regular rhythm and pressure of sculls
- Arms: elbows don't move, lower arms and hands move in horizontal line/no push-ups, flat palms and angle between palm and lower arm is 90°, angle between upper arm and lower arm is 45°

Ballet Leg + Double Ballet Leg

- Legs: Extension of legs, angle between legs needs to be 90°, lower foot dry at the surface
- Upper body: shoulders pushing down and back, shoulder blades together, long and extended neck position, only the face out of the water-not the whole head, chin pointing at the vertical position, chest is at the surface
- Core: Hips near the surface
- Sculling: efficiency of sculling, regular rhythm and pressure of sculls
- Arms: elbows don't move, lower arms and hands move in horizontal line/no "up and down", flat palms-not breaking the surface-no splash

LATERAL Eggbeater + LATERAL Eggbeater Arm at 90°

- Legs: knees close to the surface, position of knee does not move, upper leg stays-lower legs move
- Movement of legs: circle movement, no extension
- Posture: shoulders pushing down and back, shoulder blades together, long and extended neck position, lifted chin position, chest is open
- Arms: straight and stretched position

FRONT Eggbeater Double Arm

- Legs: knees close to the surface, position of knee does not move, upper leg stays-lower legs move
- Movement of legs: circle movement, no extension
- Posture: shoulders pushing down and back, shoulder blades together, long and extended neck position, lifted chin position, chest is open
- Arms: straight arms up in a stretched position, hands together: one next to the other, thumbs are not connected, touching each other.

Side flutter kick

- Upper body: straight on the surface, head on the surface looking straight at the wall
- Legs: legs and body build one line, legs move symmetrically: same angle of front and back leg towards the body, leg position need to be close to the surface
- Arms: straight and extended arms, palm of lifted arm facing in opposite direction of movement

Transition into Pike Position

- Pike Position: Angle 90° degrees
- Legs dry at the surface
- Entrance with back extended, shoulders rotating from side position to horizontal front position
- Hips need to arrive at the starting point of the head

1.6.2. Body Boost Barracudas

Metronome 120BPM

The swimmers will perform without break:

1 Body Boost 2 raise arms up

3-4-5-6-7-8 preparation in back pike position

1-2 barracuda in vertical position

3-4-5-6-7-8 preparation

1 Body Boost 2 raise arms up

3-4-5-6-7-8 preparation in back pike position 1-2 barracuda in vertical position

3 lower leg to an airborne Fishtail Position

4 close to vertical position

5-6-7-8 rapid 180° spin, pause at ankles

1-2 descent underwater 3-4-5-6-7-8 preparation

1 Body Boost 2 raise arms up

3-4-5-6-7-8 preparation in back pike position 1-2 barracuda in vertical position

3 open legs to right split

4 rapid rotation of 180° to assume an airborne Bent Knee Vertical Position with the front leg bent

5-6-7-8 rapid Vertical Descent is executed as the bent knee is extended to join the vertical leg completed as the ankles reach the surface of the water, followed by a vertical descent.

1 mark will be given for each body boost and each barracuda following the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025. The average will be taken (video is available on website).

1.6.3. Height

Metronome 120 beats per minute

- A) Start in a vertical position under water
- B) Raise up in support scull until maximum height (tempo free but minimum 4 counts)
- C) Hold vertical position for 10 counts in support scull
- D) Down until the heels reach the surface (tempo free but minimum 4 counts)
- E) Raise up in torpedo scull until maximum height (tempo free but minimum 4 counts)
- F) Hold vertical position for 10 counts in torpedo scull
- G) Descent until the heels reach the surface (tempo free but minimum 4 counts)
- H) Raise up in support scull until maximum height (tempo free but minimum 4 counts)
- I) Hold vertical position for 10 counts in a support scull
- J) Descent under water

Following the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025, as well as Guiding scale for height, 1 mark will be given for each vertical **c)**, **f)** and **i)**. The lowest level of the 10 counts will be taken into consideration for the evaluation of the height. Lines will be drawn on the thighs of the swimmers respecting the levels mentioned in the AQUA manual. (Video is available on website).

1.6.4. Routine Set

The swimmer swims the Routine Set JUNIOR-ELITE as described and shown on the video on the website <https://www.swiss-aquatics.ch/leistungssport/artistic-swimming/piste/>

The swimmer must travel 15m straight and 2m lateral and diagonal during the first lap. During the second lap the swimmer swims 2m lateral and diagonal-10m straight-1m diagonal. Marks will be placed to show where to start and where to finish the first and the second lap. If the required distance is not reached a deduction of 0.5 points will be made from the final score. No googles are allowed.

1 mark (0.25) will be given for the execution for each hybrid or element, execution for all transitional movements and performance following the AQUA Artistic Swimming Manual for Judges, Technical Controllers, Referees & Coaches 2022-2025. The average will be taken.

2. COMPETITION RESULTS

2.1. FIGURES KIDS

The best total score of the following competitions will be considered for the PISTE Figures result:

- Swiss Age Group Championships qualification – J3 figures
- Swiss Age Group Championships final – J3 figures

2.2. FIGURES YOUTH

The best total score of the following competitions will be considered for the PISTE Figures result:

- Swiss Age Group Championships qualification – J2 figures
- Swiss Age Group Championships final – J2 figures

3. ENVIROMENT

The athletes' environment is assessed on the basis of their affiliation with a recognized youth development base (NWF). When awarding the label, Swiss Aquatics Artistic Swimming requires NWF bases to fulfill many quality criteria for sustainable youth development (checklist). On average, athletes at NWF bases have a broader range of training opportunities, secure support, a higher level of performance in training, access to sports-friendly schools, advice from Swiss Aquatics Artistic Swimming, etc. A "non-NWF club" can also offer this under certain circumstances, but the probability of sustainability is higher at an NWF base (forecast). The environment (NWF base) is included in the evaluation with a factor of the total number of points depending on age.

4. RELATIVE AGE AND BIOLOGICAL STAGE OF DEVELOPMENT

Many characteristics of physical performance depend on the biological stage of development. Differences in the biological stage of development are the main cause of the relative age effect (RAE). By taking into account the biological stage of development, a fairer selection should take place and the promotion of athletes with the highest potential for the elite level should be better implemented. This fact is taken into account in the PISTE and the relative age (RA) and biological stage of development (BES) (with the Mirwald test: early, normal or late development) are taken into account.

5. PERFORMANCE DEVELOPMENT (PILOT)

The athlete's main coach in the club will fill out a questionnaire regarding the athlete's performance improvement. The questionnaire estimates how the performance an athlete has developed over the last period.

6. PERFORMANCE-ORIENTED BEHAVIOUR (PILOT)

The athlete's main coach in the club will fill out a questionnaire regarding the athlete's performance-oriented behaviour. The questionnaire includes variables such as how an athlete processes disappointments, how active an athlete is during trainings and how engaged an athlete is to ensure his or her improvement.