

Station 14: Sports Nutrition Aptitude Profile (SNAP)

Objective:

Assess the athlete's skills and provide recommendations for further development.

Materials:

- TRAIN@Home booklets (one for each athlete)
- Nutrition placemats (one for each athlete)
- Water Bottle (one for each athlete)
- A computer with a modern web browser (Internet Explorer 7+, Firefox 2+, Opera 9+, Safari 2+), with the SNAPPER program (available at <http://trainso.blogspot.com> or on the program CD under the SNAPPER/folder). If a computer is not available, pen and paper may be used, but the accuracy of the results will be significantly reduced.

Volunteers

Required: 2

- Volunteer 1 – will calculate the athlete's results by using the SNAPPER program on the computer, or the SNAPPER chart
- Volunteer 2 – will explain the athlete's results to them. They will also introduce the Nutrition and Exercise booklet that they can use at home along with give them the placemat and water bottle.

Ideal: 3

- A third volunteer will go over the placemat and water bottle and the second volunteer goes over the booklet.

Time:

With computer: 1-3 minutes

Without computer: 4-5 minutes

Setup:

If needed, extract `snapper.zip` to a directory. On the computer, open `snapper.html`. Verify that the entry form appears (Internet Explorer may require a security confirmation).

If no computer is available, turn to the 'Calculating SNAP by hand' section of this guide.

Basic Operation:

1. Fill in all the information on the form – sports currently played by the athlete, assessment scores, and the specific type of assessment performed (type of push-up, etc.)
2. Press **Calculate**.
3. The results will appear on the right side of the screen. Print or write down the results and present them to the athlete.

If there is a missing or otherwise obviously mistaken input, it will be marked with a red *. Alter the inputs as needed and press **Calculate** again. Press **Reset** to clear the form. Note that you can modify inputs as needed and recalculate as desired without resetting the form.

Using the Results:

1. The 'results' section matches the SNAP handout - fill in the appropriate areas of that form and give it to the athlete, along with the TRAIN@Home sports and nutrition booklets. If a printer is available, use the 'print' button to print the results.
2. Give the athlete a TRAIN@Home booklet, a nutrition placemat, and water bottle.
3. Explain that sports the athlete currently plays are listed first for reference.
4. Explain that skills the athlete currently excels at are listed second.
5. Skills the athlete should practice the most to improve in their chosen sports are listed third. Explain to the athlete that they can find more information about practicing these skills in the TRAIN@Home booklet and show them the relevant sections. Note that SNAPPER may recommend improvement in areas that the athlete already excels in. This simply indicates that a very high level in this skill will continue to improve success in this sport.
6. If SNAPPER does not recommend any skills for improvement, the athlete meets all requirements to succeed in their chosen sports, but improvement is of course still possible. Feel free to recommend areas of improvement - see [Advanced Operation](#) to view more information on the athlete's performance.
7. Recommendations for sports are listed last. Explain to the athlete that these are sports they might wish to try based on their physical strengths and weaknesses. Ask the athlete if they might be interested in trying any of these sports, and provide information about the sports as required.

Advanced Operation:

A 90bpm metronome is available by pressing **90bpm Beat**. Press the button again to stop the beat. If no sound is produced, it may be due to a misconfigured or missing browser plugin. In this case, the mp3 files can be found in the `data/` directory and played directly.

Each time **Calculate** is pressed, SNAPPER will store the skill data. To view this stored data, press **View Data**. Copy the data to another application to preserve it.

If time permits, additional information about an athlete can be obtained:

- If more sports recommendation results are desired, press the '+', '-', 'all', or '3' buttons next to 'sports to try'.
- The converted scores (on a 0-10 scale) are displayed in blue next to the input fields. These can be used to sanity-check input, or to gain more insight into the athlete's strengths and weaknesses (See Theory and Implementation section).

A number of features are also available from the Settings menu:

- The sound used for the metronome can be selected: Voice or Click.
- If 'Display quality of sports matches' is selected, a number will appear next to each of the recommended sports. This number indicates how good a match the sport is to the athlete. Lower is better - i.e. a quality of 0 indicate the athlete's skills are identical to those recommended for the sport. This information should be used to recommend more sports for the athlete if some are undesirable - for instance, if a recommendation for an individual sport is desired, but several team sports were recommended.

- If ‘Use chart values (0-10) instead of raw values’ is selected, the input fields will accept converted assessment scores instead of raw assessment scores. This can be used to simplify entry in cases where the converted scores are already available, or for easily testing new sports mappings.
- Any sport checked in ‘Exclude these sports from consideration’ will be ignored, both for selecting sports the athlete is involved in and for recommendation purposes. This feature is intended to be used when a specific sport is not available in the area or organization.

Calculating SNAP by hand:

The following skill abbreviations are used throughout:

Table 1: Skill abbreviations:

Abbreviation	Skill
SA	Speed/Agility
UP	Upper-Body Power
LP	Lower-Body Power
US	Upper-Body Strength
LS	Lower-Body Power
HC	Hand-Eye Coordination
FC	Foot-Eye Coordination
B	Balance
F	Flexibility
AE	Aerobic Endurance

Procedure:

1. Calculate ‘H’ or ‘L’ scores (high or low) using Table 2.
2. Look up the complete HL score in Table 3. Record the five sport codes given – these are the recommended sports.
3. To find the sport name for each sport code, use Table 4.
4. (Optional) To narrow the results down further, calculate 0-10 ‘chart scores’ using Table 5 (and also see Theory and Implementation later in this guide) and compare the chart scores for the athlete directly with the ideal scores for the recommended sports given in Table 4.

Table 2: Raw score to HL Score

Station:	1	2	3	5	6	8	9	10	12	13
Skill:	SA	UP	LP	US	LS	HC	FC	B	F	AE
‘H’ if:	<13	>2.2	>18	>5 (Reg) or >9 (Knee)	>28	>9	<25	>7	>18	<170

Table 4: Ideal Sports Scores

Sport Name	Abbreviation	SA	UP	LP	US	LS	HC	FC	B	F	AE
Athletics - Distance	AD	2	0	3	0	8	0	7	3	3	10
Athletics - Field (Jumping)	AFJ	1	1	10	1	5	0	5	5	5	0
Athletics - Field (Throwing)	AFT	0	10	4	7	1	4	1	2	4	0
Artistic Gymnastics	AG	4	2	4	8	4	3	5	8	8	0
Aquatics	AQ	9	7	7	6	6	2	2	0	5	4
Alpine Skiing	ALP	9	7	5	4	5	4	5	8	1	0
Athletics - Sprints	AS	10	0	6	0	2	0	5	3	2	0
Bocce	B	0	5	0	1	0	8	0	1	0	0
Basketball	BB	10	5	7	4	3	9	5	4	3	8
Badminton	BD	6	5	3	2	3	9	6	4	4	2
Bowling	BL	0	9	2	5	1	8	4	4	5	0
Cricket	C	6	7	2	4	1	9	2	1	3	3
Cross Country Skiing	CCS	4	6	3	9	6	3	4	8	2	10
Cycling - Road Racing	CRR	3	0	3	0	5	0	4	6	3	10
Cycling - Time Trials	CTT	9	0	3	0	5	2	5	7	3	1
Equestrian	E	0	0	0	4	7	3	2	9	2	0
Football	F	10	1	8	1	5	1	10	4	4	9
Floor Hockey	FH	9	7	4	4	2	9	2	2	4	3
Figure Skating	FS	5	0	4	1	6	1	8	10	8	2
Golf	G	0	7	4	2	2	8	1	3	5	0
Judo	J	2	3	3	9	8	4	7	9	6	0
Kayaking	K	1	8	0	9	0	5	0	1	2	2
Netball	N	9	6	5	2	2	9	3	4	3	7
Powerlifting	P	0	10	10	4	4	1	2	2	3	0
Rhythmic Gymnastics	RG	5	0	1	3	4	6	7	7	10	2
Roller Skating Artistic	RSA	5	0	4	1	6	1	8	10	8	2
Roller Skating Hockey	RSH	9	7	4	2	3	7	6	5	4	3
Roller Skating - Sprints	RSS	10	0	6	0	3	0	6	6	3	0
Sailing	S	0	1	1	5	1	5	5	8	0	0
Softball	SB	6	8	3	4	1	9	2	1	3	0
Snowboarding	SBD	9	3	5	4	5	0	5	9	1	0
Snowshoeing	SE	8	0	6	0	5	0	7	3	2	0
Speed Skating	SS	10	0	6	0	3	0	6	6	3	0
Tennis	T	8	7	5	5	3	9	4	3	4	4
Team Handball	TH	9	6	5	5	4	8	4	2	4	8
Table Tennis	TT	3	3	1	2	1	10	2	2	3	0
Volleyball	V	6	7	3	3	3	9	3	4	4	1

Table 5: Raw Scores to Chart Scores

Station 1- SA- Shuttle Run		Station 2 – UP – Medicine Ball Throw		Station 3 – LP – Vertical Jump		Station 5 – US – Push-ups (Regular)	
Seconds	Chart Score	Meters	Chart Score	Centimeters	Chart Score	Completed	Chart Score
6 or below	10	4.5 +	10	41 +	10	15 +	10
8 - 7	9	4.0 – 4.4	9	36-40	9	14	9
10 – 9	8	3.5 – 3.9	8	31-35	8	12-13	8
12 – 11	7	3.0 – 3.4	7	26-30	7	10-11	7
14 – 13	6	2.5 – 2.9	6	21-25	6	9	6
15	5	2.0 – 2.4	5	20	5	8	5
16 -19	4	1.5 – 1.9	4	19-16	4	6-7	4
20-23	3	1.0 – 1.4	3	15-12	3	4-5	3
24-27	2	0.5 – 0.9	2	11-8	2	2-3	2
28-31	1	0.1 – 0.4	1	7-4	1	1	1
32 +	0	0	0	1-3	0	0	0
Station 5 – LS – Push-ups (Knee)		Station 6 – LS – Wall Sits		Station 8– HC - Catching and Throwing		Station 9–FC – Dribbling the Soccer Ball	
Completed	Chart Score	Time in Seconds	Chart Score	Balls Hit + Caught	Chart Score	Time	Chart Score
30 +	10	56-60	10	20	10	15 or less	10
26-29	9	51-55	9	18-19	9	16 – 17	9
22-25	8	46-50	8	16-17	8	18 – 19	8
18-21	7	41-45	7	14-15	7	20 – 21	7
14-17	6	36-40	6	12-13	6	22 – 23	6
13	5	31-35	5	10-11	5	24 – 26	5
11-12	4	26-30	4	8-9	4	27 – 28	4
8-10	3	21-25	3	6-7	3	29 – 30	3
5-7	2	16-20	2	4-5	2	31 – 32	2
3-4	1	11-15	1	2-3	1	33 – 34	1
0-2	0	10 or less	0	0-1	0	35 +	0

Station 10 – Balance – Walk a Line		Station 12– Flexibility – Sit and Reach		Station 13 – Aerobic Endurance – 3 minute Step Test	
Steps on the line	Chart Score	Centimeters	Chart Score	Pulse (beats per minute)	Chart Score
16	10	46 +	10	90 or less	10
14-15	9	41-45	9	91-100	9
12-13	8	36-40	8	101-110	8
10-11	7	31-35	7	111-120	7
9	6	26-30	6	121-130	6
8	5	23-25	5	131-140	5
7	4	20-22	4	141-150	4
6	3	17-19	3	151-160	3
4-5	2	14-16	2	161-170	2
2-3	1	11-13	1	171-180	1
0-1	0	10 or less	0	181 +	0

Theory and Implementation

For maximum compatibility over all computer platforms, SNAPPER is implemented as a local javascript application. All code is found in `snapper.html`. Several data files are also required for SNAPPER to operate: `jquery-1.4.2.min.js`, `assessmentmap.xml`, `sportsmap.xml` and `button.png`.

SNAPPER first maps the raw assessment scores to a 0-10 scale using the data found in `assessmentmap.xml`. If two assessments measure the same skill, they are averaged. SNAPPER then calculates the Euclidian distance to the ideal scores for each sport found in `sportsmap.xml` and recommends those sports having the least distance. A score that is lower than the ideal is worth double the distance.

Skills to improve are calculated by taking the maximum score for each skill in all sports the athlete plays, and taking those two with the most difference from the athlete's actual abilities.

Distribution, Translation, and Modification

To distribute, copy `snapper.html` and the `data` folder to a new location.

Translating SNAPPER requires five steps:

1. Translate `snapper.html`, both the body section and the javascript string constants (at the top of the scripting section).
2. Translate the following items in `assessmentmap.xml`:
 - a. `AssessmentMap/SkillLabel`
 - b. `AssessmentMap/Assessment/Name`
 - c. `AssessmentMap/Assessment/Unit`
3. Translate the following items in `sportsmap.xml` (possibly via `sportsmap.xls`):
 - a. `SportsMap/Sport/Name`
 - b. `SportsMap/Sport/ShortName`

Modification: To add, delete, or modify a sport, edit `sportsmap.xml`. To add, delete, or modify an assessment, edit `assessmentmap.xml`. If validation is desired, corresponding schemas can be found in the data directory (`sportsmap.xsd` and `assessmentmap.xsd`)

`sportsmap.xml` can be generated by exporting it from the SNAP sheet of `sportsmap.xslm` (Developer->XML/Export). In addition, the SNAP-by-hand table can be generated from the ManualTable sheet of `sportsmap.xslm` - Press the 'Recalculate' button on the sheet.