

COOL, AWESOME and EDUCATIONAL! part 1

ORIENTEERING
at school
for ages 6–12

SILVA



**COOL,
AWESOME and
EDUCATIONAL!**

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Maps: Dalaportens OL, Stora Tuna OK, Kvarnsvedens Golf, Säterbyg-
dens OK, Lantmäteriet Metria, Google Earth, Eniro Sweden and the
Turkish Orienteering Federation

Production: Silva Sweden AB, Box 85, 161 26 Bromma; www.silva.se
Version 1, januari 2015

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GUINNESS WORLD RECORD

Guinness World Record, May 11th 2016

THE COLLABORATION between schools and orienteering clubs and with WOC 2016 as the "engine", Skol-Sprinten may become the most important activity for expansion of Swedish orienteering. All clubs can make a fantastic contribution that benefits both education at school and orienteering development of the sport to recruit and keep youngsters.

WE HAVE A VISION to set a new Guinness World Record. The current record is from WOC 2003 in Switzerland, when 207,979 young people at 1381 locations ran an orienteering course.

AT 2000 LOCATIONS, Wednesday May 11th 2016, we want to see lots of young people running Skol-Sprinten. We shall beat the old record! 250,000 young people is our challenging target.

THE CONCEPT is now developed, we have the inspiration and we have enthusiasm.

Cool, awesome and educational! Do you want to join us?

To get more information regarding "Skol-Sprinten" och Guinness World Record, please contact Göran Andersson, se page 26.

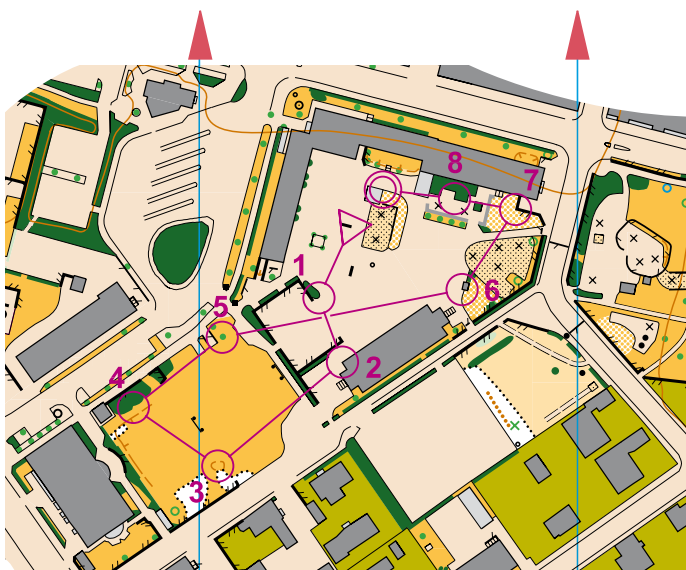


GUINNESS WORLD RECORD



May 11th 2016
at 2000 locations

Markusskolan, Avesta



WOC
Sweden 2016

Nokian Tyres
World Orienteering
Championships
Strömstad - Tanum
August 20-27

ORIENTEERING IS EASY!

ORIENTEERING AT SCHOOL is easy to implement if you are well prepared. Our experience is that the knowledge of how to teach orienteering at school is very diverse and the reasons are many. The availability or lack of teaching materials as well as preparation time are the key impediments to teaching orienteering in schools.

ACCESS TO LEARNING MATERIALS, primarily map but also compasses, orienteering markers and punching systems is very different in schools today. The Swedish National Agency for Education through its clarification of the curriculum imposed municipality and school to implement teaching in an adequate and relevant manner and judge the student's level based grading system.

DURING AGES 7-12 years, students achieve a certain knowledge of orienteering in "known environment". During the Ages 13-15 years students achieve equivalent knowledge of orienteering in "unknown environment". The "known environment" means the campus/grounds and its immediate vicinity. The unknown environment refers nearby forest areas of outdoor character.

BASED ON EXPERIENCE from the project "Skol-Sprinten" and in close cooperation with primary school PE teachers, we are now able to make orienteering teaching easy. These guidelines will create better conditions for the teaching and learning of orienteering at school.

WITH A MAP that corresponds to reality, clear exercises structured in a pedagogical way, the right orienteering equipment these all combine to assist teachers to deliver fun orienteering lessons. This "Teacher's guide" will inspire all!

BASED ON EXPERIENCE from the project "Skol-Sprinten" and in close cooperation with the PE teachers at primary school we have an idea how to make orienteering easier at school. We want with these guidelines to create better conditions for the teaching of orienteering at school.

WE BELIEVE THAT A MAP that corresponds to reality, finalised exercises in a pedagogical approach and orienteering equipment helps teachers to create fun lessons in orienteering. This "Teacher's guide" will hopefully inspire all!

Stockholm January 20th 2015
Göran Andersson



COOL, AWESOME and EDUCATIONAL!

FULL SPEED to the first check point. The flash from the tag confirms the punch. Orientating the map using red to red - compass red needle points at the red edge of the map. The stone on the lawn! The teacher points east. Where is it on the map? Students consider. Rotating the map. Glancing at friend's thumb. "There, there it is" pointing vigorously to a black point. "Good! Anyone else who knows?" This is real Orienteering. Awesome!

SECOND CONTROL. "Where now"?? "That way!" "OK, then we'll see you there." Full speed again. Someone takes the lead, you find a control. Some others hesitate. Viewing map, red to red. Changing direction and finding the right control. A extra marker is placed at another tree and discussion arises. This is real Orienteering. Educational!

"WHEN CAN I RUN BY MYSELF? I can do this and it's first an intro course, then Challenge 1, then Challenge 2. 40 minutes of vigorous activity and 60 controls have been found at most. Sweaty, smiling kids make me happy. I'm feeling satisfied and fortunate to experience teaching in this way. "Will you come tomorrow too?" I'm somewhat shocked. Sprint at school. This is real Orienteering. Fantastic!

"MAY I RUN ONE MORE COURSE? Did I get the right check points? Did I run faster than the last lap?" The questions come quick and fast. I scan the tag, tear off the split time strip and give it to the curious boy with long running legs from Somalia. "I want to start orienteering" he says spontaneously. "Fun! Come to our training tonight. We are here, at the same place. But new challenges, of course!" "Hi, see you tonight!" Skol-Sprinten has arrived. This is real Orienteering. Cool, Awesome and Educational!

SKOL-SPRINTEN is a pilot project, implemented by Dalaportens OL and financed mainly with funds from Sport's Foundations. At eleven schools in the Avesta, four schools in Borlänge and one school in Säter, Skol-Sprinten has been implemented at primary level. Over 3000 students have run as hounds after fleeing hares. They found and punched 120,000 orange-white markers and 650 meters of timing records have been printed.

THE APPROACH to orienteering has changed dramatically as a result. 90% of the young students thought it was "good fun", 8% "fun" and 2% "OK fun". Sprint Orienteering at school is valuable and an important key for international orienteering to grow through. But also an educational asset to any school to develop and improve students' knowledge of map reading, problem solving and perform orienteering in a fun way.

MAP KNOWLEDGE IS TODAY an important part of the school curriculum and teachers need both help with education materials and assistance in implementing their lessons to

inspire student learning. School Orienteering can be used to help the school to achieve its goals while concurrently attracting a future generation of orienteers.

SPRINT ORIENTEERING on school property is both known and safe for students. Many details, continuous direction changes and frequent feedback when the students find the orange-white markers provide some very good educational experiences for students in map and spatial understandings and decision making when selecting routes between controls. Mistakes can be rectified, and learning reinforced. They just get back to the beginning and start again. Sprint is better than forest orienteering for learning orienteering in a fast and simple way.

THE CONCEPT is developed, we have inspiration and enthusiasm. The aim of this booklet is that you as a teacher have an educational tool guiding your teaching of orienteering for "Ages 7-12" to enable you to deliver lessons that stimulate physically activity with fun.

WELCOME to a new world, with map and compass!



THE PROJECT "SKOL-SPRINTEN"

Intro

We begin, depending on the weather, either in the gym or outdoors to explain the map colours, the map's symbols and how to orientate the map using the compass "red-to-red". Because the compass sits smoothly on the wrist, it is very easy to orientate the map to reality. Then the instructor runs with the students in groups to all controls. At each control, the instructor repeats "orientate the map" - "red to red," pointing out some objects and starts a dialogue about how the objects are drawn on the map.

Skräddarbacksskolan, Borlänge

Intro 0,4 km

1	101	△	○
2	102	△	○
3	103	△	○
4	104	△	○
5	105	△	○
6	106	△	○
7	107	△	○
8	108	△	○

20 m

Intro

Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandvta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Tät skog
- Tomt, rabatter, blommar
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket/cykelsätt
- Mur, plank, opasserbar
- Bord/blomsten
- Häck, hög rabatt
- Beständsgräns
- Vattendike
- Brant, opasserbar
- Fotbollsmål/parkbänk
- Träd, stort och litet
- Särpräglad träd/buske
- Trappa
- Större stolpe, lyktstolpe
- Flaggstång, liten stolpe
- Sten, betongklump/brunn
- Frisebänk/lekställning
- Höjdpunkt/utningsstreck
- Liten höjd/stock, mur
- OBST! Här får man inte springa!

Klubb: Stora Tuna OK
Info: www.sttunaik.nu
E-mail: info@sttunaik.nu
Kontaktperson: Ninni Carlsson
Kartan ritad av: Göran Andersson

Tjärnaängskolan, Borlänge

Utmaning 1 0,6 km

1	102	△	○
2	109	△	○
3	101	△	○
4	110	△	○
5	111	△	○
6	112	△	○
7	105	△	○
8	107	△	○
9	108	△	○

0 25 50 75 m
Höjdskillnad 2 m

World Guinness Record
11 maj 2016
på 2000 platser

WOC

STILMA ezib

Utmaning 1

Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandvta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
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- Vattendike
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- Frisebänk/lekställning
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- Liten höjd/stock, mur
- OBST! Här får man inte springa!

Klubb: Stora Tuna OK
Info: www.sttunaik.nu
E-mail: info@sttunaik.nu
Kontaktperson: Ninni Carlsson
Kartan ritad av: Göran Andersson

Challenge 1 och 2

Students at middle school and those at primary school with a bit more experience of orienteering can then run a more complex course, "Challenge 1" or/and "Challenge 2".

Kvarnsvedens Skola, Borlänge

Utmaning 2 0,5 km

1	102	△	○
2	108	△	○
3	112	△	○
4	105	△	○
5	104	△	○
6	103	△	○
7	107	△	○
8	101	△	○
9	111	△	○
10	110	△	○
11	106	△	○

20 m

Utmaning 2

Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandvta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Tät skog
- Tomt, rabatter, blommar
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket/cykelsätt
- Mur, plank, opasserbar
- Bord/blomsten
- Häck, hög rabatt
- Beständsgräns
- Vattendike
- Brant, opasserbar
- Fotbollsmål/parkbänk
- Träd, stort och litet
- Särpräglad träd/buske
- Trappa
- Större stolpe, lyktstolpe
- Flaggstång, liten stolpe
- Sten, betongklump/brunn
- Frisebänk/lekställning
- Höjdpunkt/utningsstreck
- Liten höjd/stock, mur
- OBST! Här får man inte springa!

Klubb: Kvarnsvedens Golf OK
Info: www.kgolfok.se
E-mail: info@kgolfok.se
Kontaktperson: Erik Stigsmark
Kartan ritad av: Göran Andersson

Forssaängskolan, Borlänge

Lika tid 0,7 km

1	101	△	○
2	106	△	○
3	112	△	○
4	111	△	○
5	110	△	○
6	109	△	○
7	103	△	○
8	104	△	○
9	102	△	○
10	105	△	○
11	107	△	○
12	108	△	○

20 m

Lika tid

Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandvta
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- Liten höjd/stock, mur
- OBST! Här får man inte springa!

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Equal time

After school, during volunteer time, we put on a "competition" in orienteering. The difficulty level is equivalent to "Challenge 1-2" and the participants can walk, jog or run the course. The students perform the course at least twice. The time of the first lap the students have to "dot" on the next lap. They are free to try as many times as they want. The student who comes closest to her/his first time i.e. "equal time" is the winner of the competition.

WHAT IS A MAP?

GOOGLE EARTH has opened up a whole new world of amazing experiences of how the Earth's different parts look like. Google Earth is a graphical 3D application whose purpose is to show the earth from above. It uses aerial photographs, satellite imagery and GIS information over the earth, and these have been joined as a mosaic to a virtual globe.

IN THE PROGRAMME you can enter a location, zooms in down to city and street level. Everywhere on earth you can distinguish lakes, cities and rivers, and in most inhabited areas, you can see major traffic routes, parks, squares etc.

IN THE AREAS with higher resolution individual buildings, streets, bridges, cars and in some special cases even people can be identified.



USING this software it's much easier to understand how a traditional map is created. All maps are drawn in a unique way depending on their use - tourist maps, road maps, city maps are some maps we all use at some point. All these maps are a simplified representation of reality. The larger the area, you want to map, such as the Nordic region as shown left, the less detail you can put on the map. The map becomes highly simplified in comparison with the map below.

THE CITIES OF FALUN AND BORLÄNGE are not on the Nordic map but on this map you can add more detail because the area is much smaller. Houses and roads (yellow colour), forest (green colour), lakes (blue colour) as well as fields and meadows (white colour) appear very clearly. This map is suitable to use when you are orienteering by bicycle or car.



WE ARE APPROACHING THE EARTH!

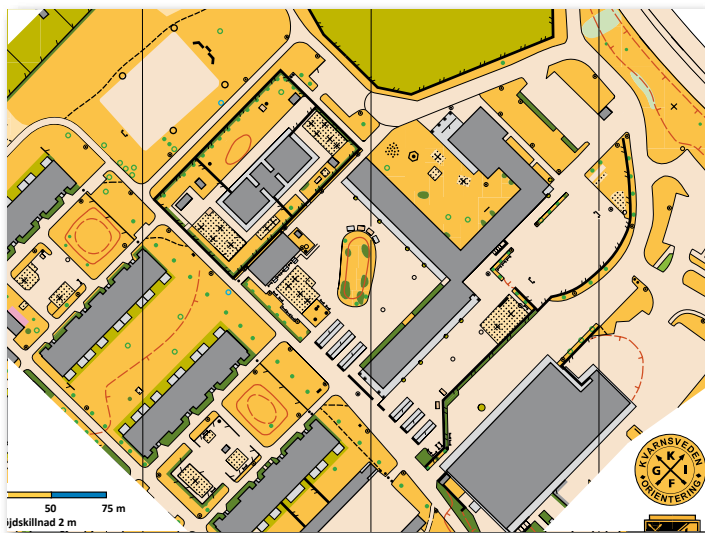
THE SPACECRAFT is approaching the Earth and from above, we can see the "small ball" getting bigger and bigger. We can identify Europe, Greenland, North Africa, Asia and the Atlantic Ocean. The closer we get, the more we recognise countries. Sweden, Norway, Denmark and Finland are right in front of us, Iceland top left and UK bottom left. Gotland is clearly visible in the Baltic Sea as are the white icecaps in Norway and Iceland.

WE STEER the spacecraft towards Dalarna and suddenly Lake Runn appears with the cities of Falun and Borlänge to the left of the lake and the meandering river Dalälven which is most similar to a long snake. The braking rockets light up and it's time for landing. The goal is Tjärna Äng school in Borlänge. The white "football" is visible from the sky. The Dome attracts the pilot's attention and it is this building we use as the "last safe" or "attack point" to find the school as fast as possible.

IN THE UPPER left corner we get a glimpse of a red roof, "Hemköp". We focus on the red roof, flying a few laps over the area. We can see the school and the green hill clearly and we land softly on the playground between Hemköp and main building.



The MAP IS A simplified representation of reality and the smaller the area you want to draw, the more detail you can put on the map. On the Google Earth picture you can see houses and roads very clearly, but you can even discover trees, play equipment and soccer goals. This means that a map of a school and school yard can be very detailed. This is very important when you learn to navigate. What you see in reality is included on the map. The map becomes credible and students trust what the map shows. Having a reliable map is what makes orienteering fun!



ALL MAPS in this booklet are drawn in the international map norm for sprint maps (ISSOM). The colours are logical and easy to understand. All houses are grey, all roads are light brown, lawns are yellow and trees are green. Fences, walls and other manmade objects are black. All that is wet is blue, e.g. lakes, streams, wells and ponds are drawn in blue. The olive green colour denotes private areas and flower beds. More colours and map symbols are described on the following pages.

THE MAP'S COLOURS

THE LANGUAGE OF THE MAP is international. In the global orienteering world it is important to understand how a map is drawn. The International Orienteering Federation (IOF) has developed an international standard for map drawing where forest maps are drawn to the ISOM (International Specification for Orienteering Maps) norm whilst urban and park maps are drawn based on ISOM but developed into ISSOM ((International Specification for Sprint Orienteering Maps). This standard is generally called "sprint norm" when it is used for orienteering in Sprint, Sprint Relay and Urban races.

SCHOOL MAPS are drawn in the sprint norm (ISSOM) but with the addition of a number of special details that are mostly found in a school yard e.g. lamp post, park bench, small pole (basketball), flagpole, football goal, playground frame, etc. Usually we draw sprint maps at a scale of 1: 4000 or 1: 5000, while the school maps are drawn to scale 1: 1000- 1: 2000 which allows us to include more detail on the map.

ON OUR SCHOOL MAPS we don't show any scale but only a "distance ruler". We think it is difficult for the students to carry a ruler compass in the hand and at same time try to learn orienteering. Silva's "Begin" that sits on the wrist helps students to orientate the map easily to the north and the distance ruler provides sufficient information to know the distance between different points.

AN ORIENTEERING MAP in the forest is usually drawn in five or six colours, while a sprint and school maps have some more shades of the basic colours:

White - Forest with good runnability.

Brown - Hills, pits.

Black - Rocks, cliffs, roads, fences, walls, bridges, pillars.

Yellow - Open land as fields, meadows and lawns.

Green - Dense vegetation. Used when the terrain is difficult to run through or to highlight hedges.

Grey - Houses, buildings. Light grey highlights canopies.

Light brown - Paved or hard gravel surfaces such as roads, car parks, school yards.

Pink - Temporary buildings, outdoor café, containers.

Blue - Water: lakes, rivers, streams, ditches, marshes.

Explanation ISOM and ISSOM

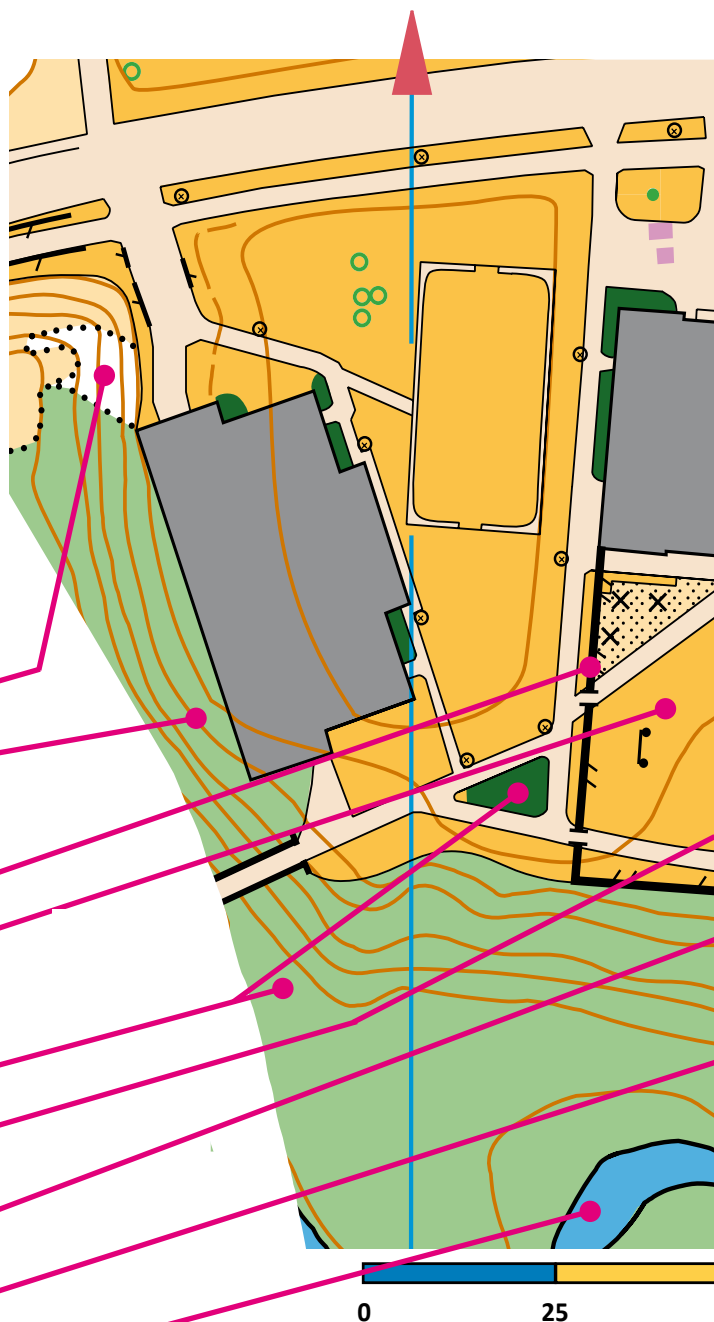
ISOM:

International Specification for Orienteering Maps

ISSOM:

International Specification for Sprint Orienteering Maps

Krylbo Skola, Avesta



Contour interval 2m

Guinness World Record
May 11th 2016
at 2000 locations

WOC
Sweden 2016
World Orienteering Championships
Strömstad - Tanum

THE MAP'S SYMBOLS

THE MAP'S SYMBOLS are the same throughout the world. A stone is marked as a black dot whether you're in Sweden, UK, Australia, China or Brazil. The legend to the right of the map shows most map symbols the cartographer is using, but there are more signs and nuances that can be used to make the map even more detailed. For Ages 6-12, we have made it

it clearer. Some map characters are highlighted with a pink background. This is important information for both the teachers who prepare the courses and for the students' participating in the activity.

You are not allowed to run here!

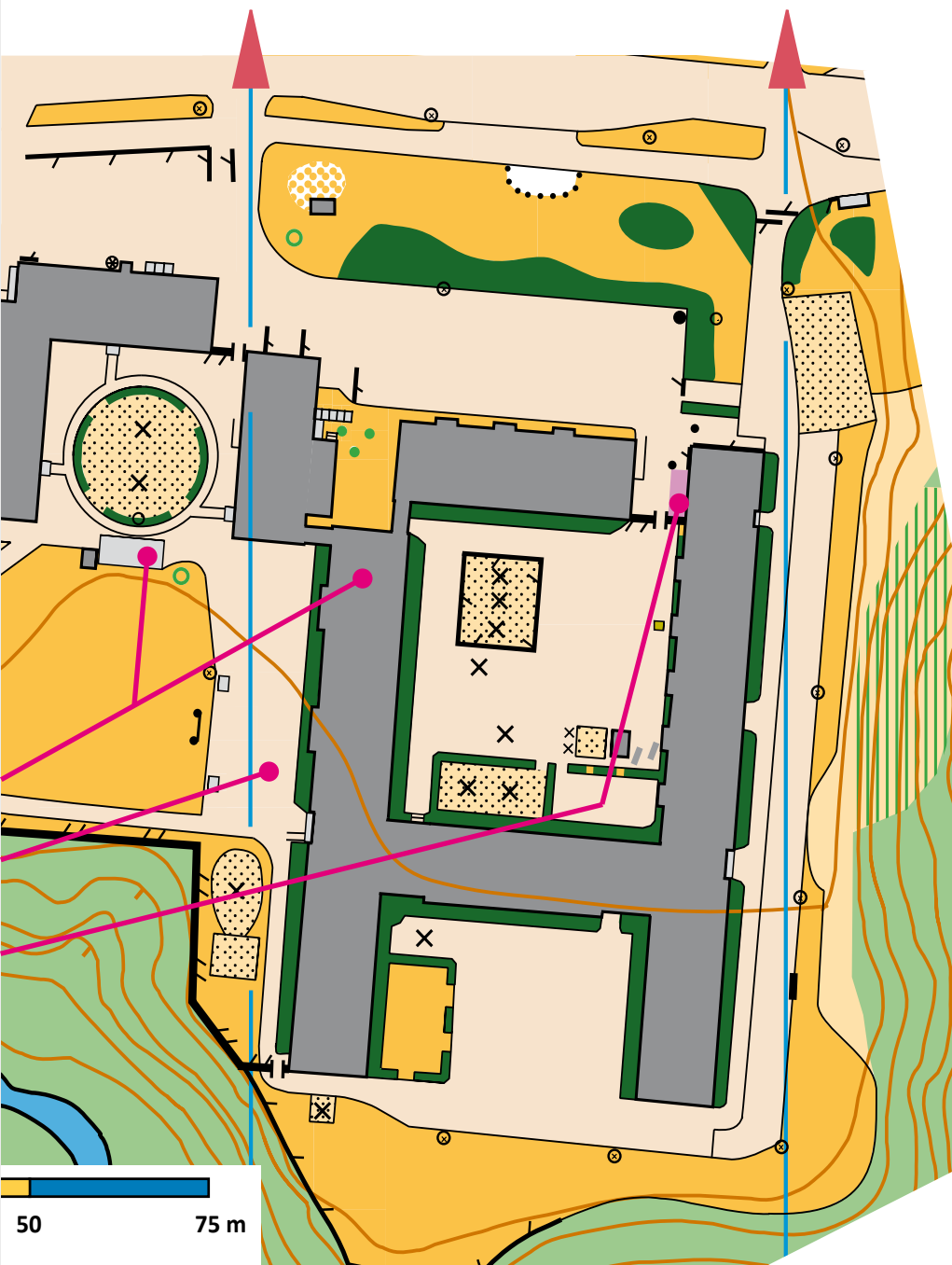


Legend

- Forest
- Building
- Canopy
- Open land
- Undergrowth
- Open land scattered trees
- Open sandy ground
- Rough open land
- Paved area
- Dense vegetation
- Private area, flower bed
- Road, paved footpath
- Big and small footpath
- Impassable fence
- Passable fence
- Impassable wall
- Passable wall
- Impassable vegetation
- Vegetation boundary
- Minor watercourse
- Impassable cliff
- Fotball goal
- Big and small tree
- Prominent veg features
- Stair
- Big post/Lamppost
- Flagpole, small post
- Shower/Boulder
- Well/Man made object
- Hill/Depression
- Knoll/Pit

NB! Forbidden to cross!

Club: Dalaportens OL
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Contact persons: Lisa Silvemark and Linda Mattsson
Mapper: Göran Andersson
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SILVA

emil

Dalaportens OL

LEARNING ORIENTEERING

"STEPS OF DEVELOPMENT" is a pedagogical description of how to learn orienteering in a clear sequential way. The basic elements come first followed by increasing difficulty.

THIS GUIDE IS A SUPPLEMENT to the Swedish Orienteering Federation's book "Orientera i skolan" and provides practical and concrete guidance how to utilise the school and its neighbourhood for teaching orienteering within the "Physical Education" curriculum.

BASED ON THE LEVELS of green, white and yellow this guide contains a number of exercises which the teachers can transfer for use with their own school maps. If you don't have access to any map of the school, i.e. educational material, there is more information in the back of the folder how to obtain functional educational materials for teaching.

DURING THE EARLY SCHOOL AGE learning starts at the green level. Many checkpoints provide regular ongoing feedback to reaffirm that the student is getting it right. The short legs to focus concentration. The next checkpoint should be visible once one finds their right control.

THREE KEY PRINCIPLES: Orientate the map, red to red and thumb your map. Students have to repeat and emphasise these three principles every learning opportunity. This is the basis for orienteering to be interesting and fun. When you understand how things fit together the students are looking forward to the next challenge.

WHITE LEVEL requires two to three map reading decisions to find the correct way to the control. In the beginning you navigate one step at a time. Over time every step is pulled

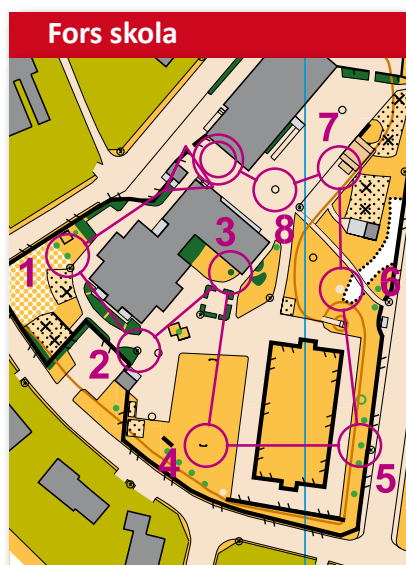
together into a larger unit – "first south through the gate, follow the house to the east and then north along the hedge to the control.

THE YELLOW LEVEL is designed for teaching in secondary schools but parts of this level can be used at the end of middle school too. In particular, by using a small forest area nearby with some hills. An area where the kids normally play. Students get an understanding of what goes up and down on the map. The area is both known and safe for children.

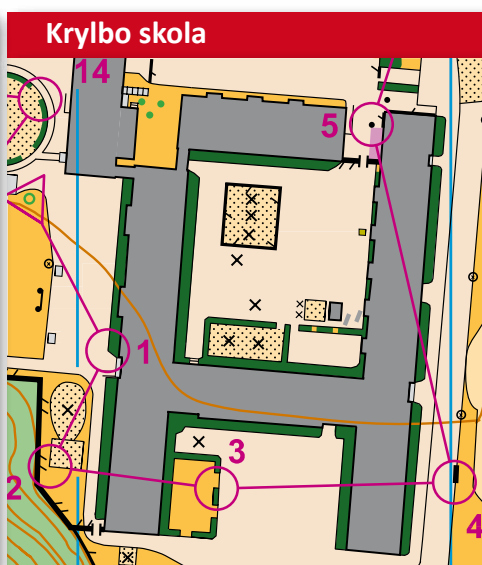
IF SOMEBODY MAKES A MISTAKE and become a "little lost" it is better if this happens in the known and safe environment. They can return to the teacher and start again. If a child gets lost in less familiar terrain, the risk is very high that this experience will put them off for the rest of the school years, maybe even for life.

IT IS AN ADVANTAGE if a teacher is experienced at one level higher than they are teaching. For most teachers orange-level is sufficient. As a teacher, you are the catalyst to enable learning orienteering to be as smooth as possible. Play and 'learning by doing' are factors for success in learning something that can be a bit difficult and complicated. Therefore the school area, a good and updated map, a simple compass and a dedicated teacher are the foundation stones for successful learning and for a great, positive experience of orienteering.

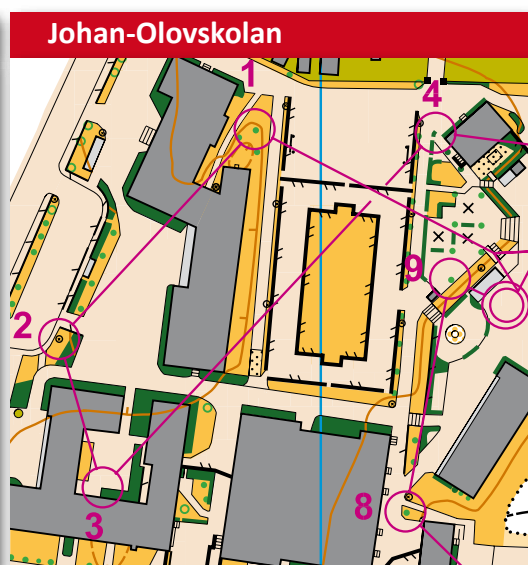
COOPERATION with the local orienteering club is valuable. If the school can borrow electronic punching equipment this increases motivation to learning.



Green level



White level



Yellow level

STEPS OF DEVELOPMENT

ORIENTEERING'S steps of development are adapted to the school's goals according to Lgr11* and Gy11*, and the curriculum in physical education. It gives concrete examples of navigation skills that must be demonstrated at this level. The higher the level is, the higher the qualitative requirements will be.

Developed by Swedish Orienteering Federation (SOFT).

*The Swedish National Agency for Education

14. Deeper understanding height. Depressions, ridges and cliffs as control.
13. Route choices in hilly terrain.
12. Compass and map reading to the checkpoint.
11. Compass and map reading towards distinct handrail.
10. Understanding of height. Highest point. When is it uphill and when is it downhill?
9. Understanding of colours and symbols showing runnability.
8. Short cut towards distinct handrail.
7. Paying attention to terrain objects beside the handrail.
6. Thinking ahead, choose a route, short or long.
5. Knowing the term and be able to orientate along distinct handrails.
4. Orientate the map using the terrain and the compass, "thumb your map" and "red to red".
3. Understand the concept of "where you are on the map" (start), and "where to go" (the control).
2. Knowing the colours of the map and the most common map's symbols.
1. Map understanding, what is a map?

Suitable levels at for each age

The model below shows the type of area and the level of development suitable to use in the teaching of each year.

Developed by Swedish Orienteering Federation (SOFT).

		Secondary school Ages 13-15		High school
Primary school Ages 6-9		Known terrain Unknown terrain		Unknown terrain
Primary school Ages 10-12		Known terrain Unknown terrain		Unknown terrain
Known terrain		Unknown terrain		Unknown terrain

Known terrain: means the school yard and areas in the school's immediate vicinity.

Unknown terrain: means a nearby forest area of outdoor character close to the school.

GLOSSARY

Map understanding:
Handrail:

Orientate the map:

Thumb your map:

Knowing that the map is reduction small scale and simplification version of reality.

Distinct terrain objects that are easy to follow, for example, roads, paths, fences or large buildings. Less distinct handrails can be small paths, hedges, ditches and, vegetation boundaries. Alignment of the map consistent to the real north with the map image aligned with reality. This is achieved by the Red to Red principle.

Positioning of the thumb on the map precisely where one is in reality. As one moves in reality, so too should the thumb consistent with that movement.

RED TO RED!

“RED TO RED”, “ORIENTATE THE MAP”, “thumb your map” are some terms that occur repeatedly for beginners and elite orienteers alike. Applying these principles is vital for interpreting the map. Constant repetition will reinforce these basic techniques of orienteering.

THE MAP is a simplified image of reality (see page 6-7). If the map is orientated incorrectly, the reality does not match the map. We cannot change reality but we can reposition the map to reality or, as we say “orientate the map”.

YOU CAN EITHER orientate the map to the terrain, for example using by houses and roads or by using the simple “red to red” principle with the help of a compass. In cooperation with Silva and the project “Skol-Sprinten”, we have developed a new compass “Begin” which is perfectly adapted to children’s hands and sits smoothly on the wrist.

1 Fold your map

Fold the map to a comfortable size for your hand.



2 Thump your map

Place your thumb where you are right now.

3 Red to Red

Rotate the map until the red edge of the map and compass red north arrow form a “T”, i.e. north arrow is pointing toward the edge of the map. You are now orientated to reality.



Chessboard, red to red

BUILD A CHESSBOARD (64 squares) using plastic bands or string and sticks on a lawn, or with chalked lines on the school yard asphalt surface or thin and narrow boards (free from the building trade). One edge is marked with red plastic, red chalk or coloured red board (preferably to the north).

The map below shows 6 different symbols that can be marked as follows: Trees (spruce twig), play equipment (toy), boulder (clenched fist big stone), height (upside down Chinese hat), building (shoebox), and pole (stick).

Passa kartan							
Tree				Hill			
Play equipment				Building			
Boulder				Pole			

THE STUDENTS WILL each receive a map of the chessboard and they help the teacher to build “the terrain” with equipment as above. In this folder, there are four different examples of course (see next page). Students begin at the start (triangle) and then follow the dashed line to the finish (double rings).

TO START the students fold their maps to a comfortable size, identify their location on the map with their thumb at the appropriate start (1, 2, 3 or 4). The students then orientate map by rotating map using the compass and the “red to red” Principle. If no compass, orientate the map to the terrain with the map’s red edge toward the red edge in the terrain.

THE STUDENTS GET to practise orientating the map by following the dashed line. At each change of direction they stop to move their body around the map whilst the map is fixed (red to red).

THE EXERCISE ends when all students have a map without lines. On this map they draw a new course and start running after each other. Switch maps between students.

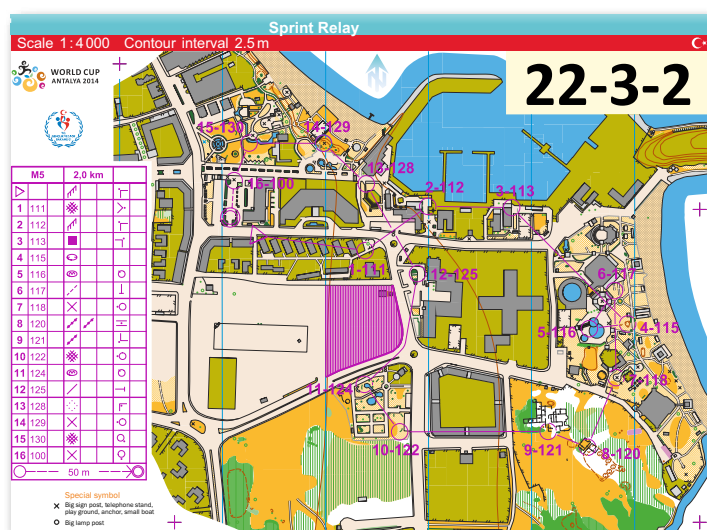
ORIENTATE THE MAP!

THE BASIS of all orienteering is that the map is orientated to reality. The boulder to the right in the terrain should also be to the right on the map. Therefore, the "red to red" is important to all learning. As soon as you look at the map, orientate the map. "Red to red" is the easiest way to do this. Even today's World Cup and World Championship maps have the red north edge marked on the map.

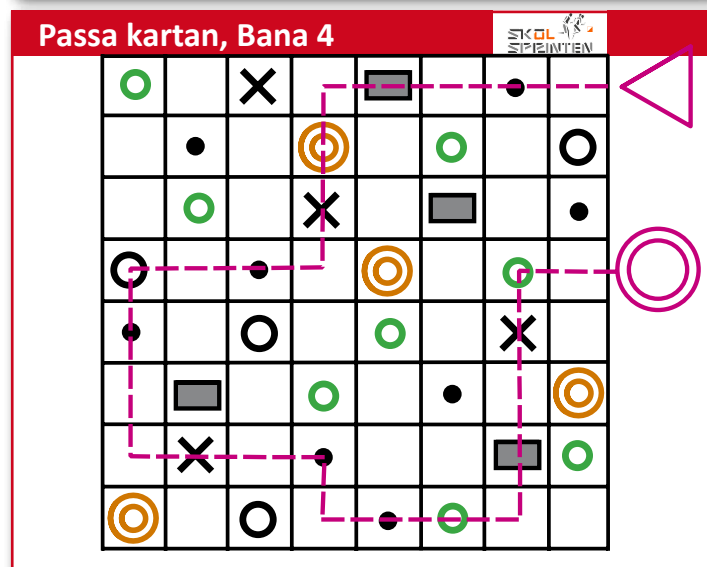
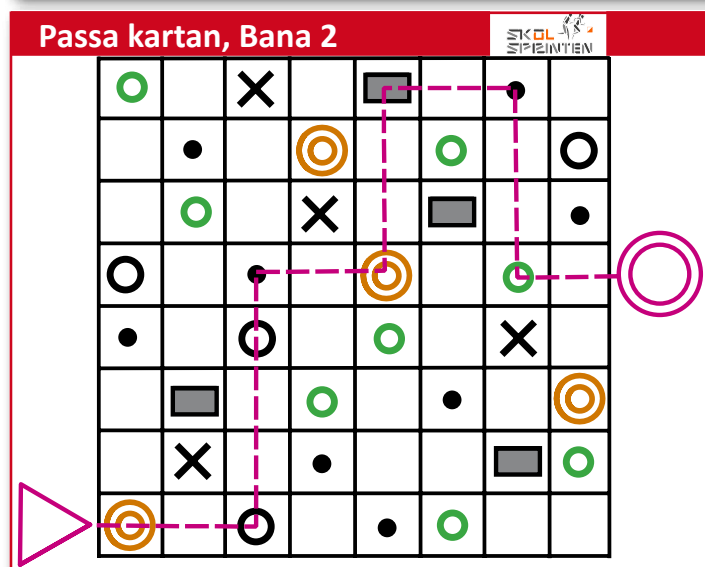
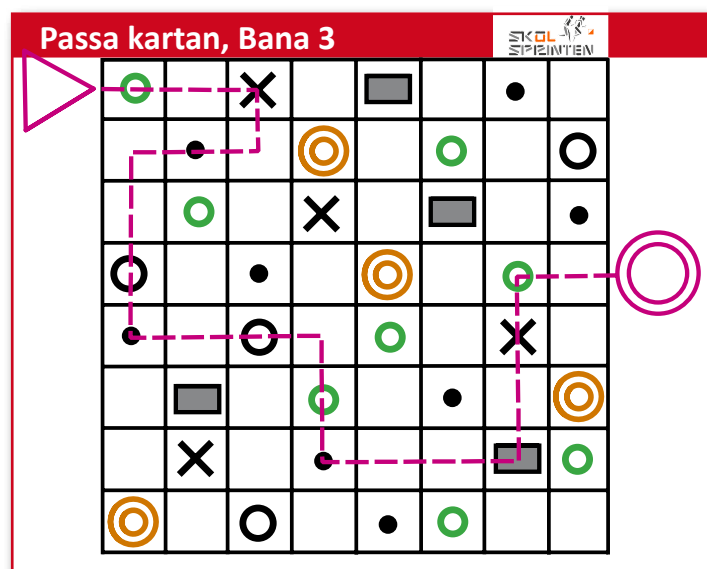
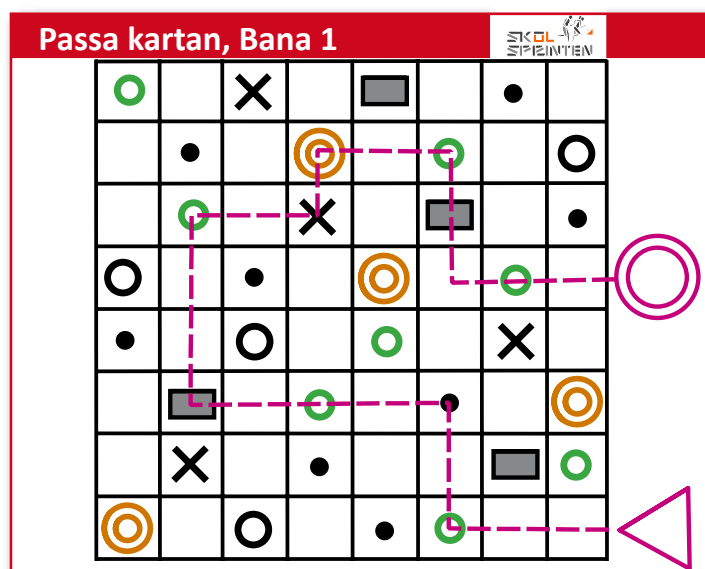
THE MAP TO THE RIGHT is taken from the first International Sprint Relay ever. The competition was organised by the Turkish Orienteering Federation in the resort of Kemer.

TODAY'S ELITE ORIENTEERS use the same method that beginners do, always red to red when starting a race and every time they read the map, they take a look at the compass, "Red to Red".

THE FOLLOWING EXAMPLES are basic exercises on learning to orientate the map to the reality or the terrain.



In the appendix you will find all originals to print and to use free of charge.



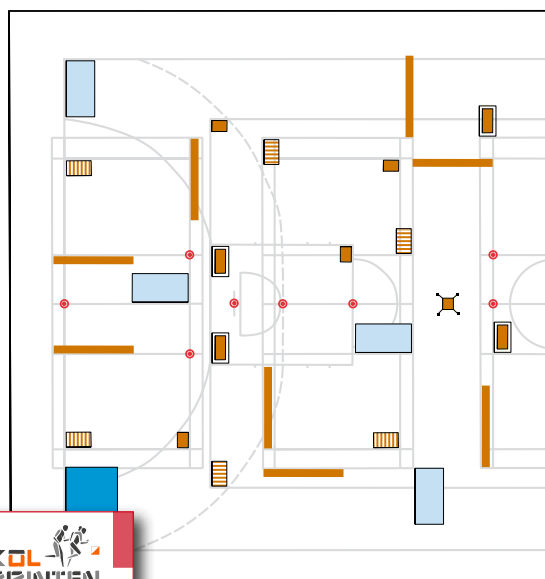
EXERCISES "ORIENTATE THE MAP"

Orientate the map in the multi-gym

BY DRAWING a map of the multi-gym you can train in map understanding and "map orientation" in both an effective and a fun way. Use as many items as possible from the gym. The map to the right shows how the equipment can be plotted to illustrate the various objects (see "Legend"). If you have red carpets as you draw them in red. Try to emulate objects as much as possible.

Using a Master Map with gym floor lines visible, you can put out the objects in the right position more easily. These lines are not on the "Student Map" or on the exercise maps.

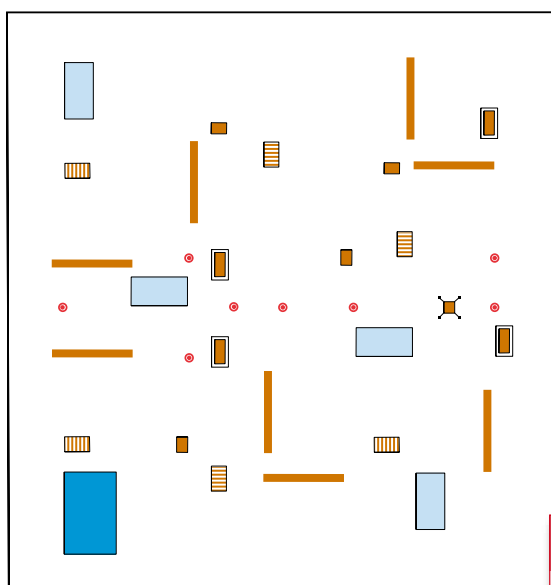
Gympasalen, Mallkarta



Legend

- Vaulting buck
- Vaulting box
- Vaulting box, small
- Springboard
- Bench
- Gym mat
- Mattress
- Con

Gympasalen, Elevkarta



Legend

- Vaulting buck
- Vaulting box
- Vaulting box, small
- Springboard
- Bench
- Gym mat
- Mattress
- Con

Student Map

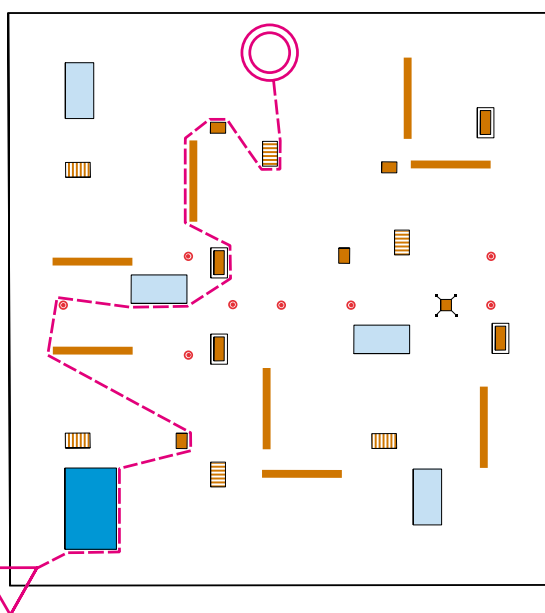
THE MASTER MAP is used to "build the terrain" (can use as a warm up) while the "Student Map" is used for the execution of the exercises. On the next page you will find four different courses that you can print from the Appendix. Students and/or teachers can draw new variations of courses on blank (i.e. no course marked) maps. The red edge of the map corresponds to the north in reality. The teacher identifies which wall will be "north".

Indoor, Intro

THE TEACHER FOLLOWS the dashed line and stops at each new object. Students have a blank map (student map) and follow the teacher. The teacher repeats often "thumb your map" and especially "red-to-red" for the students. The teacher asks the students "where are we?", "Where is for example this blue gymnastic mat on the map?". Students work together in pairs and show and answer the teacher's questions by pointing out the objects on the map.

AS A WARM UP, students can "build up the terrain" using the master map. It's good to enlarge the master map as much as possible and place it in a central location. Let students work in pairs.

Gympasalen, Intro



Legend

- Vaulting buck
- Vaulting box
- Vaulting box, small
- Springboard
- Bench
- Gym mat
- Mattress
- Con

EXERCISES "ORIENTATE THE MAP"

Orientate the map (Line-O indoor, courses 1-4)

DIVIDE THE CLASS into four groups (1-4) and let the students start their Line-O from each starting point. The teacher puts out a number of controls along each dashed line for example "mini-markers". At the finish the students show the teacher where the controls are placed.

Gympasalen, Bana 2

Legend

- Vaulting buck
- Vaulting box
- Vaulting box, small
- Springboard
- Bench
- Gym mat
- Mattress
- Con

Gympasalen, Bana 1

Legend

- Vaulting buck
- Vaulting box
- Vaulting box, small
- Springboard
- Bench
- Gym mat
- Mattress
- Con

As the students have finalised the exercise they can draw new dashed lines by themselves, which they then have to follow. It is important that the teacher constantly emphasises the importance of "thumb your map"- red to red - orientate the map".

Gympasalen, Bana 3

Legend

- Vaulting buck
- Vaulting box
- Vaulting box, small
- Springboard
- Bench
- Gym mat
- Mattress
- Con

Gympasalen, Bana 4

Legend

- Vaulting buck
- Vaulting box
- Vaulting box, small
- Springboard
- Bench
- Gym mat
- Mattress
- Con

"Real Map"

FURTHER ON in the education you can draw a "real map" of the multi-gym. Use the same equipment but with a different format. For example, horses could be houses, a mattress might be a lake, small mats are marshes, bench becomes walls, etc. All objects get a map symbol available on the school map and corresponding to the sprint norm (ISSOM). See part of the map to the right.

The map is available in the Appendix in larger size for printing.

Gympasalen, "riktig karta"

Legend

- Canopy (Vaulting buck)
- House (Vaulting box)
- House (Vaulting box, small)
- Sandy area (Springboard)
- Wall (Bench)
- Lake (Gym mat)
- Marsh (Mattress)
- Pole (Con)

EXERCISES "ORIENTATE THE MAP"

Orientate the map (Line-0, outdoor 1)

THE TEACHER FOLLOWS the dashed line and makes a stop at distinct objects/places. Students have a blank map and follow the teacher. The teacher reminds the students to "thumb your map" and especially "red-to-red". The teacher asks the students "Where are we?", "Where is for example the boulder on the map?", "In which direction do I point now."

Students work together in pairs and show and answer the teacher's questions by pointing on the map.



Orientate the map (Line-0, outdoor2)

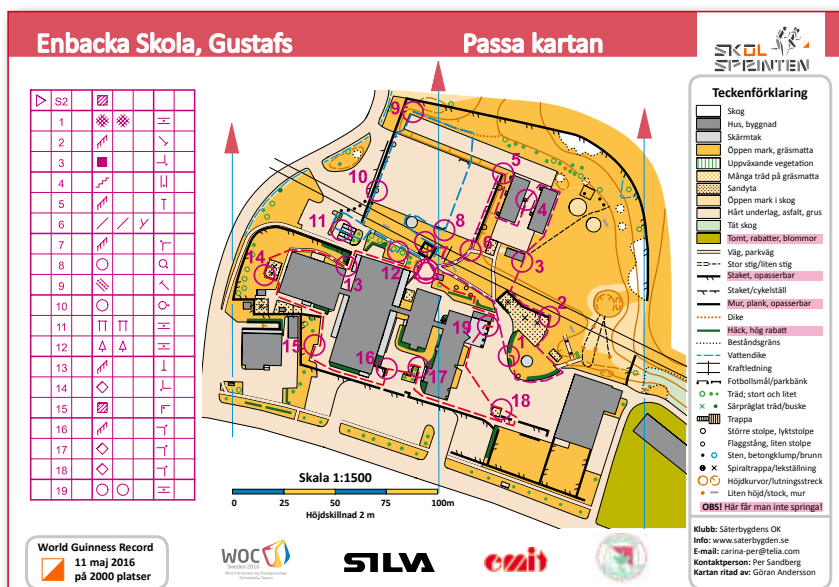
THE STUDENTS will be divided into three groups and should follow the dashed lines. There are control markers placed at different distinct points along each dashed line. The task is to highlight where these are situated. The teacher reminds students to "thumb your map" and to focus on the "red-to-red".

Students can usefully cooperate two and two.

Master Map (Line-0, outdoor 2)

THE CHECKPOINTS MAY BE marked with orienteering markers and pin punches. If you have access to electronic punching systems such as EMIT or SPORTident these can be used advantageously. Checkpoints may also be marked in a simple way using plastic tape in bright colours.

AS A WARM UP, students can put out 1-2 controls and as warm down bring the same controls back again. However, this requires that you have a map for each control, but it may be worthwhile to produce these additional master maps.



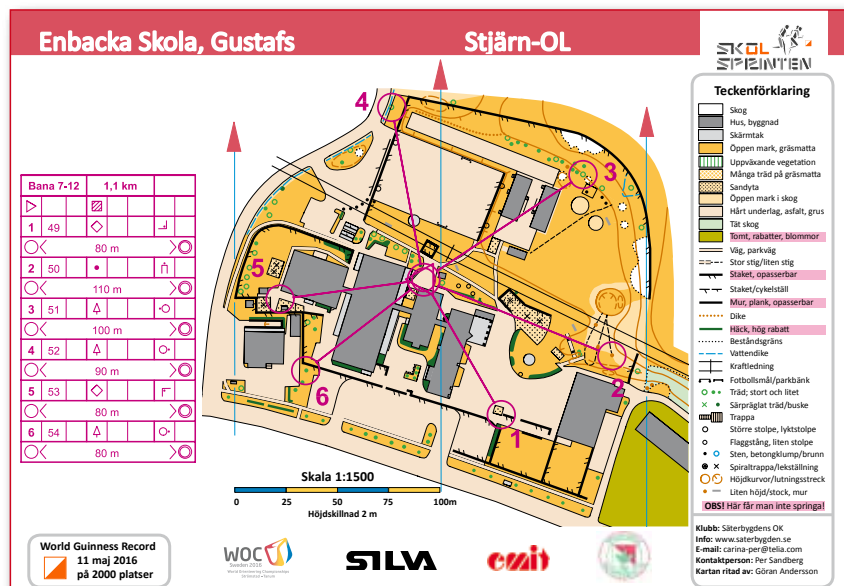
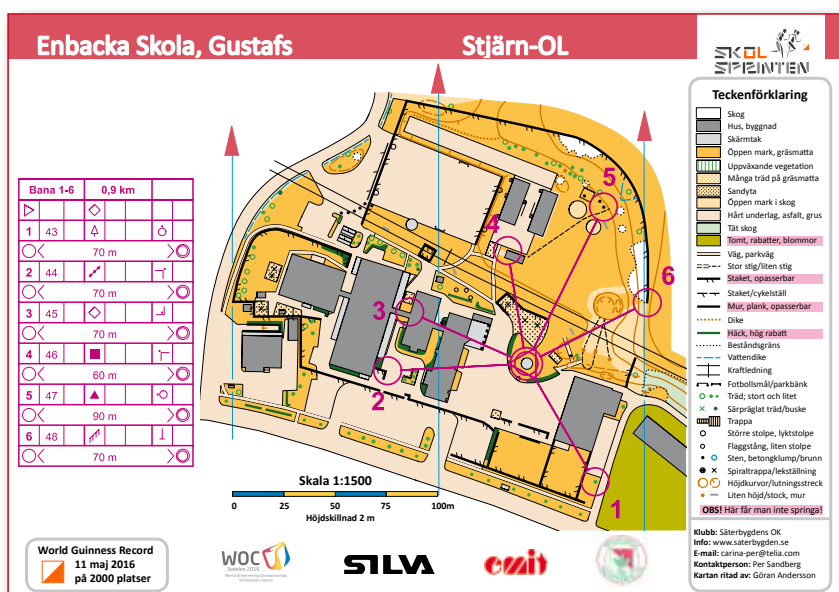
EXERCISES "ORIENTATE THE MAP"

Orientate the map (Star-0, control 1-6)

THIS IS A PERFECT activity both for developing the technique to orientate the map and to develop the students' fitness. The exercise can preferably be carried out as an interval session. Only one control per map. Students can work in pairs or in groups during warm up putting out control markers.

THE TEACHER DIRECTS students from the start and finish (same location). "Thumb your map" and especially "red to red" emphasised. When the students have orientated the map and made a decision how to run to the control the task is:

- The students navigate to the control, punch and run at full speed back to start/finish.



Orientate the map (Star-0, control 7-12)

AFTER ALL SIX CHECKPOINTS are completed teachers and students move to the next start and finish point for the implementation of the next exercise. In the same way as before the teacher reminds students about "thumb your map" and "red-to-red".

THE ADVANTAGE OF THE STAR-O is that the teacher can continuously provide instructions and feedback to the students, which is otherwise very difficult in the teaching of orienteering. Students can advantageously work one by one during these exercises. It is perfectly OK if some students want to run together, of course.

The school staff's ugliest grimaces

THE CHECKPOINTS MAY BE marked with orienteering markers and pin punches. If you have access to electronic punching systems as EMIT or SPORTident these can be used advantageously. Checkpoints may also be marked in a simple way using plastic tape in bright colours.

AS A FUN ALTERNATIVE you can take photos of the school staff. But they have to be fun photos! One variation is that everyone who works at the school makes her/his ugliest face or grimace. Put the photo in A5 size and laminate it. Students report at the finish who and what grimace was present at the respective control.



EXERCISES "ORIENTATE THE MAP"

Orientate the map (Photo-orientteering)

THE TEACHER TRIES to find both visible as less visible objects in the school yard. A lone tree or a detail of a tree, part of a house, a detail in the form of a drainpipe, a little thing on a play equipment etc. It is only your imagination that limits the creativity.

THE ADVANTAGE OF PHOTO-O is that you avoid putting out control markers because the object is already selected as a photo. The exercise can be conducted as a planned activity or as a spontaneous event. The task is to connect each control with the right photo.

THE STUDENTS can work together in pairs.

Enbacka Skola, Gustafs
Foto-OL

Kontroll	Bokstav
1	
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Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Öppenväxande vegetation
- Måttlig träd på gräsmatta
- Sandytta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Torr skog
- Tomt, rabatter, blommar
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket/lykehall
- Mål, plan, opasserbar
- Dike
- Häck, hög rabatt
- Beståndsgrens
- Vattendike
- Kraftledning
- Fotbollsmål/parkbänk
- Träd; stort och litet
- Särpräglad träd/buske
- Trappa
- Större stolpe, lyktstolpe
- Flaggstång, liten stolpe
- Sten, betongklump/brunn
- Spiraltrappa/lekställning
- Höjdskurv/turningsgreck
- Liten höjd/stock, mur

OBS! Här får man inte springa!

Klubbs: Störbygdens OK
 Info: www.storbygden.se
 E-mail: carina-per@telia.com
 Kontaktperson: Per Sandberg
 Kartan ritad av: Göran Andersson

World Guinness Record
 11 Maj 2016
 på 2000 platser

Tip!

LAMINATE THE MAP FOR REUSE.

Photos from the school "Enbacka"



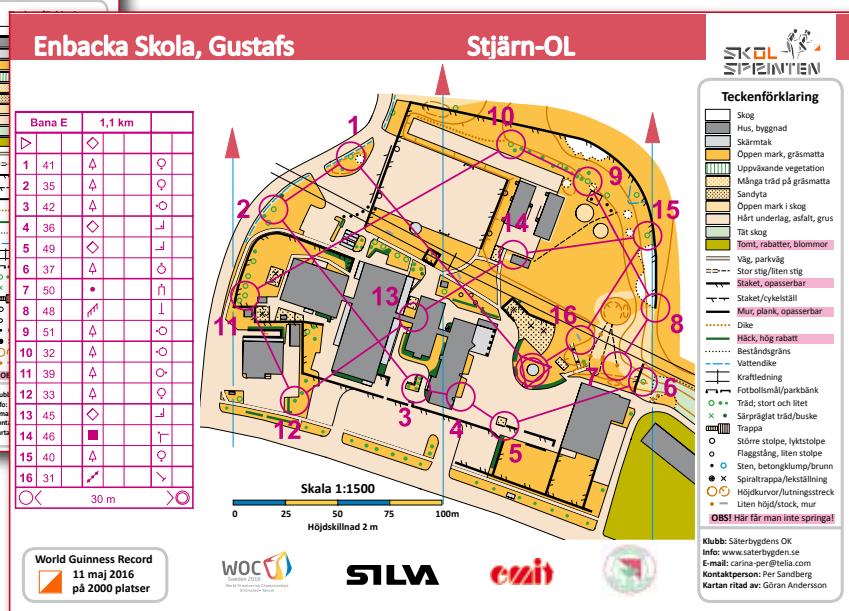
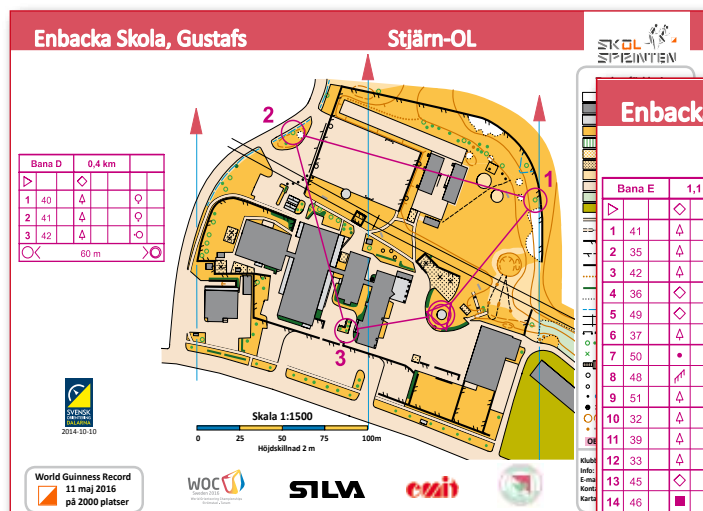
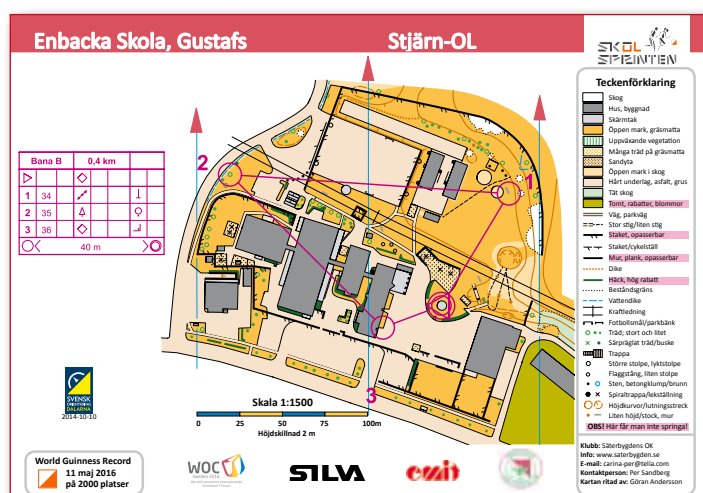
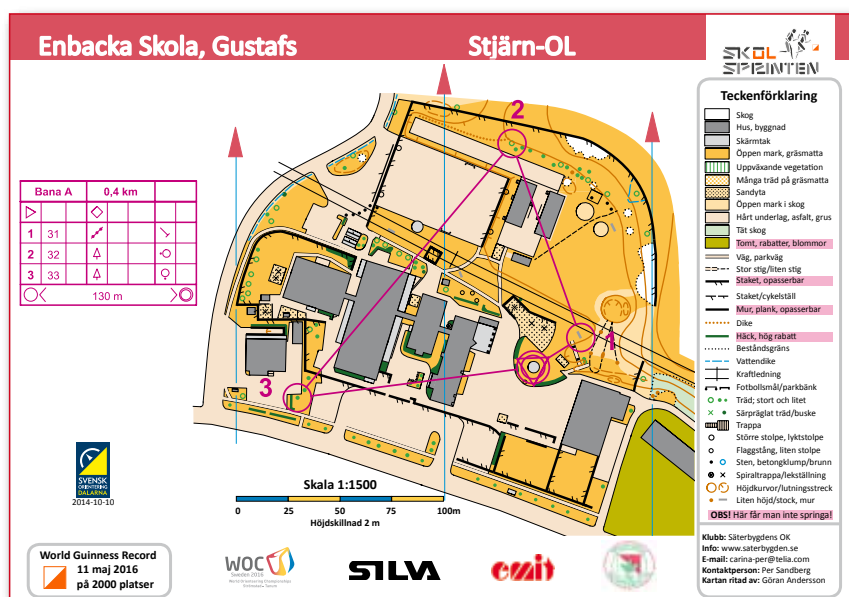
EXERCISES "ORIENTATE THE MAP"

Orientate the map (Star-0, Courses A-E)

THIS IS A VERY GOOD activity both to develop the technique of orientating the map and to develop students' fitness when the students have managed the green difficulty level. The exercise is great to perform as an interval session. One course per map. Students can work in pairs or in groups during warm up by putting out control markers.

THE TEACHER DIRECTS students from the start/finish (same location). The teacher reminds the students "Thumb your map" and especially "red to red". The message to the students is:

- Navigate to all controls, punch and run at full speed back from the last control to finish.



Course E

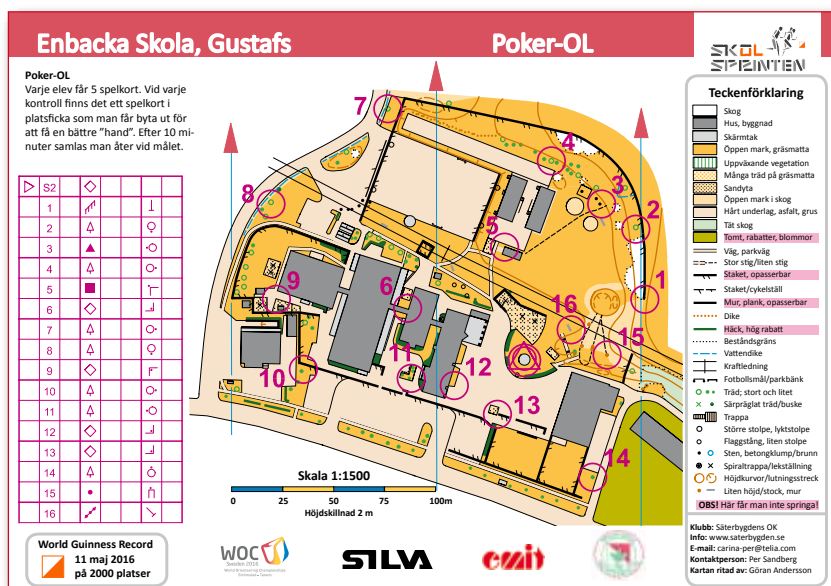
COURSE E APPLIED to all controls from courses A-D. This is a bonus course for those who have reached a higher technical level.

POKER-O

THE EXERCISE IS BASED on a predefined period of time in which the student obtains the best poker hand as possible. The students start with five cards in the hand and the task is to exchange their cards for better cards to get a good poker hand.

STUDENTS MOVE between the controls where they can change a card to another. At every control, the teacher has put out a card in a plastic bag. The students take the card from the plastic bag and replaces it with a card from the hand.

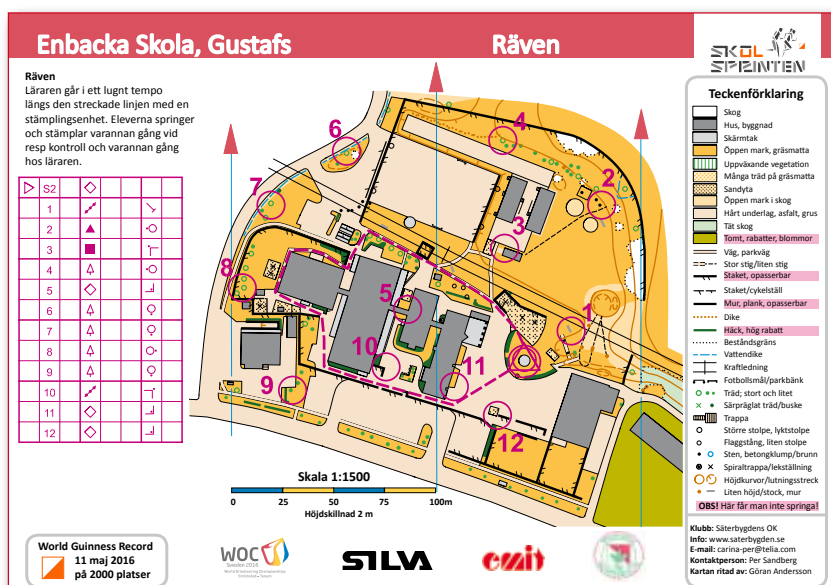
IT CAN BE TIME-LIMIT exercise for 10 minutes or 15 minutes; then implement it again with five new cards. The exercise can be carried out either individually, in pairs or teams.



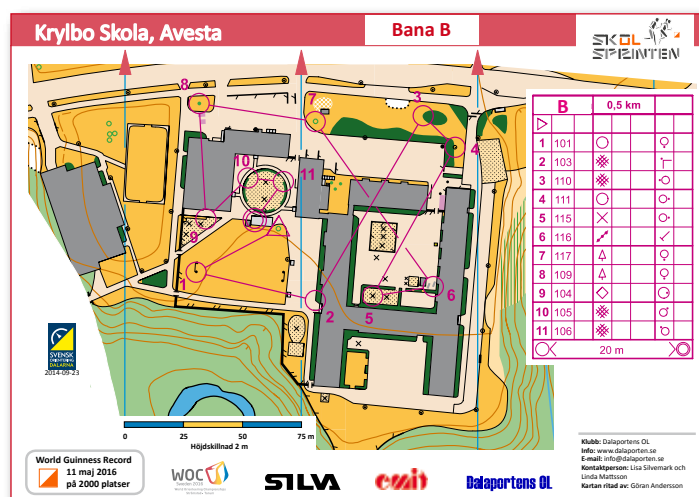
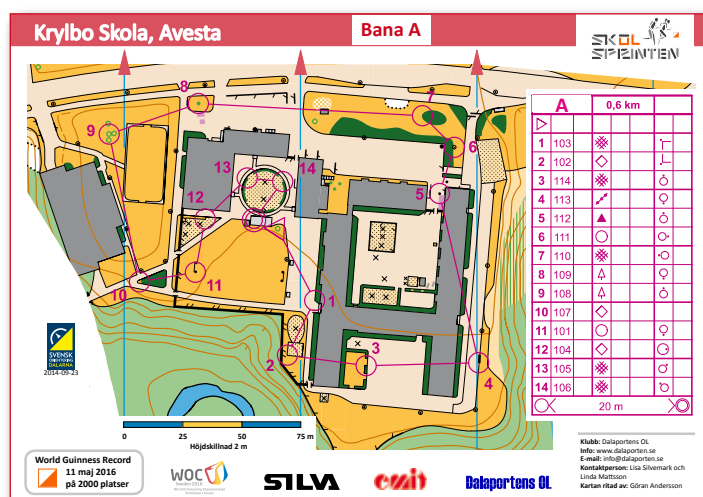
THE FOX

YOU CAN USE the same controls as in Poker O or any other exercise and implement the "Fox" as an additional activity.

THE TEACHER WALKS in a calm pace along the dashed line as a "mobile control". It is an advantage if you have access to, for example, EMIT or SPORTident but it works just as well without. The students punch by doing "high five" with the teacher. The students run first to the nearest control, punch, then back again to the "mobile control" (The Fox). Out again to next control and back to the "Fox".



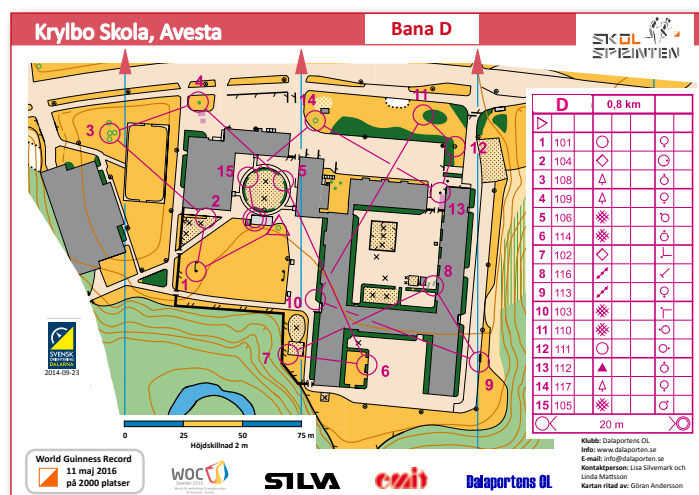
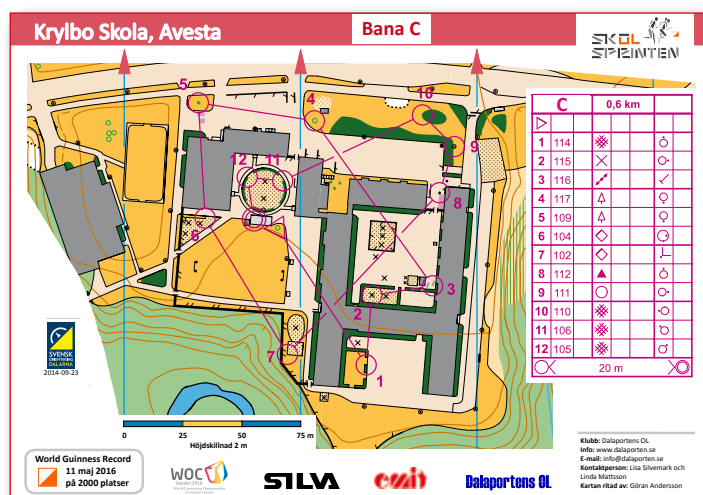
ONE MAN RELAY



One man relay

RELAY WITH YOURSELF! The students carry out this exercise on their own or in pairs. Have a mass start or wave start every half-minute on all four courses. After each completed

course the students have a shorter break, checking the performance, getting feedback from the teacher and then preparing for the next lap, how to find the controls in a smooth way.



ASSESSMENT YEAR 6

ASSESSMENT of the student's knowledge is always a hard nut to crack for most of teachers. It's "knowledge of map" that should be assessed mainly, not how fast the student runs. According to the curriculum (Swedish) we can read as follows:

Year 1-3: To orientate (navigate) themselves in the local environment and understand simple map's structure.

Year 4-6: To orientate in nearby nature and outdoor environment using maps. Understand map's structure and symbols.

Year 7-9: To orientate in unknown environments using maps and other assistive devices for positioning.

Knowledge requirements primary school "orienteering"

According to the curriculum the student shall achieve the following knowledge requirements for different levels of grade at the end of Year 6:

Knowledge requirements for grade E

Students can carry out various activities in nature and outdoor environment with some adaptation to different conditions and to the right of public access rules. In addition, the students can, with some certainty, orientate themselves in known environments using maps.

Knowledge requirements for grade C

Students can carry out various activities in nature and outdoor environment with relatively good adaptation to different conditions and to the right of public access rules. In addition, the students can with relative accuracy orientate themselves in known environments using maps.

Knowledge requirements for grade A

Students can carry out various activities in nature and outdoor environment with good adaptation to different conditions and to the right of public access rules. In addition, the students can with high degree of accuracy orientate themselves in known environments using maps.

Suggestions for Assessment

"Some certainty" (grade E) means that the students make some errors and need some guidance before the students can orientate themselves.

"Relatively good certainty" (grade C) means that the students make errors choice before the students can orientate themselves.

"Good certainty" (grade A) means that the students don't make any errors or don't need any guidance in order to orientate themselves.

Basis for Assessment, Year 6

From the above, you should assess students' knowledge of being able to orientate in a known environment:

- 1 / The map's colours and symbols and map's structure.
- 2 / Orientate the map using compass or terrain.
- 3 / Using map to move between several locations.



IMPLEMENTATION

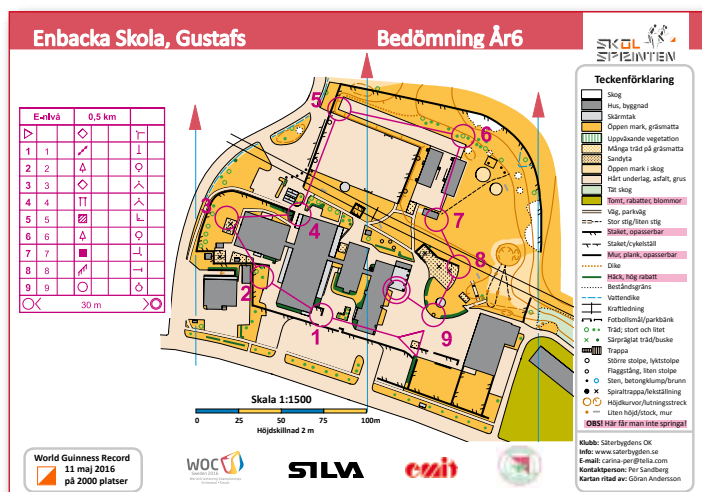
Generally

The following courses check if students can orientate the map correctly (red to red), and plan and move between several locations in a known environment (school yard and immediately nearby area). Students will visit a number of check points (controls) without code numbers and punch at the controls the students have on the map. In this example, there are 16 controls placed in the terrain (see the master map to the right).

Grade E, Year 6

The task is managed normally within 15 minutes walking pace. The content must be at least 6 check points with at least 5 check points right. Maximum time 30 minutes.

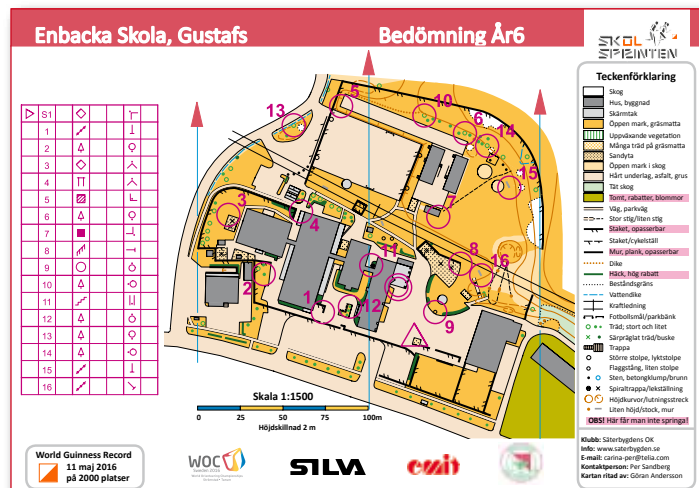
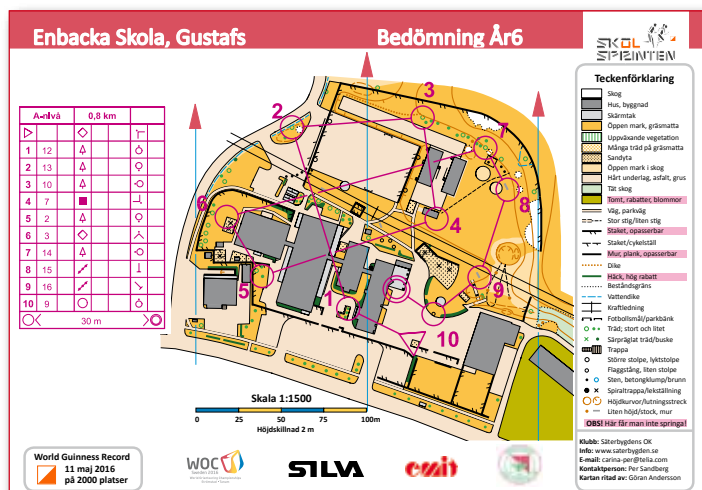
In this case, at least 8 of 9 check points must be right.



Grade A, Year 6

The task is managed normally within 15 minutes walking pace. The content must be at least 6 check points with at least 5 check points right. Maximum time 30 minutes.

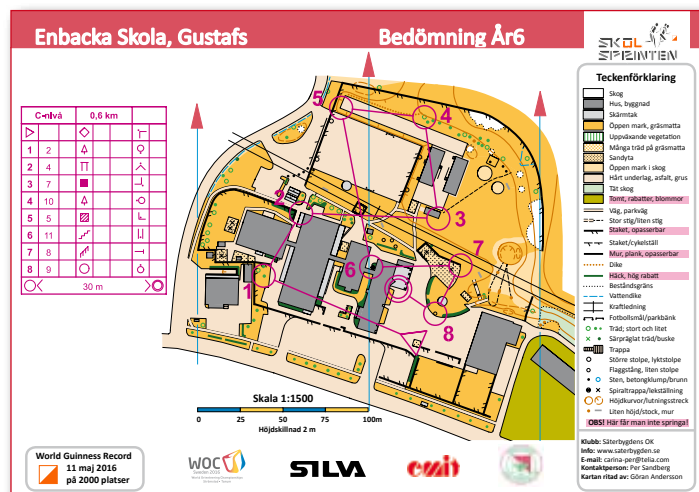
In this case, all 10 check points must be right.



Grade C, Year 6

The task is managed normally within 15 minutes walking pace. The content must be at least 6 check points with at least 5 check points right. Maximum time 30 minutes.

In this case, at least 7 of 8 check points must be right.



HOW CAN THE SCHOOL GET HELP?

The map is an educational tool

MAP AND COMPASS are closely interconnected when you navigate in forest or cities. To learn orienteering and at the same time achieve the requirements that the National Agency for Education is setting by the curriculum, each school requires teaching materials to implement a relevant education.

THE INTENTION of the project "Skol-Sprinten" and this guideline is to show how to create great conditions for an education in orienteering that the students perceived as "cool, awesome and educational." The main thread has always been that students should experience joy when they perform orienteering "for real", with a colourful map conforming to reality, a cool compass and an electronic punching system.

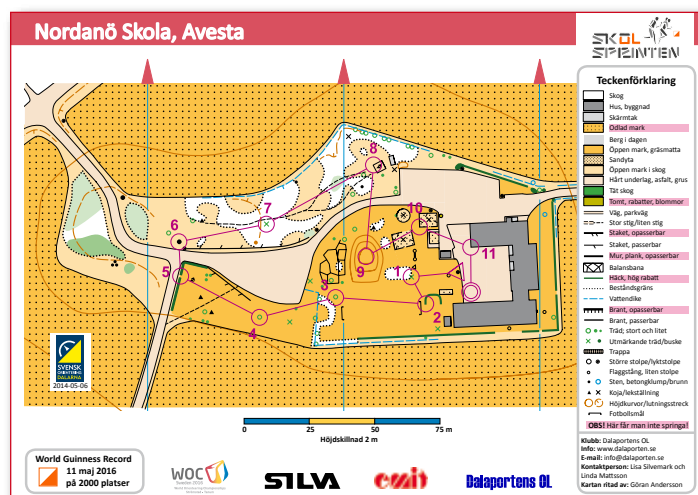
IN CONJUNCTION with Silva Sweden AB and EMIT AS as collaborative partners, Dalaportens OL and sixteen schools in Dalarna, we have created a concept that is very attractive for education in schools. The response has been fantastic both from students, teachers and not least school leaders.

COLLABORATION WITH THE LOCAL orienteering club provides great opportunities to apply for financial support from the "Sport Foundation" especially be able to draw a map of the school grounds. Furthermore, each school and municipality must prioritise its budget and set aside money annually for mapping of schools. A municipality in Stockholm has an ongoing contract with an orienteering club to ensure that school maps are drawn and that the maps are updated annually.

IF YOU WANT some more information about: help on submitting an application, implementation of mapping or own exercises for education, please contact Göran Andersson.



More examples of maps from Skol-Sprinten



SILVA SWEDEN AB

History

THE YEAR WAS 1933, just 14 years after orienteering had become a competitive sport, when a trio of Swedish Champions in orienteering put their heads together to improve their equipment to achieve better results. The first real competition compass was created. Since then, Silva has taken the lead of developing compasses in many different areas and today, Silva is the world leader in compasses for orienteering.

IN THE PAST THE MAP was very underdeveloped and in those days orienteering was all about following the compass. Today it is very different. The maps are very detailed and well-drawn. Today's orienteering is very much about map reading and orientating the map to the terrain and the reality.

15 YEARS AGO the compass "66 OMC Spectra" was developed for this purpose, ie emphasis on map reading with only short glimpses of direction. Together with the latest Silva thumb compass "Race 360 JET", these are the most used compasses in the sport of orienteering.

A FEW YEARS AGO Silva developed the small compass "Metro" as an accessory to key ring or to hang available on the backpack strap for hikers.

Silva Begin Wrist Compass

The functions of "66 OMC Spectra" and "Metro" have been merged into the new school compass "Begin". This wrist compass is the perfect beginner's compass for interested young people and school orienteering. The compact size, with rubberised compass house, make it ideal for a small hands and tough challenges. The strap fits securely in the hand so the user can focus on map reading and running direction.

Other products from Silva Sweden AB

In addition to compasses Silva also delivers orienteering markers (with reflex), pin punches and headlamps for all activity within orienteering.



Begin



66 OMC Spectra



Metro



Race 360 JET



NOTES



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42

Find five faults

43

Five symbols have disappeared

44

Five symbols have been added

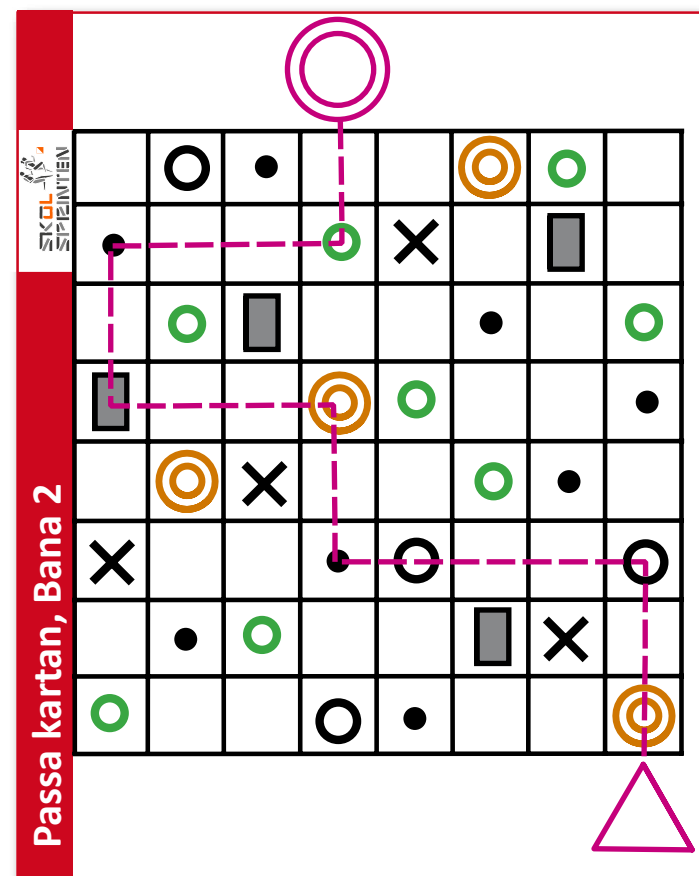
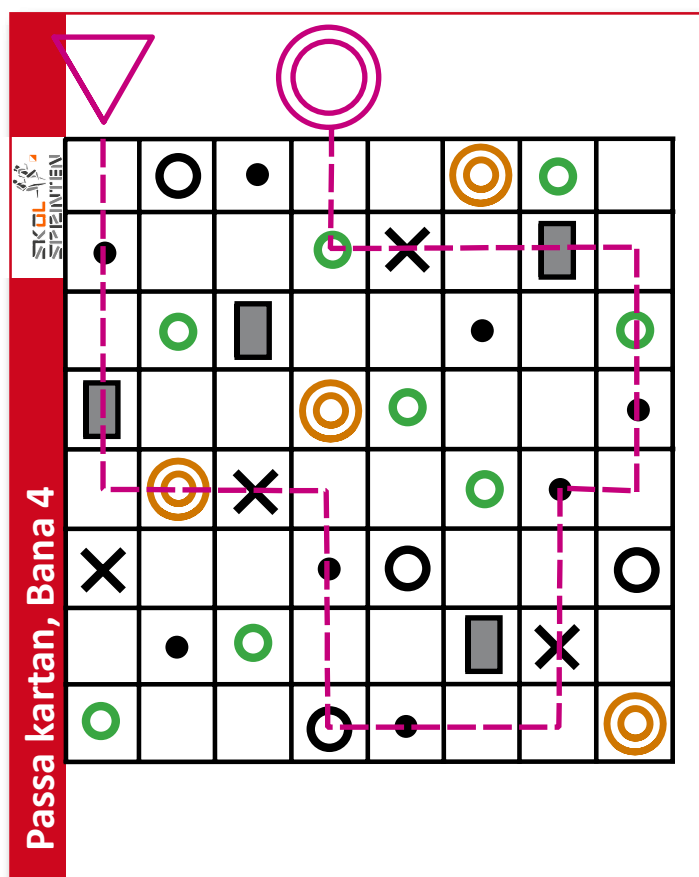
45

Five symbols have been enlarged

46

Correct answers to the exercises

47-50



ORIENTATE THE MAP

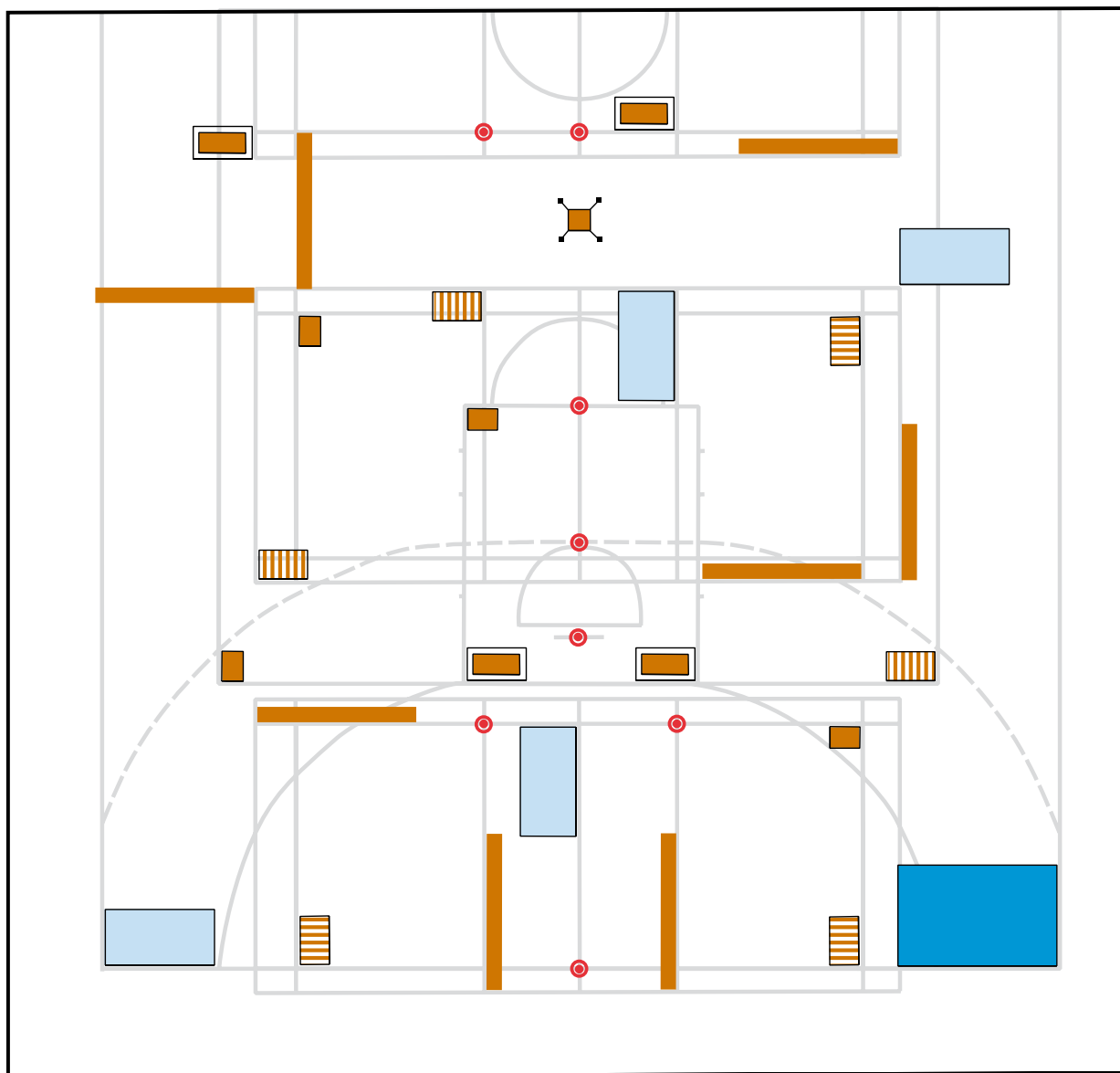
Multi-gym, Master map



Gympasalen, Mallkarta

Legend

	Vaulting buck
	Vaulting box
	Vaulting box, small
	Springboard
	Bench
	Gym mat
	Mattress
	Con



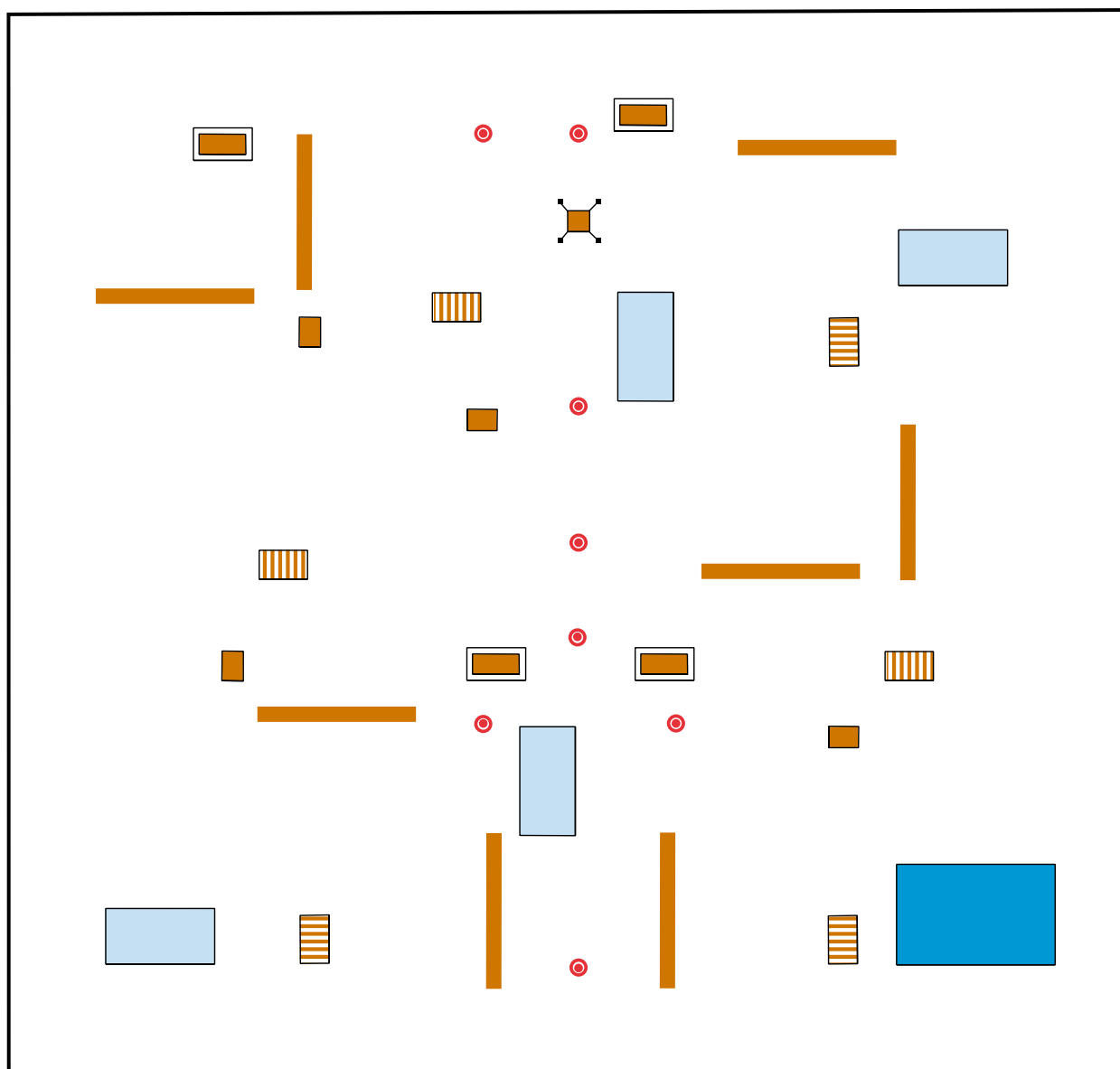
ORIENTATE THE MAP

Multi-gym, Student map



Legend

	Vaulting buck
	Vaulting box
	Vaulting box, small
	Springboard
	Bench
	Gym mat
	Mattress
	Con



Gympasalen, Elevkarta



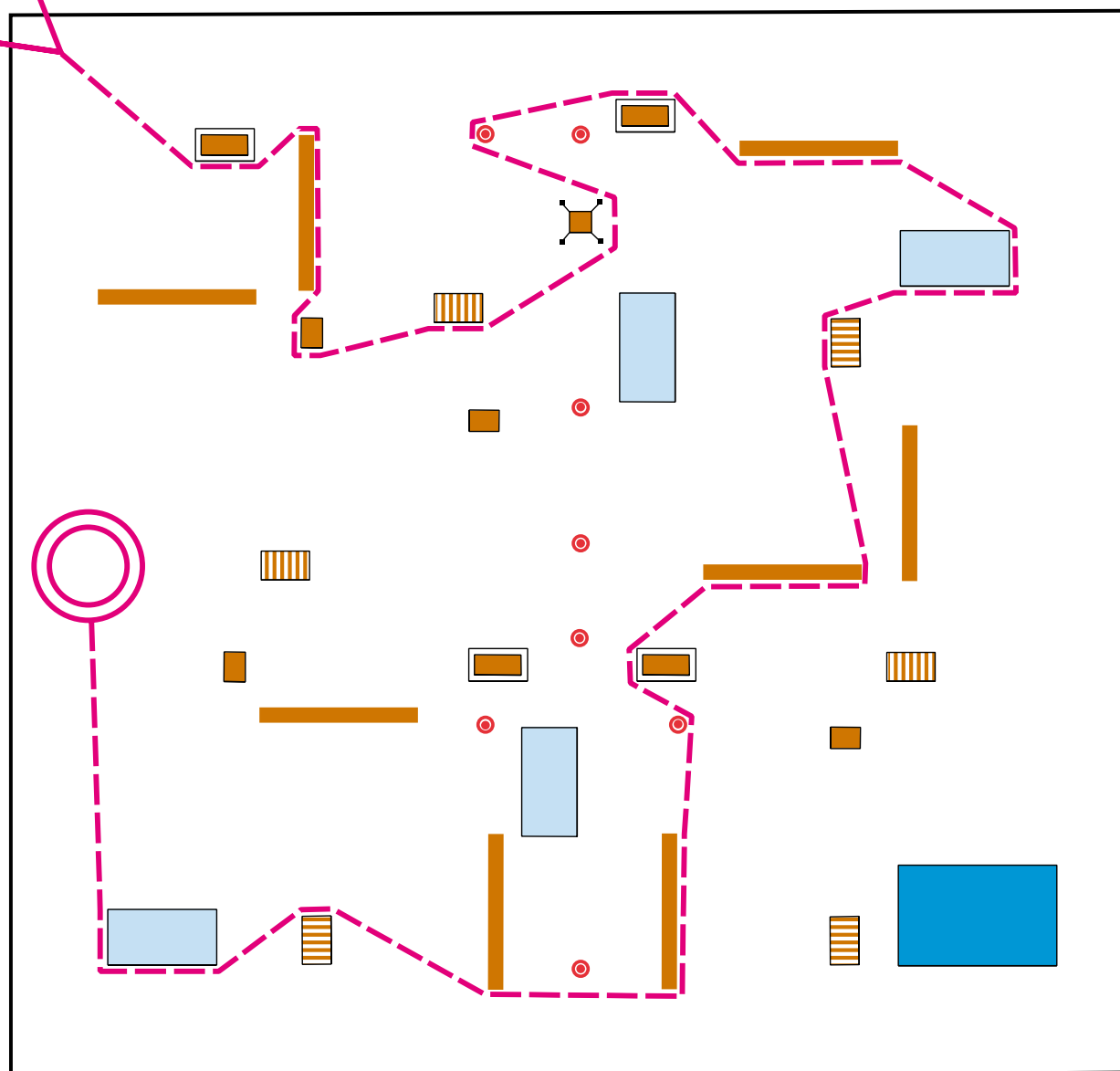
ORIENTATE THE MAP

Multi-gym, Course 1



Legend

	Vaulting buck
	Vaulting box
	Vaulting box, small
	Springboard
	Bench
	Gym mat
	Mattress
	Con



Gympasalen, Bana 1

ORIENTATE THE MAP

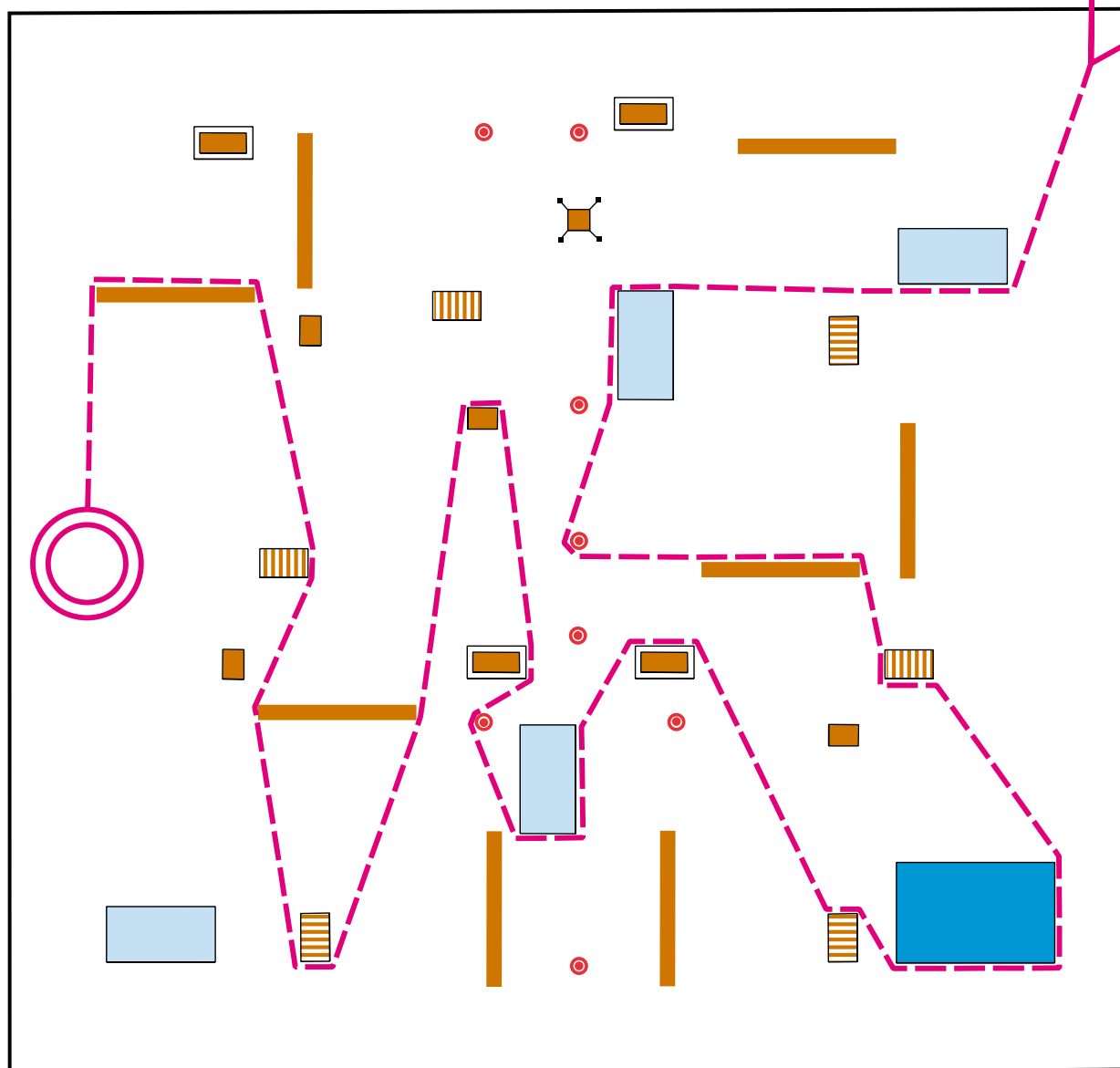
Multi-gym, Course 2



Gympasalen, Bana 2

Legend

	Vaulting buck		Vaulting box		Vaulting box, small		Springboard		Bench		Gym mat		Mattress		Con
--	---------------	--	--------------	--	---------------------	--	-------------	--	-------	--	---------	--	----------	--	-----



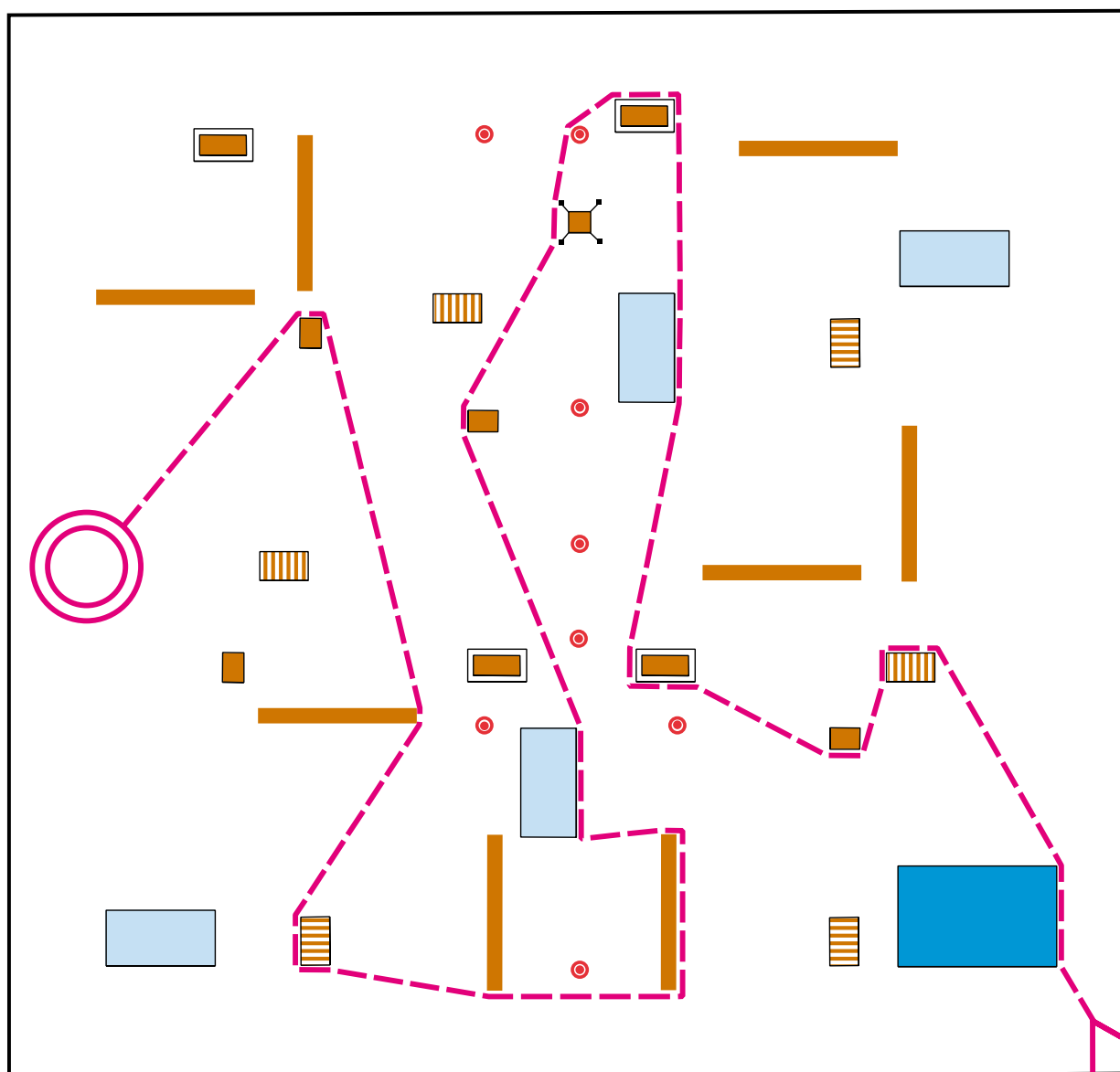
ORIENTATE THE MAP

Multi-gym, Course 3



Legend

	Vaulting buck
	Vaulting box
	Vaulting box, small
	Springboard
	Bench
	Gym mat
	Mattress
	Con



Gympasalen, Bana 3

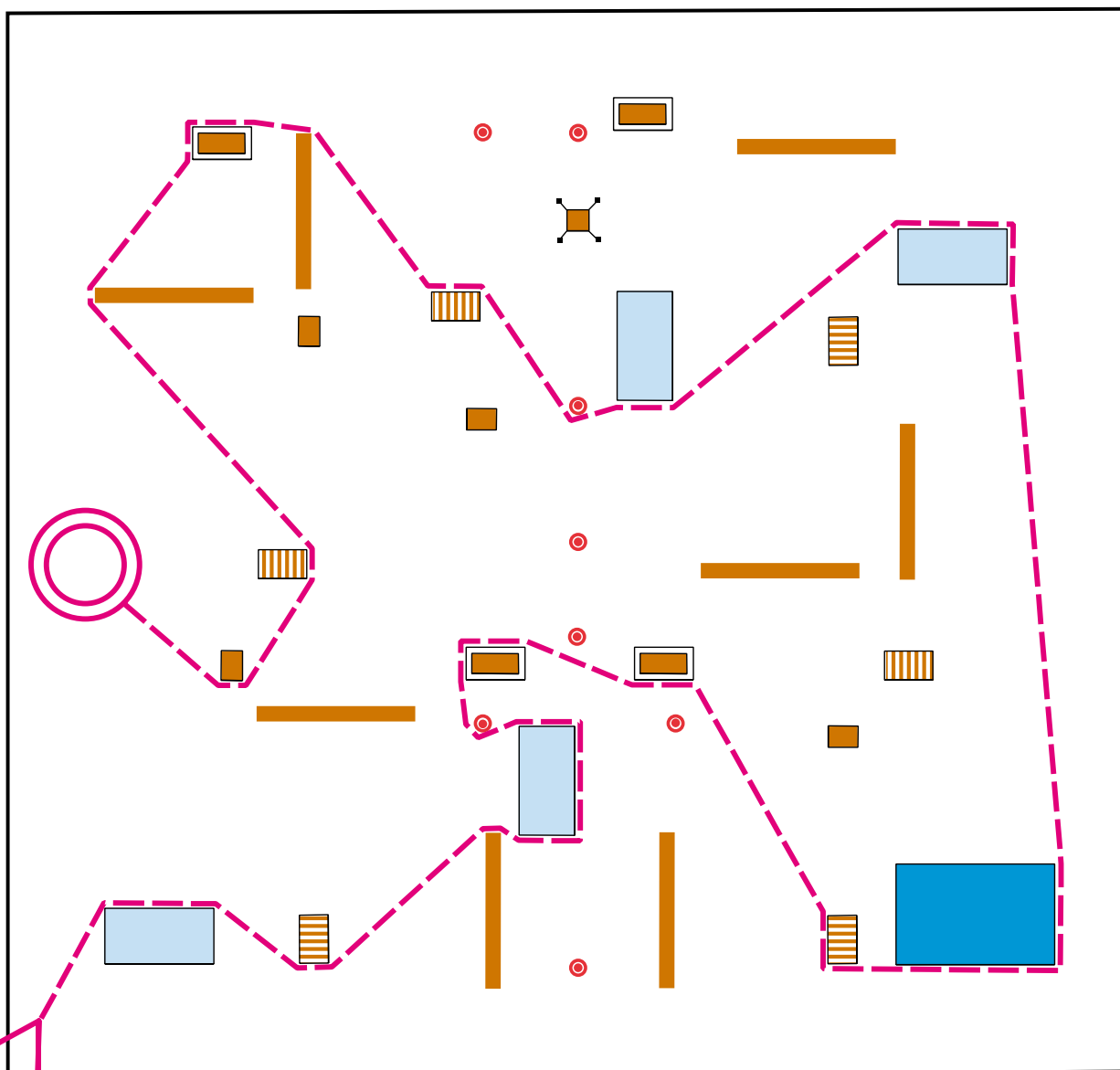
ORIENTATE THE MAP

Multi-gym, Course 4



Legend

	Vaulting buck		Vaulting box		Vaulting box, small		Springboard		Bench		Gym mat		Mattress		Con
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Gympasalen, Bana 4

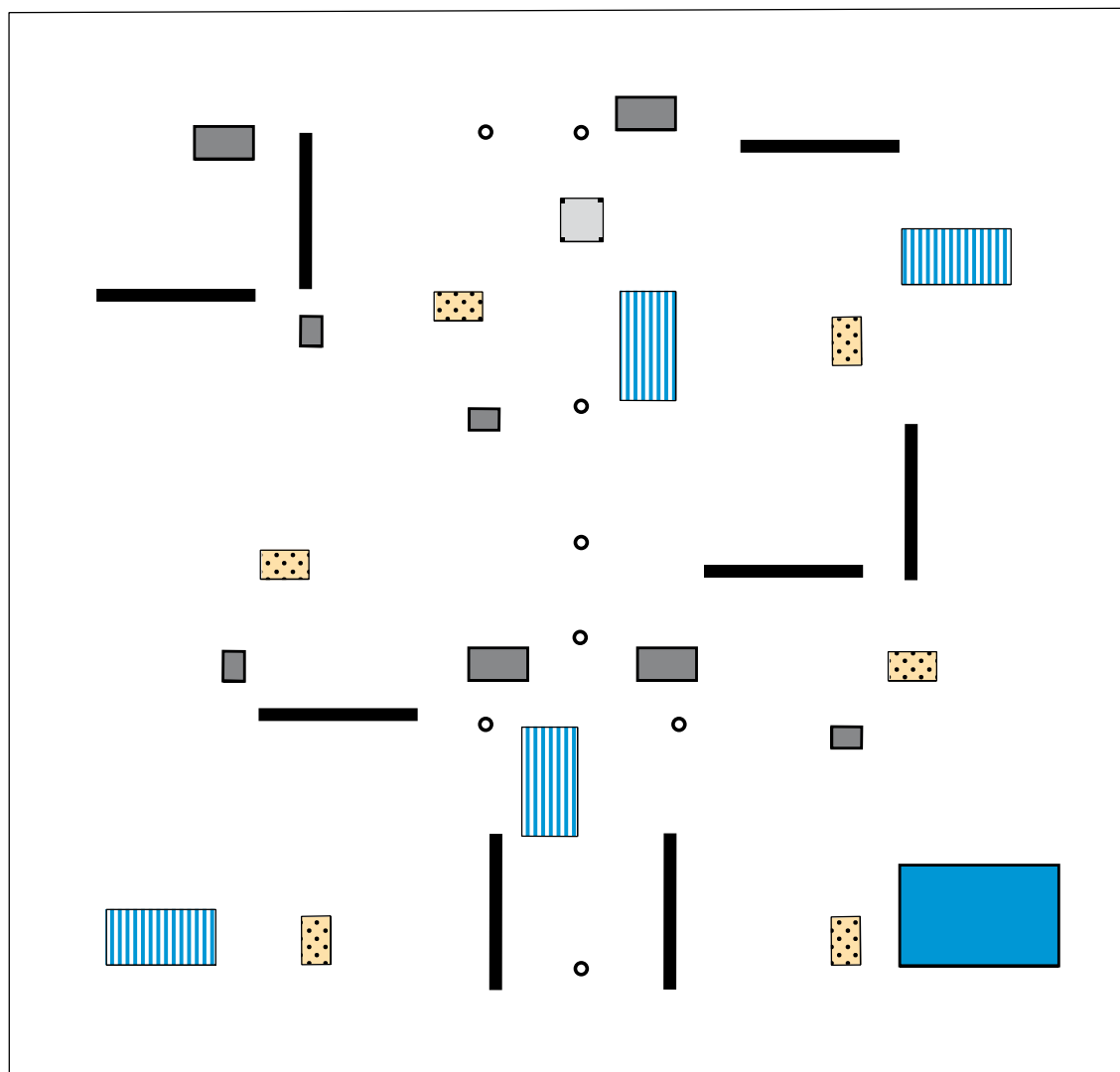
ORIENTATE THE MAP

Multi-gym, "real map"

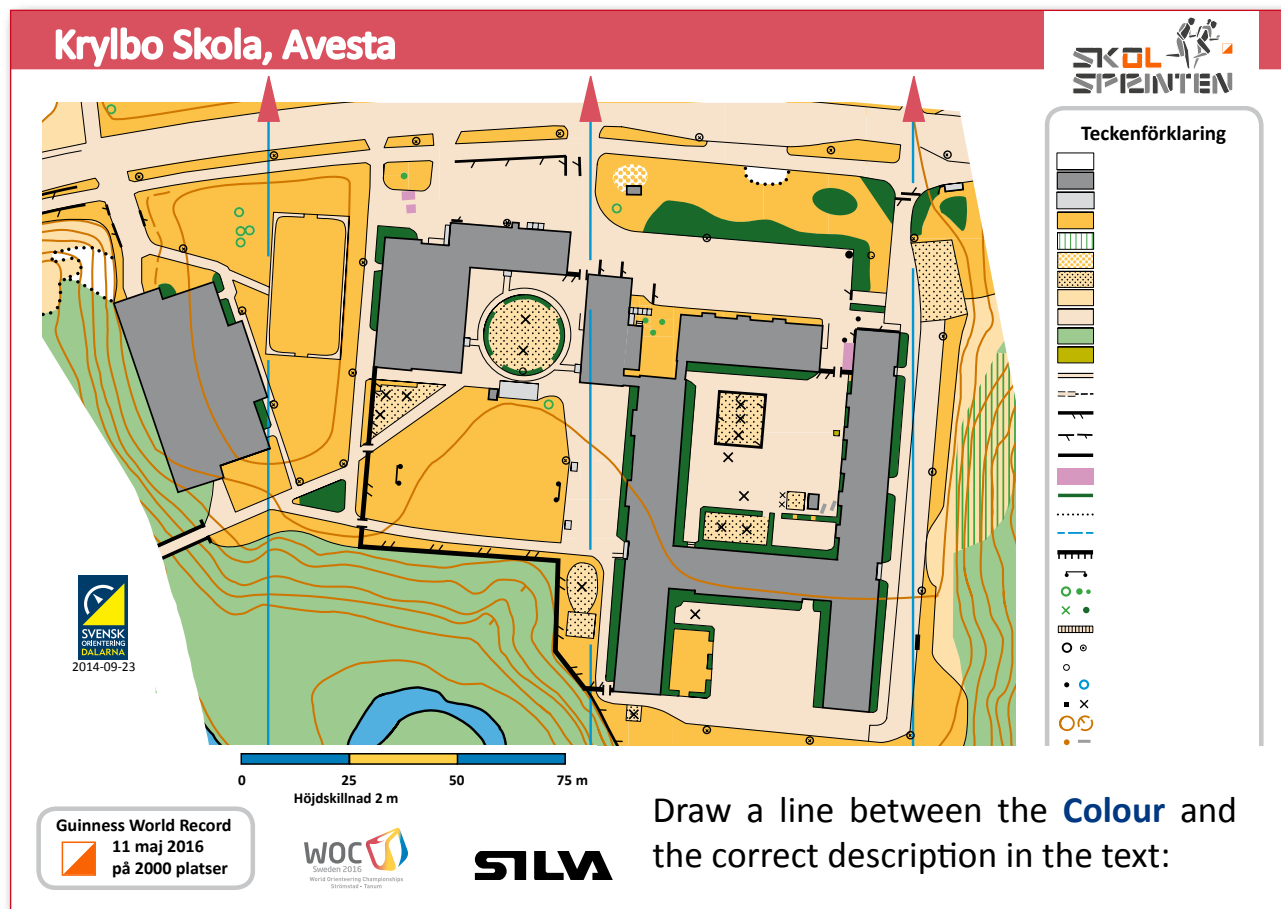


Gympasalen, "riktig karta"

Legend	
Canopy (Vualting buck)	
House (Vualting box)	
House (Vualting box, small)	
Sandy area (Springboard)	
Wall (Bench)	
Lake (Gym mat)	
Marsh (Mattress)	
Pole (Con)	



THE MAP'S COLOURS



Yellow

- Forest with good runnability.

Green

- Hills, pits.

Pink

- Rocks, cliffs, roads, fences, walls, bridges, pillars.

White

- Open land as fields, meadows and lawns.

Light brown

- Dense vegetation. Used when the terrain is difficult to run through or to highlight hedges.

Blue

- Houses, buildings. Light grey highlights canopies.

Brown

- Paved or hard gravel surfaces such as roads, car parks, school yards.

Black

- Temporary buildings, outdoor café, containers.

Grey

- Water: lakes, rivers, streams, ditches, marshes.

THE MAP'S SYMBOLS

Skräddarbacksskolan, Borlänge

SKOL-SPRINTEN

Teckenförklaring

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World Guinness Record
11 maj 2016
på 2000 platser

WOC
Sweden 2016
World Orienteering Championships
Örebro - Torsby

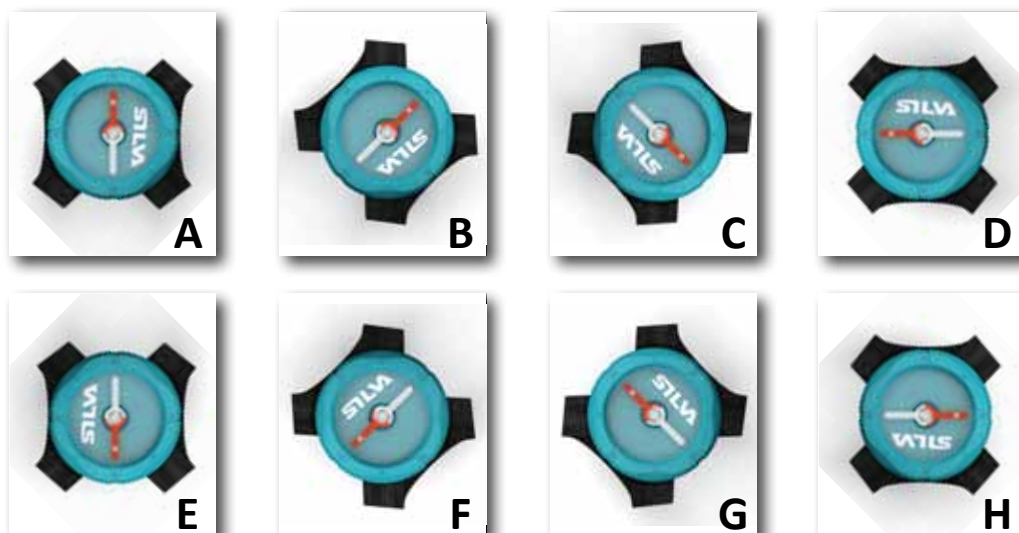
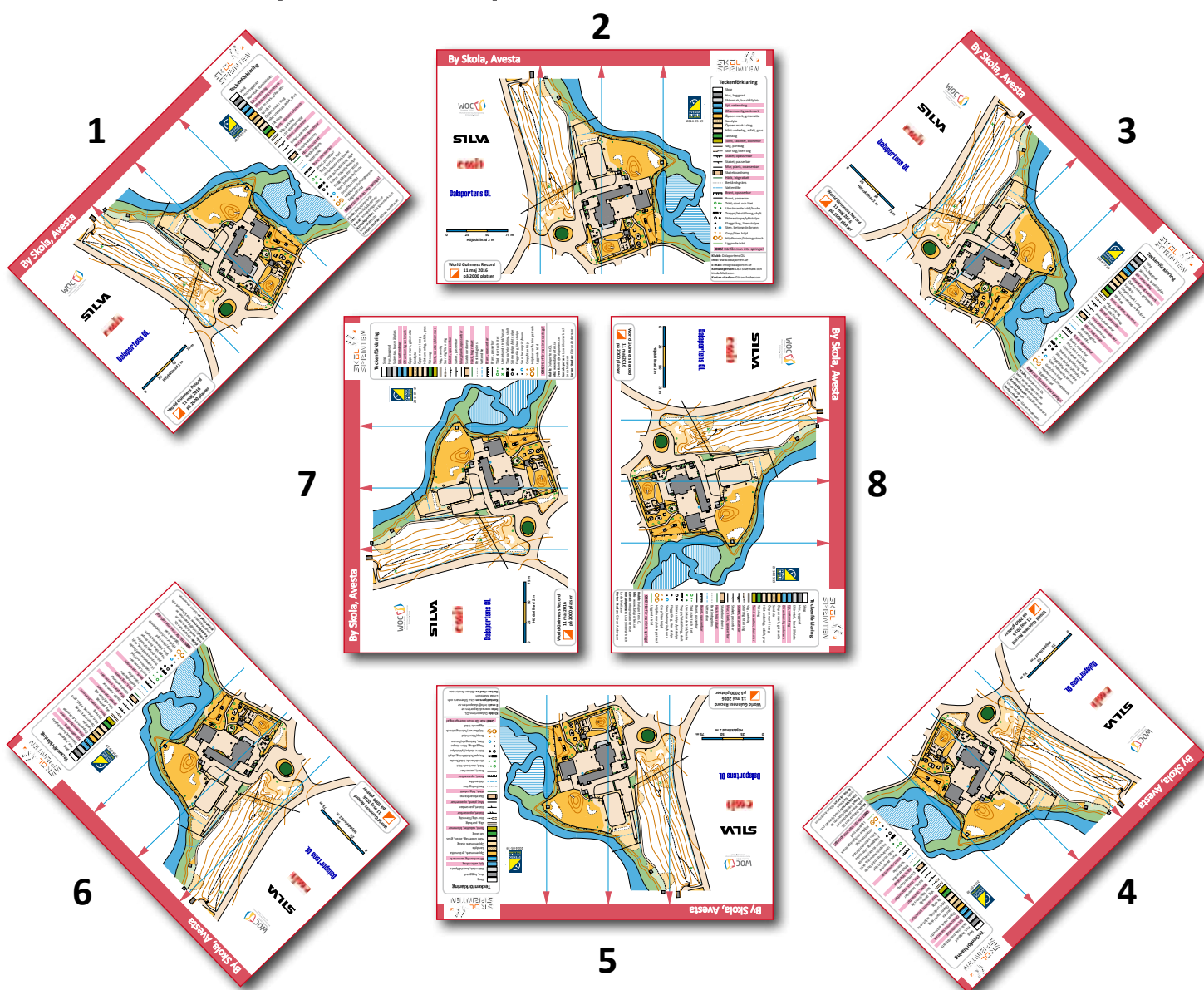
SILVA

Fill in the boxes with numbers you believe are consistent with the controls:

- | | |
|---|---|
| ☐ House, building | ☐ Vegetation boundary |
| ☐ Forest | ☐ Minor watercourse, stream |
| ☐ Canopy | ☐ Impassable cliff |
| ☐ Lawn, open land | ☐ Football goal |
| ☐ Sandy ground | ☐ Park bench |
| ☐ Private area, flower bed | ☐ Stair |
| ☐ Road, park road | ☐ Big post |
| ☐ Big path | ☐ Flag pole, small post |
| ☐ Small path | ☐ Boulder |
| ☐ Passable fence | ☐ Well |
| ☐ Impassable fence | ☐ Play equipment |
| ☐ Impassable wall | ☐ Hill, contour line |
| ☐ Passable wall | ☐ Dense vegetation |
| ☐ Big tree | ☐ Open land, scattered trees |
| ☐ Small tree | ☐ Knoll |
| ☐ Prominent vegetation feature | ☐ Impassable vegetation, hedge |

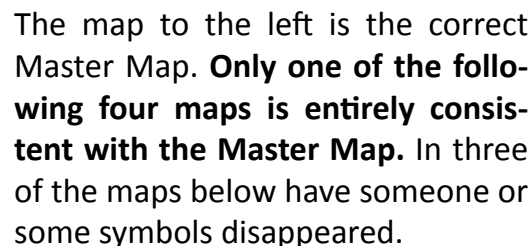
RED TO RED

Orientate correct map to correct compass



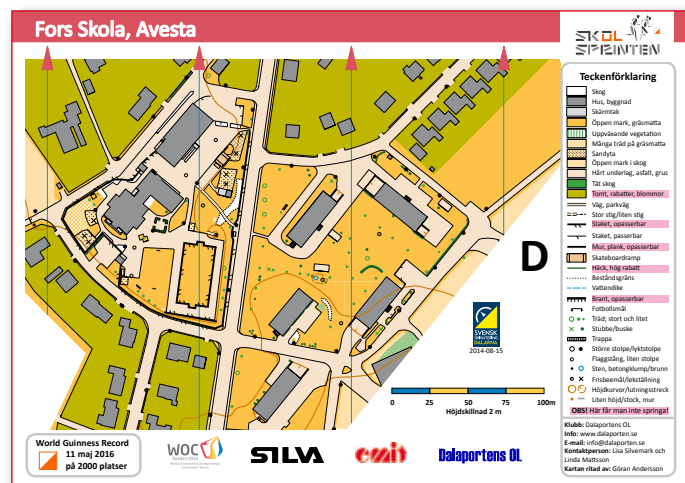
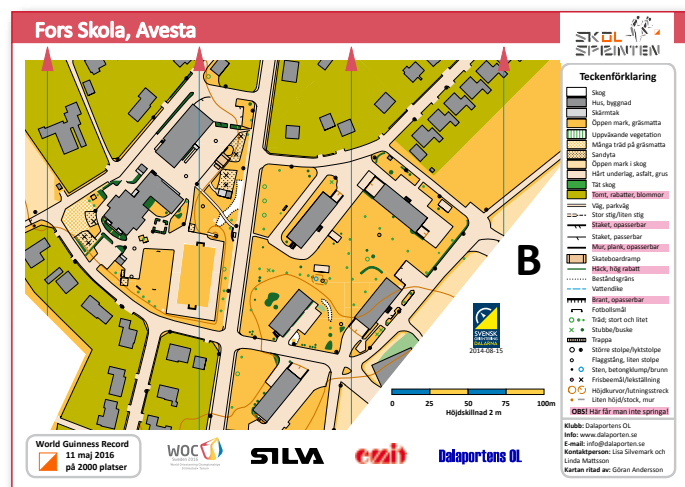
Draw a line between the **num-
ber** and the **letter** that you
think is correct "red to red":

- | | |
|---|---|
| 1 | A |
| 2 | B |
| 3 | C |
| 4 | D |
| 5 | E |
| 6 | F |
| 7 | G |
| 8 | H |

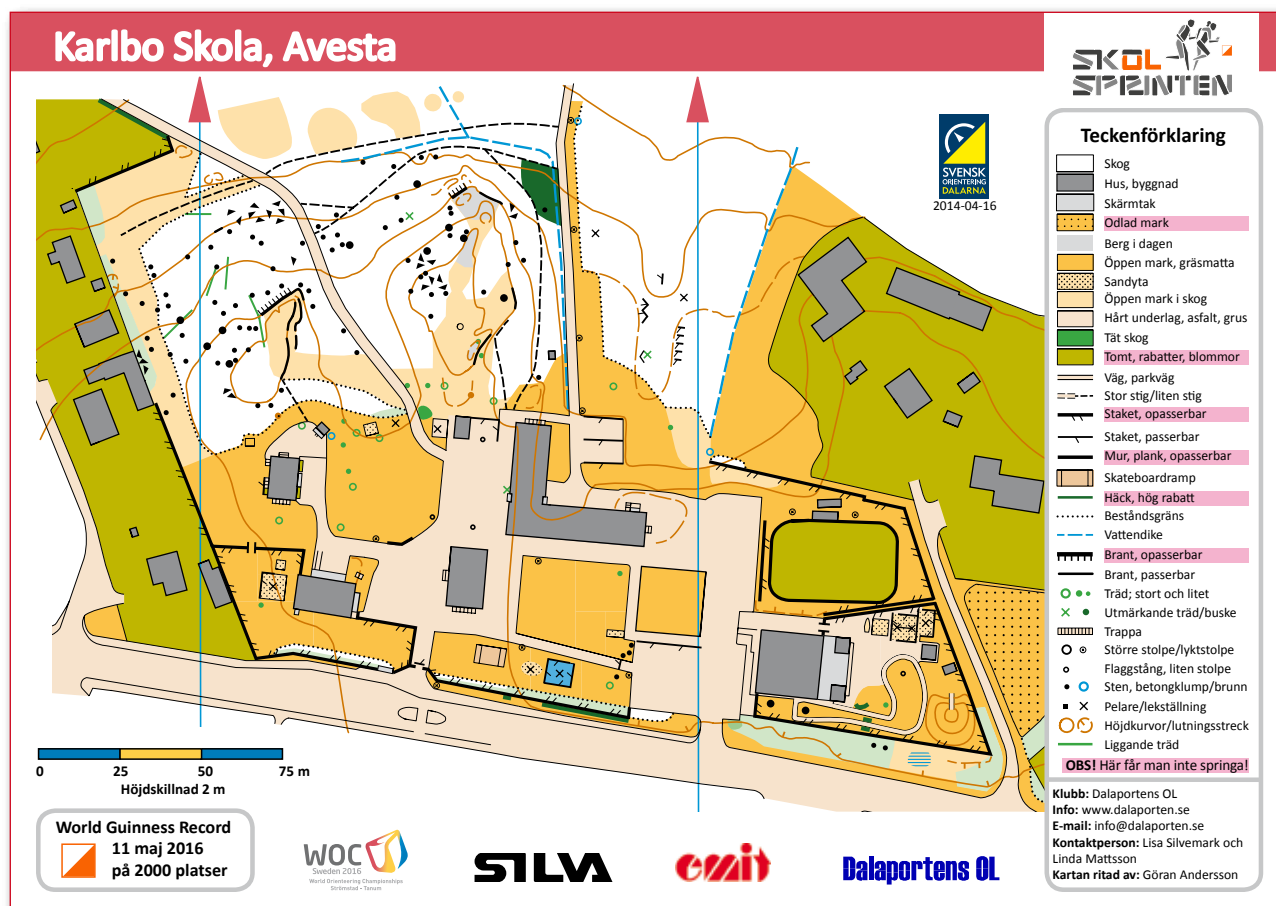
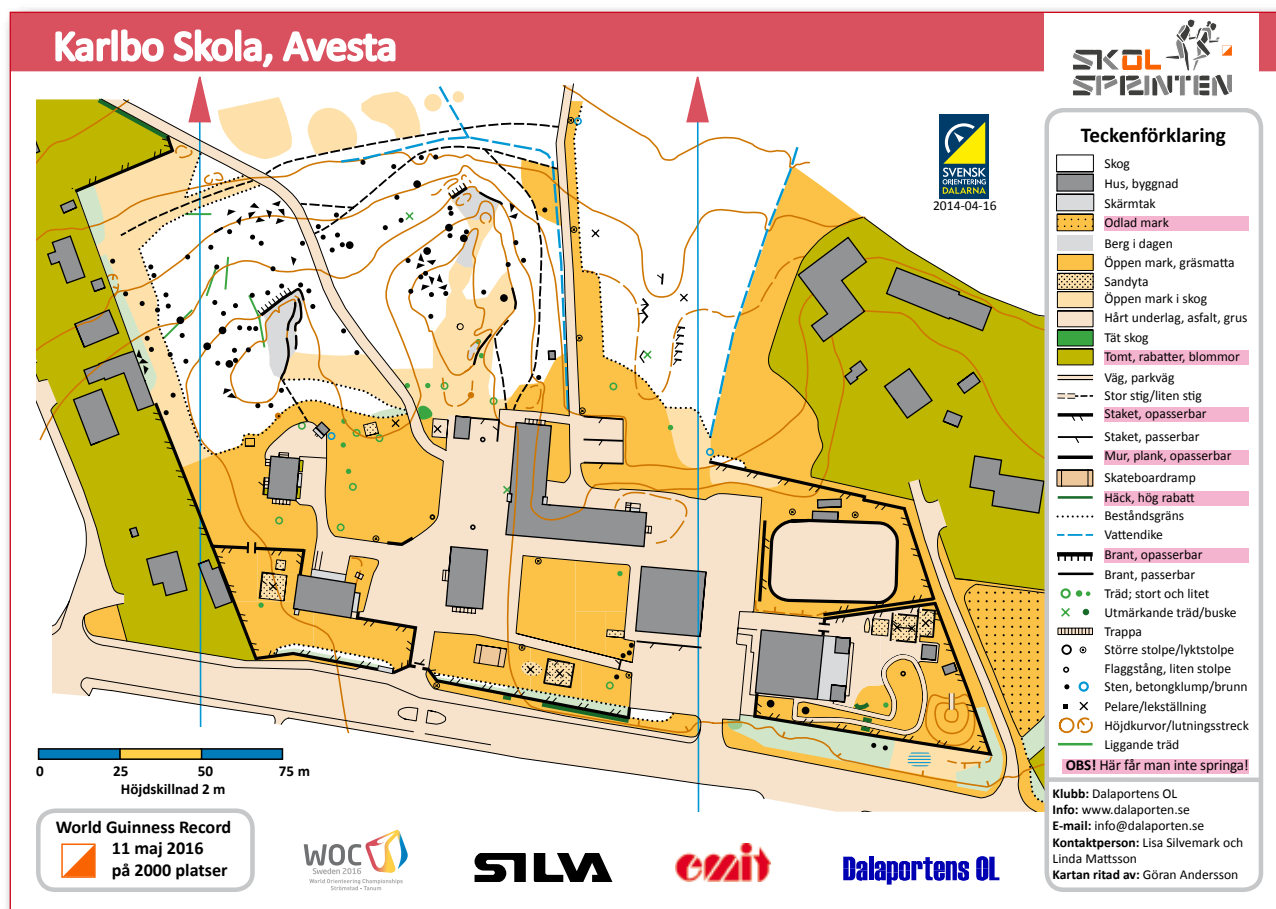


Which map is correct of:

- | | |
|----------|--|
| A | |
| B | |
| C | |
| D | |

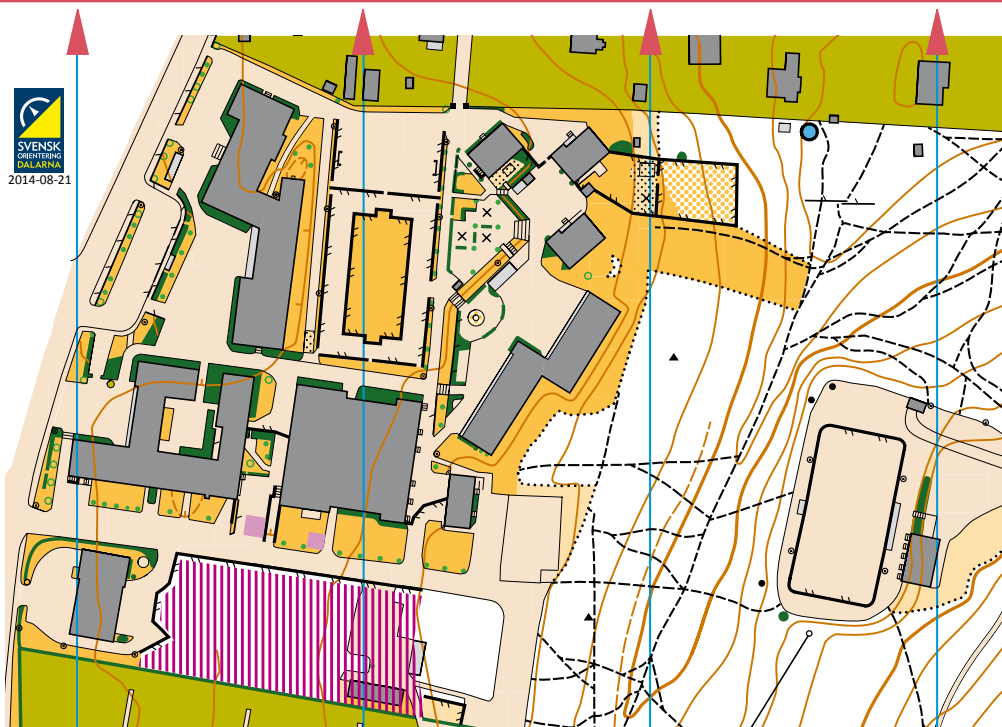


FIND FIVE FAULTS



FIVE SYMBOLS HAVE DISAPPEARED

Johan-Olovskolan, Horndal, Avesta



World Guinness Record
11 maj 2016
på 2000 platser

WOC
Sweden 2016
World Orienteering Championships
Sörmland - Torshälla

0 25 50 75 100m
Höjdskillnad 2 m

SILVA
Dalaportens OL

SKOL
SPRINTEN

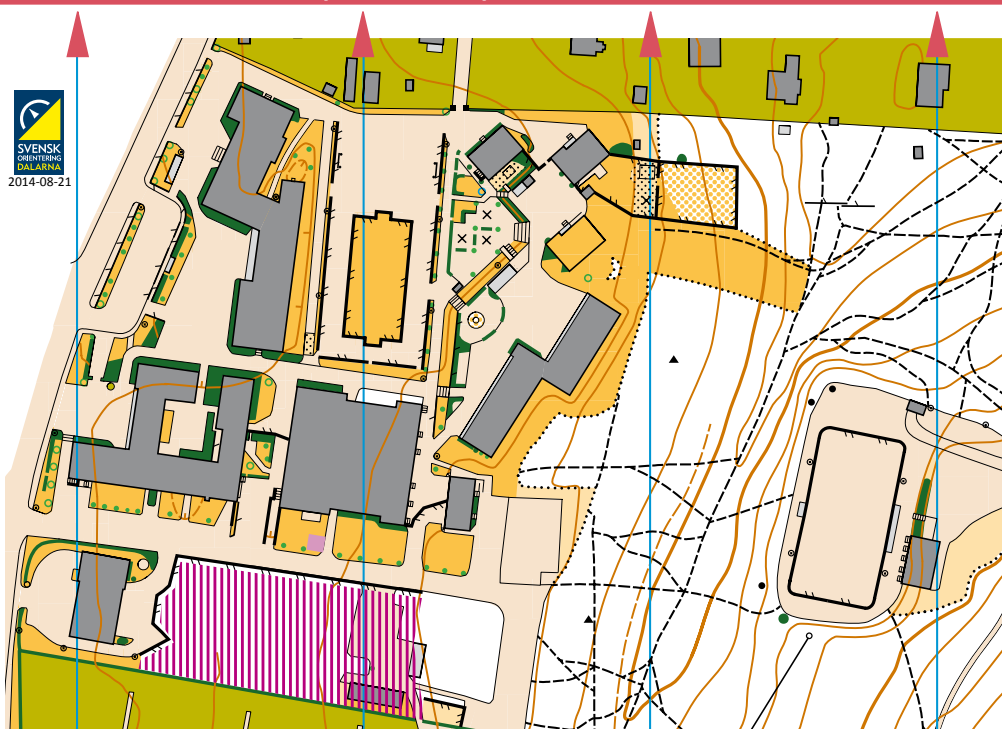
Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandyta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Tät skog
- Tomt, rabatter, blommor
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket, passerbar
- Mur, plank, opasserbar
- Skateboardramp
- Häck, hög rabatt
- Beståndsgräns
- Vattendike
- Brant, opasserbar
- Fotbollsmål
- Träd; stort och litet
- Utmärkande träd/buske
- Trappa
- Större stolpe/lyktstolpe
- Flaggstång, liten stolpe
- Sten, betongklump/brunn
- Frisbeemål/lekställning
- Höjdkurvor/lutningsstreck
- Liten höjd/stock, mur

OBS! Här får man inte springa!

Klubb: Dalaportens OL
Info: www.dalaporten.se
E-mail: info@dalaporten.se
Kontaktperson: Lisa Silvermark och Linda Mattsson
Kartan ritad av: Göran Andersson

Johan-Olovskolan, Horndal, Avesta



World Guinness Record
11 maj 2016
på 2000 platser

WOC
Sweden 2016
World Orienteering Championships
Sörmland - Torshälla

0 25 50 75 100m
Höjdskillnad 2 m

SILVA
Dalaportens OL

SKOL
SPRINTEN

Teckenförklaring

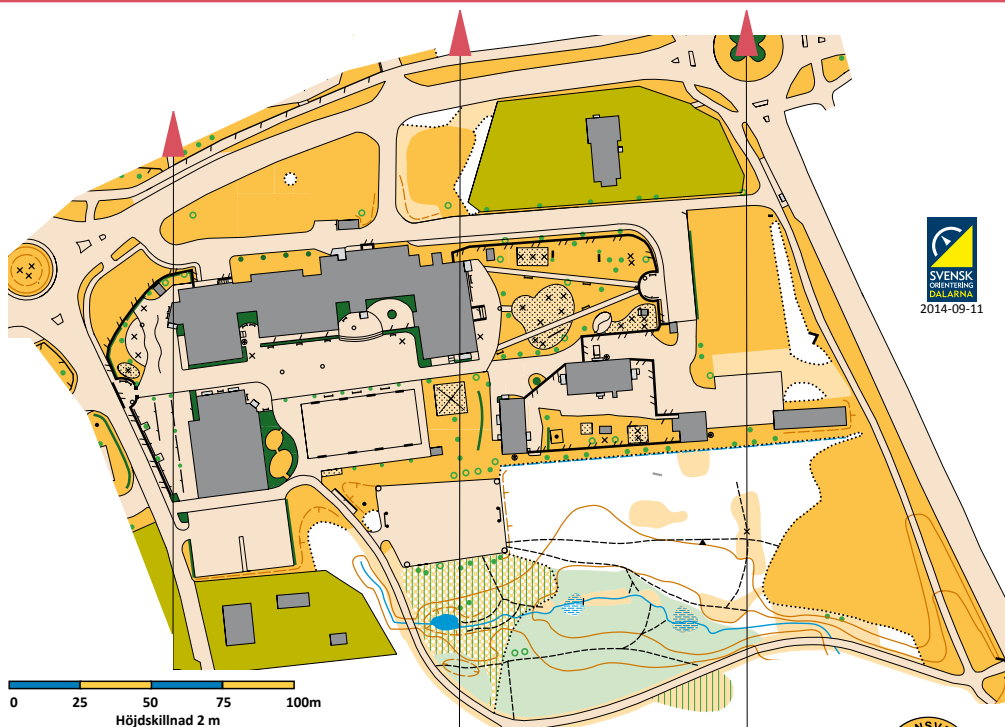
- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandyta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Tät skog
- Tomt, rabatter, blommor
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket, passerbar
- Mur, plank, opasserbar
- Skateboardramp
- Häck, hög rabatt
- Beståndsgräns
- Vattendike
- Brant, opasserbar
- Fotbollsmål
- Träd; stort och litet
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- Flaggstång, liten stolpe
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- Höjdkurvor/lutningsstreck
- Liten höjd/stock, mur

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Kontaktperson: Lisa Silvermark och Linda Mattsson
Kartan ritad av: Göran Andersson

FIVE SYMBOLS HAVE BEEN ADDED

Kvarnsvedens Skola, Borlänge



Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandyta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Tät skog
- Tomt, rabatter, blommor
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket/cykelställ
- Mur, plank, opasserbar
- Skateboardramp
- Häck, hög rabatt
- Beståndsgrens
- Vattendike
- Brant, opasserbar
- Fotbollsmål/parkbänk
- Träd; stort och litet
- Särpräglad träd/buske
- Trappa
- Större stolpe, lyktstolpe
- Flaggstång, liten stolpe
- Sten, betongklump/brunn
- Frisbeemål/lekställning
- Höjdkurvor/lutningsstreck
- Liten höjd/stock, mur

Klubb: Kvarnsvedens Golf OK
 Info: www.kgoifok.se
 E-mail: info@kgoifok.se
 Kontaktperson: Erik Stigsmark
 Kartan ritad av: Göran Andersson

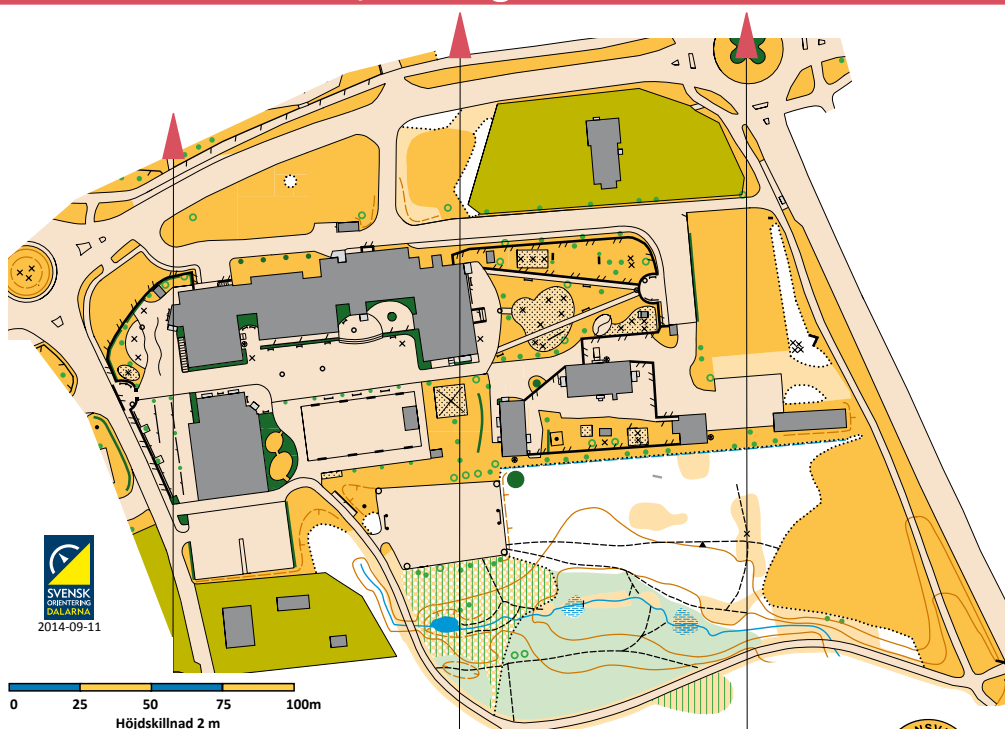
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 11 maj 2016
 på 2000 platser



SILVA



Kvarnsvedens Skola, Borlänge



Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandyta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Tät skog
- Tomt, rabatter, blommor
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket/cykelställ
- Mur, plank, opasserbar
- Skateboardramp
- Häck, hög rabatt
- Beståndsgrens
- Vattendike
- Brant, opasserbar
- Fotbollsmål/parkbänk
- Träd; stort och litet
- Särpräglad träd/buske
- Trappa
- Större stolpe, lyktstolpe
- Flaggstång, liten stolpe
- Sten, betongklump/brunn
- Frisbeemål/lekställning
- Höjdkurvor/lutningsstreck
- Liten höjd/stock, mur

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World Guinness Record
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 på 2000 platser

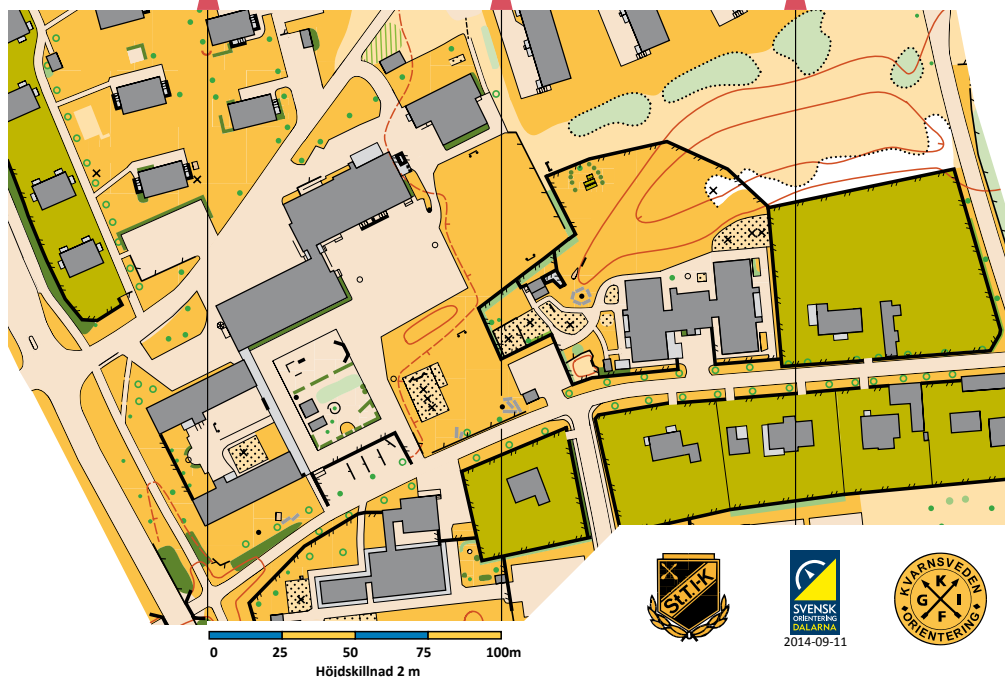


SILVA



FIVE SYMBOLS HAVE BEEN ENLARGED

Forssaängskolan, Borlänge



Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandyta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Tät skog
- Tomt, rabatter, blommor
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket/cykelställ
- Mur, plank, opasserbar
- Bord/blomstersten
- Häck, hög rabatt
- Beståndsgräns
- Vattendike
- Brant, opasserbar
- Fotbollsmål/parkbänk
- Träd; stort och litet
- Särpräglad träd/buske
- Trappa
- Större stolpe, lyktstolpe
- Flaggstång, liten stolpe
- Sten, betongklump/brunn
- Pelare/lekställning
- Höjdkurvor/lutningsstreck
- Liten höjd/stock, mur

OBS! Här får man inte springa!

Klubb: Stora Tuna OK
Kvarnsvedens Golf OK
Info: www.sttunaik.nu
www.kgoifok.se
Kartan ritad av: Göran Andersson

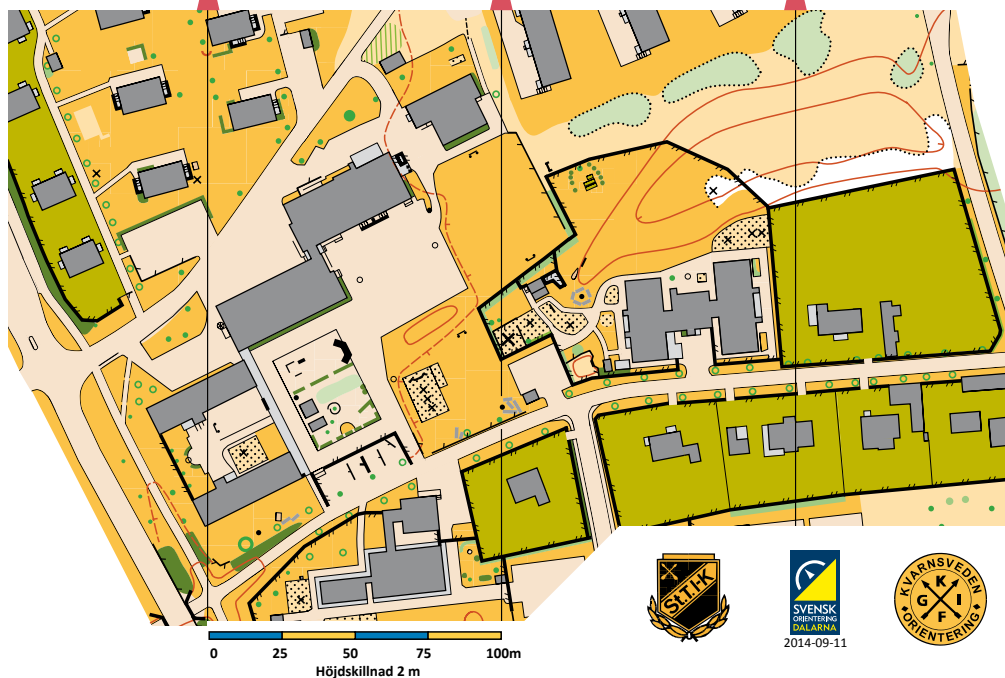
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2014-09-11



Forssaängskolan, Borlänge



Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandyta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Tät skog
- Tomt, rabatter, blommor
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket/cykelställ
- Mur, plank, opasserbar
- Bord/blomstersten
- Häck, hög rabatt
- Beståndsgräns
- Vattendike
- Brant, opasserbar
- Fotbollsmål/parkbänk
- Träd; stort och litet
- Särpräglad träd/buske
- Trappa
- Större stolpe, lyktstolpe
- Flaggstång, liten stolpe
- Sten, betongklump/brunn
- Pelare/lekställning
- Höjdkurvor/lutningsstreck
- Liten höjd/stock, mur

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Info: www.sttunaik.nu
www.kgoifok.se
Kartan ritad av: Göran Andersson

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2014-09-11



CORRECT ANSWERS TO THE EXERCISES

The map's colours

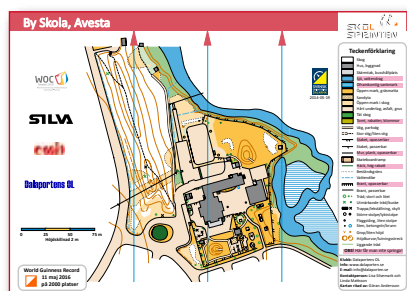
- Yellow** — Forest with good runnability.
- Green** — Hills, pits.
- Pink** — Rocks, cliffs, roads, fences, walls, bridges, pillars.
- White** — Open land as fields, meadows and lawns.
- Light brown** — Dense vegetation. Used when the terrain is difficult to run through to highlight hedges.
- Blue** — Houses, buildings. Light grey highlights canopies.
- Brown** — Paved or hard gravel surfaces such as roads, car parks, school yards.
- Black** — Temporary buildings, outdoor café, containers.
- Grey** — Water: lakes, rivers, streams, ditches, marshes.

Red to Red

Draw a line between the **number** and the **letter** that you think is correct "red to red":

- 1 — A
- 2 — B
- 3 — C
- 4 — D
- 5 — E
- 6 — F
- 7 — G
- 8 — H

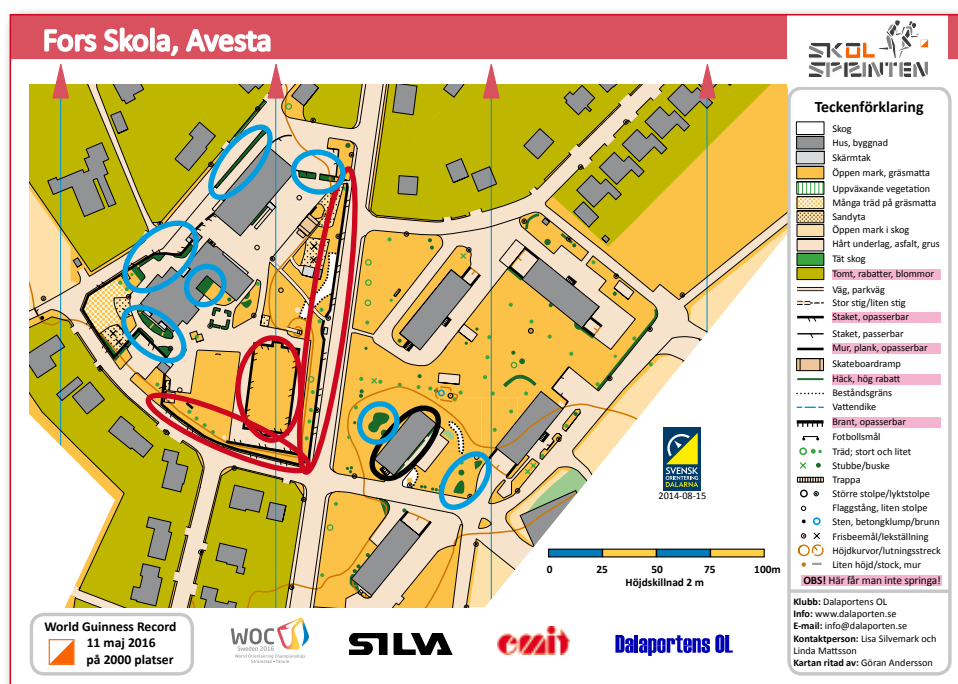
2



CORRECT ANSWERS TO THE EXERCISES

The map's symbols

- | | |
|---------------------------------------|--|
| 15 House, building | 1 Vegetation boundary |
| 31 Forest | 10 Minor watercourse, stream |
| 26 Canopy | 7 Impassable cliff |
| 12 Lawn, open land | 29 Football goal |
| 32 Sandy ground | 21 Park bench |
| 25 Private area, flower bed | 9 Stair |
| 13 Road, park road | 23 Big post |
| 28 Big path | 4 Flag pole, small post |
| 27 Small path | 5 Boulder |
| 17 Passable fence | 30 Well |
| 18 Impassable fence | 16 Play equipment |
| 22 Impassable wall | 20 Hill, contour line |
| 8 Passable wall | 11 Dense vegetation |
| 2 Big tree | 24 Open land, scattered trees |
| 3 Small tree | 19 Knoll |
| 6 Prominent vegetation feature | 14 Impassable vegetation, hedge |



Map to Map

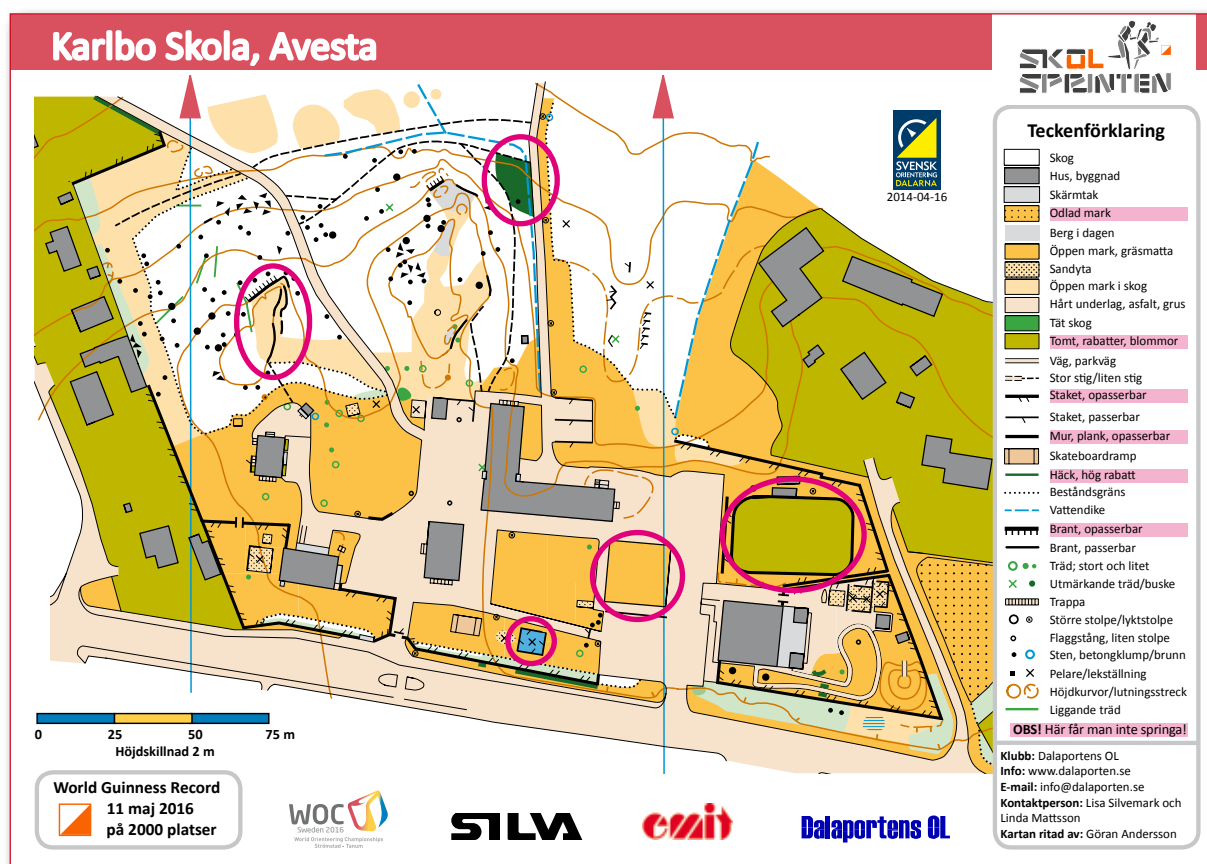
The map to the left is the correct Master Map. **Map C corresponds to the Master Map.** The three different colours of the rings show the symbols which are removed from respective map.

Correct answer:

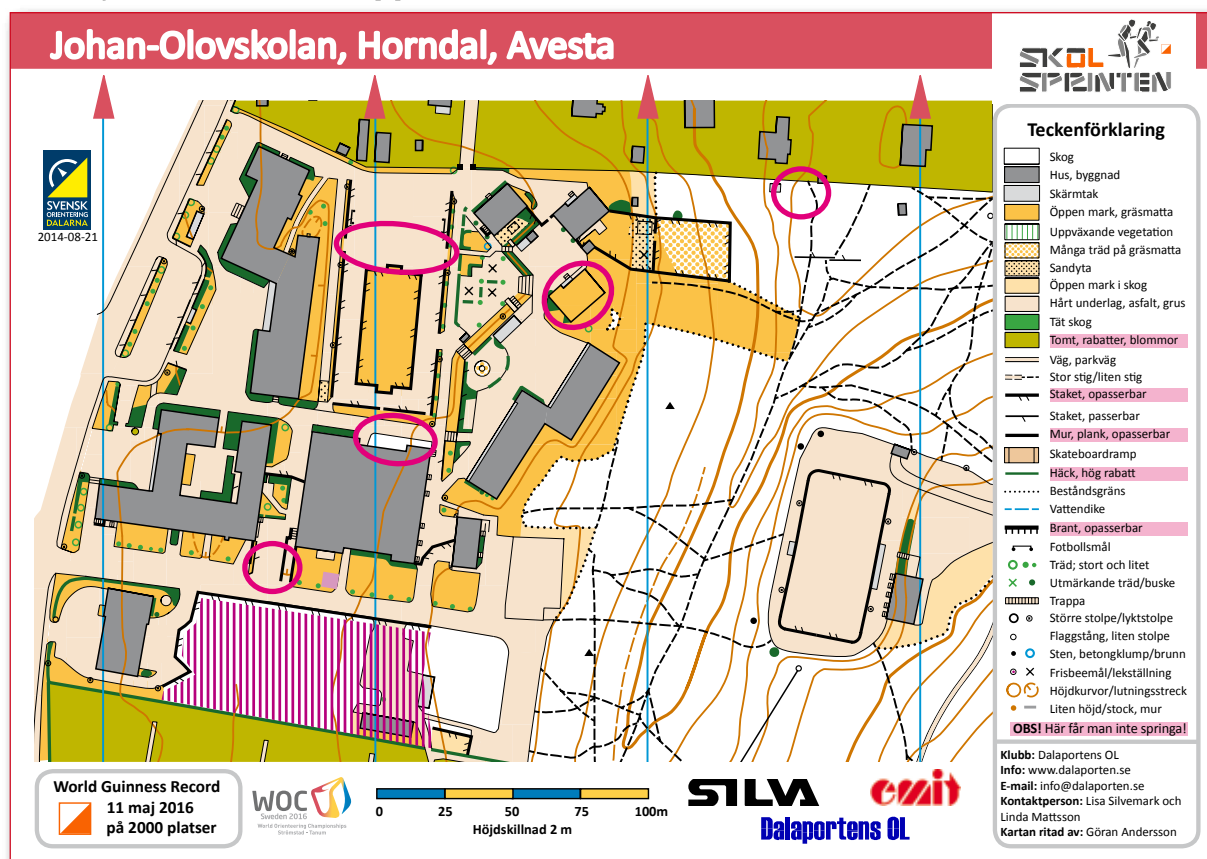
- | | |
|----------|-------------------------------------|
| A | ☐ |
| B | ☐ |
| C | ☒ |
| D | ☐ |

CORRECT ANSWERS TO THE EXERCISES

Find five faults



Five symbols have disappeared



CORRECT ANSWERS TO THE EXERCISES

Five symbols have been added

Kvarnsvedens Skola, Borlänge

Höjdskillnad 2 m

0 25 50 75 100m

Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandyta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Tät skog
- Tomt, rabatter, blommor**
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket/cykelstall
- Mur, plank, opasserbar
- Skateboardramp
- Häck, hög rabatt
- Beståndsgräns
- Vattendike
- Brant, opasserbar
- Fotbollsmål/parkbänk
- Träd; stort och litet
- Särpräglad träd/buske
- Trappa
- Större stolpe, lyktstolpe
- Flaggstång, liten stolpe
- Sten, betongklump/brunn
- Frisbeemål/lekstallning
- Höjdkurvor/lutningsstreck
- Liten höjd/stock, mur

OBS! Här får man inte springa!

Klubb: Kvarnsvedens Golf OK
Info: www.kgoifok.se
E-mail: info@kgoifok.se
Kontaktperson: Erik Stigsmark
Kartan ritad av: Göran Andersson

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11 maj 2016
på 2000 platser

WOC
Sweden 2016
World Orienteering Championships
Borlänge - Torshälla

Five symbols have been enlarged

Forssaängskolan, Borlänge

Höjdskillnad 2 m

0 25 50 75 100m

Teckenförklaring

- Skog
- Hus, byggnad
- Skärmtak
- Öppen mark, gräsmatta
- Uppväxande vegetation
- Många träd på gräsmatta
- Sandyta
- Öppen mark i skog
- Hårt underlag, asfalt, grus
- Tät skog
- Tomt, rabatter, blommor**
- Väg, parkväg
- Stor stig/liten stig
- Staket, opasserbar
- Staket/cykelstall
- Mur, plank, opasserbar
- Bord/blomstersten
- Häck, hög rabatt
- Beståndsgräns
- Vattendike
- Brant, opasserbar
- Fotbollsmål/parkbänk
- Träd; stort och litet
- Särpräglad träd/buske
- Trappa
- Större stolpe, lyktstolpe
- Flaggstång, liten stolpe
- Sten, betongklump/brunn
- Pelare/lekstallning
- Höjdkurvor/lutningsstreck
- Liten höjd/stock, mur

OBS! Här får man inte springa!

Klubb: Stora Tuna OK
Kvarnsvedens Golf OK
Info: www.sttunaik.nu
www.kgoifok.se
Kartan ritad av: Göran Andersson

World Guinness Record
11 maj 2016
på 2000 platser

WOC
Sweden 2016
World Orienteering Championships
Borlänge - Torshälla

NOTES



COMPASSES



HEADLAMPS



ORIENTEERING MARKERS