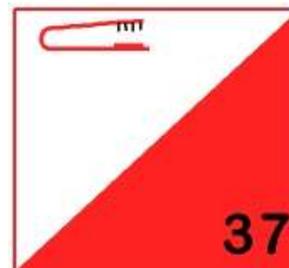# Orienteering in SA Schools:
A Starter Pack
Originally compiled by Chris Franklin & Paul Hoopmann 2015 updated Ken Thompson 18th March 2017

Orienteering is a fun navigation sport – finding your way over a set course with the aid of a map, in the shortest possible time. Therefore **each child** needs a copy of a legible map with a course marked on the map.

Courses, which need to be different each time, consist of controls (checkpoints) circled on the map and these controls should be found by map reading skills, not by luck (if hidden) or by following others. Courses are usually not seen by orienteers until their start time has commenced.

Orienteers need to know that they have found the correct control, so controls have identifying number (or letters) on them – a control code. Orienteers also need to be able to prove that they have found the correct controls. This is usually done with an orienteering 'punch' attached to the control, which is used to record unique 'teeth marks' in the correct punch boxes on the map (or on a separate punch card).

The simplest controls could be a piece of card, taped to a mapped feature, with a letter on the card which the child records (use short pencils for running) and unjumbles into a word on finishing. Also controls could simply be a carried set of questions (e.g. how many bolts on the sign post?). However, proper controls are hung flags or lockable plates, the faces of which, are divided into a red and a white triangle with an identifying control code and a punch. Some large schools have 30 or more small permanently fixed plates with code letters on them, from which to make up courses (but children can get to know where they are located, thus nullifying navigation so they need to be moved from time to time). Flags and punches can be bought (see Resources), however lockable plate and permanent controls need to be made up.

Orienteering Information and Resources

Orienteering SA   http://www.sa.orienteering.asn.au/

Orienteering Australia   http://www.orienteering.asn.au/

Links to Teaching Resources
http://sa.orienteering.asn.au/juniorsandschools/TeacherResources/

For support regarding any aspect of orienteering in schools email:
schools@sa.orienteering.asn.au

Getting a School Mapped
An orienteering map can be made of your school (or updated if one is already available) and training provided ($0 for member schools $50 + travel costs for non-member schools) to enable you to use software to plan & print your own courses.
Mapping Costs: (note Schools with a Sporting Schools Grant are not eligible for the map subsidies which are provided using ORS funds)
   a. New Map. A quotation is provided by our mapping coordinator (Adrian Uppill) who then appoints a mapper once the school accepts the quotation. A $7.50 OSA administration fee applies. Currently the quotation for the mapping is based on an

hourly rate of $30 and travel costs of $0.50/km. In most cases a new rectified aerial photograph is required which is charged at a flat non subsidized rate of $100. Schools are able to have a copy of this photography. The mapping element of the quotation is subsidized up to a maximum of $330 where the cost of the map is $660.

b. <u>Map Update.</u> Minor updates are provided at a flat rate of $100 up to a maximum mapping cost of $200. Where it is estimated that the actual cost of an update will exceed this amount a quotation will be provided by the mapper or mapping coordinator.

Primary schools are able to access full funding for mapping by registering with the Sporting Schools Programme. Go to the Sporting Schools section of our website for more details: http://sa.orienteering.asn.au/juniorsandschools/sportingschools/

Free software to make your own maps is at :http://www.ocad.com/en/downloads/freeware or http://oorienteering.sourceforge.net/ (But getting a map made as above is very cheap, as it is subsidised by Orienteering SA. or the Sporting Schools Programme)

Using your new map to draw and print courses using Purple Pen: a free program for course planning and printing http://purplepen.golde.org/
Once you have your new or updated school map the next step is to install and learn how to use the above software.
Notes on use & installation of Purple Pen:
http://sa.orienteering.asn.au/gfolder/admin/OASAGuidelinesPolicies/15%20Using%20Purple%20Pen%20For%20Course%20Planning.pdf

A good option is to get approximately one hour training in the basics of course planning using Purple Pen software Cost $50 plus travel costs. Member schools free. This training counts towards teacher professional development hours.

Orienteering Supplies: http://www.osoa.com.au
http://www.wildfiresports.com.au/shop-by-sport/explore/orienteering

Ideas & Info for School Orienteering:
'Orienteering in Schools' 2014 ACHPER PowerPoint Presentation

http://wa.orienteering.asn.au/get-involved/wa-school-programs/

http://www.orienteering.asn.au/gfolder/schools/successfulOrienteeringProgram.pdf

Excellent Book: 'Orienteering Games: *The Ultimate Teaching Resource'*
Electronic version $22, Printed version $48.50 *https://oq.asn.au/o-games-book*

Do It Yourself Orienteering: for the location of permanent orienteering courses and for free map download for these;

http://sa.orienteering.asn.au/DIYOrienteering

Catching Features: a computer orienteering game used to teach map reading and orienteering skills
http://www.catchingfeatures.com/

Videos:
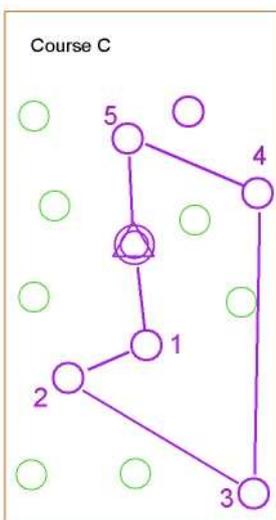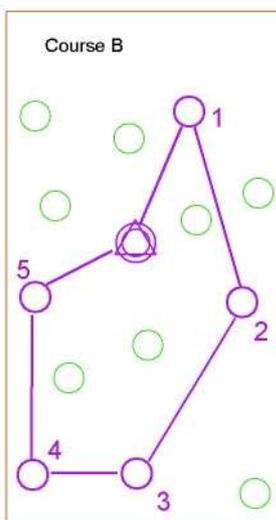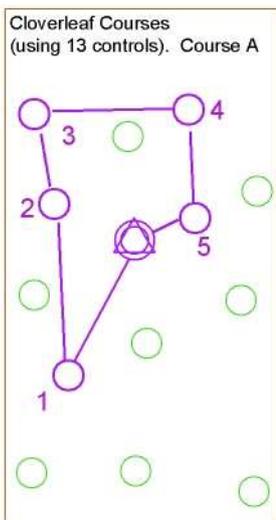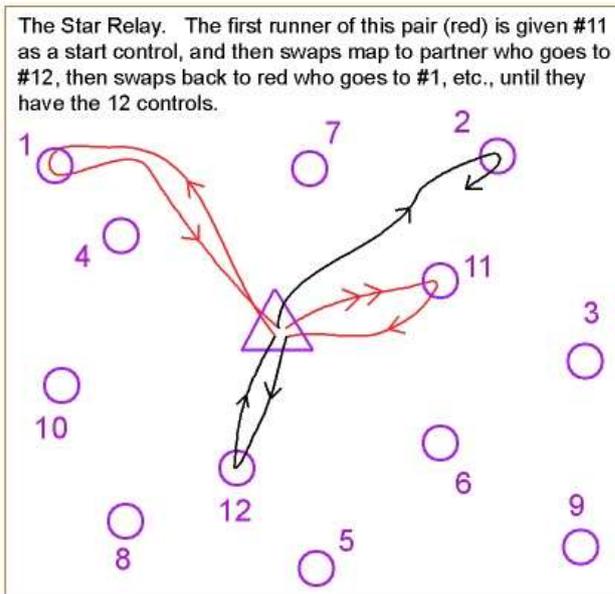http://www.youtube.com/user/OrienteeringAUS

Types of Orienteering Courses

The **Normal Course** consists of numbered controls that have to be visited in their numbered order. To minimise following, competitors start at one or two minute intervals. Normal courses work well when set up for classroom teachers who can send children off as they finish other classroom work, using the closest control as the first on their course and then finishing back at the classroom, where (when they have recovered) they can go on with other work. However it may not suit a PE teacher who only has a 45 minute block in which to get everyone out and back. But two starters can start at the same time if half do the course backwards and with the Purple Pen program it is easy to make this second, backwards course. If another pair of the controls is chosen as first and last controls halfway around the course, it is possible to have two more starters doing the course forwards or backwards at the same time, thus getting 28 starters out in seven minutes.

A Normal Course in purple.

The same controls but the course reversed.

Another course starting half way around.
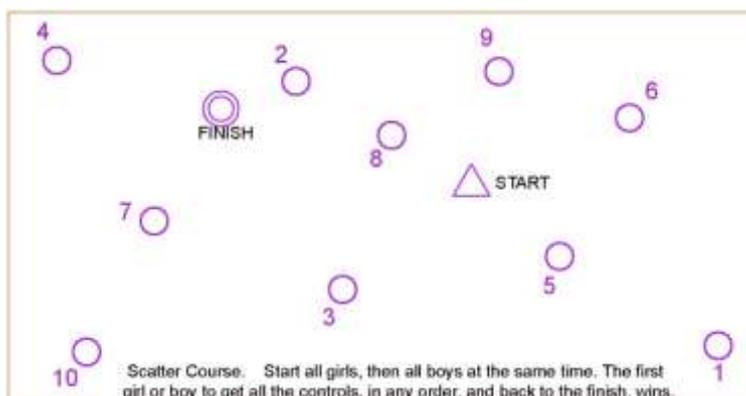

And this course reversed.
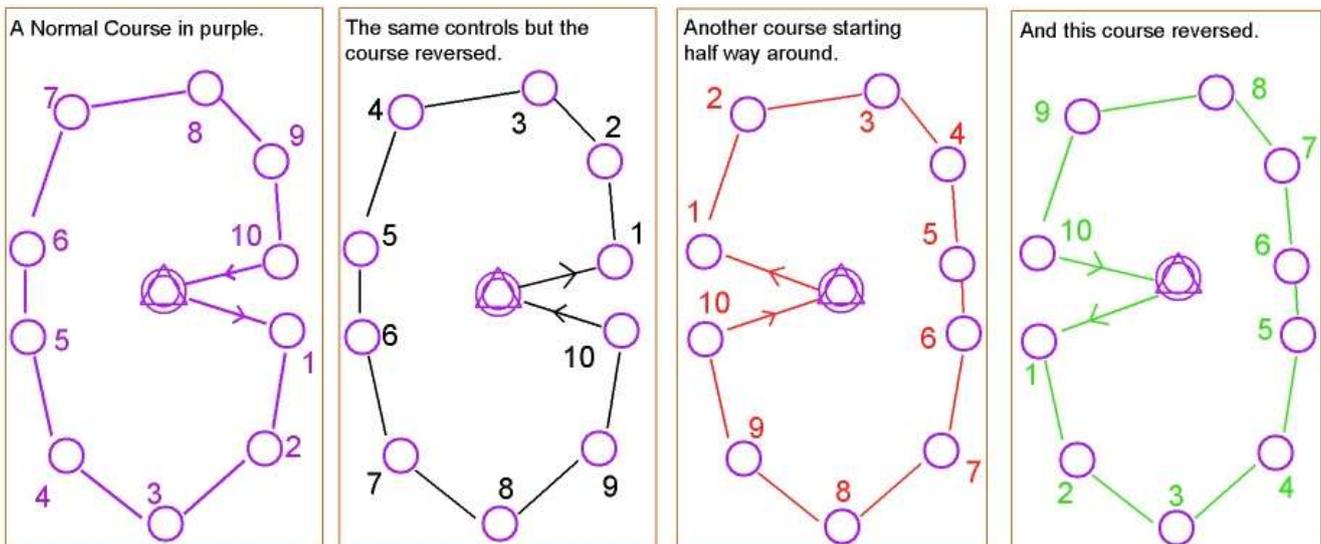
The **Star Relay** format could have 12 numbered controls and the children in teams of two with one map between them. The start runners from each team are all given a different one of the 12 control numbers to find. Then on 'Go' these 12 first runners each find their allocated control and return to the start to hand the map (and maybe a control punch card) to their partner who has to find the **next** control in **numbered** order and then return to the start and hand the map back to the first runner and so on, until the pair have found all 12 controls. (With ten controls start the girls first and the boys two minutes later.) No timing is required as the first male or female team to record all the controls and to return, wins. An **Extension Activity** is to have several maps taped to a table or wall, and on 'Go', or when tagged, a runner goes to the table, memorises the location of their next control, finds it, then returns to tag their partner who runs to the table/wall, etc.

The Star Relay. The first runner of this pair (red) is given #11 as a start control, and then swaps map to partner who goes to #12, then swaps back to red who goes to #1, etc., until they have the 12 controls.

A **Cloverleaf or Loop Course** has three different short courses, A, B and C, each on a separate map. Three runners start at the same time each on a different course, and each with a punch card that has punch boxes for the three courses on it. On completing their first course the three runners put their map back into the correct box, A, B or C, then take a map out of the next box and complete that course, etc., until the three courses are all completed. If students are grouped in threes according to their ability, any competition could just be between those three students who started at the same time thus removing the need for timing them. This Cloverleaf format could also be conducted as a relay where each course map is handed to a partner to complete that loop as well. Thus each pair is competing against two other pairs, and runners get rest breaks between the loops.

Cloverleaf Courses (using 13 controls). Course A

Course B

Course C

A **Scatter Course** has a good spread of controls over the map area, there are no lines joining up the controls in a set order (although the control circles on the map do need to be given a number so that children know which box to punch in), and there is no easily seen way of collecting all the controls by a

Scatter Course. Start all girls, then all boys at the same time. The first girl or boy to get all the controls, in any order, and back to the finish, wins.

shorter route. Students are told that they are to find all the controls in **any** order, and that the first to have done this and returned to the finish (the double circle) wins. At the start (the triangle - which can be in a different part of the map to the finish), maps are given say to all the girls and on 'Go' they can look at their maps and begin. A couple of minutes later the boys can be likewise released on their Scatter Course competition. A small version of a scatter course is good at the end of the introductory lesson to orienteering, as the teacher can, depending on the amount of time left in the lesson, nominate a suitable number of controls to be found. Another version of a Scatter Course is a **Score Course** where each control is given a points value and there is a set time to collect as many 'points' as possible and be back to the finish. A set number of points per minute are deducted for being back late (need watches or a warning siren).

NB If planning a Scatter Course with Purple Pen, select 'Score Course', instead of 'Normal'.

General Hints on Setting and Conducting Courses

The free download Purple Pen is great for setting courses, intuitive, and Orienteering SA can send someone to give a tutorial in its use, if need be. To download, see 'Resources'.

A good idea before setting any courses is to walk around the school ground with a 'possible controls sites map', and circle all the likely positions for a control location, i.e. where there is something to tie or lock the control onto, no nearby dangers, the map is correct, etc. Controls should be on mapped features and in the middle of the control circle.

Expect children's times for the same course to vary. The fastest Yr 3s can do a 1km course locating and punching ten controls in a large primary school, in 7 minutes, whilst the slowest Yr 7s on the same course may take 25 minutes. The latter are content to treat it as a recreation instead of as a competition, which is quite okay. They may walk, but are still orienteering, being challenged, and enjoying it. Very rarely do children stuff up behaviourwise whilst orienteering. Send out the recreational type orienteers first and the competitive types last, and include near the end some responsible ones to let you know where any 'stragglers' were last seen and if they are still on task.

Orienteering, like other athletic sports, generally splits into male and female competitions.

The purple colour in Purple Pen has been adjusted so that most colour blind children can see it, but be aware that with colour maps colour blindness may cause map reading problems for some.

Let the grounds person, senior staff and other teachers know when orienteering is on, e.g. to warn Yr R-2s that big kids may be running around the buildings. And use the Special Items function in Purple Pen to mark Out Of Bounds or construction areas.   A Control Descriptions list (or Clue Sheet) is normally printed on the map and lists; all the controls for the course in order, each control's identifying code, names the feature at the centre of the circle on which the control is located, and the controls position on that feature, e.g.

    1   35   top of west play equipment
    2   32   NE corner of S fence

If timing, start on exact minutes, with children picking up their maps from an up-turned pile of maps as they start, not before - so that they can't unfairly plan ahead.

Record times: <u>BOYS</u>   <u>START</u>   <u>FINISH</u>   <u>TIME TAKEN</u>
                    Ben & Luke   10.02   10.28.25   26min25sec

When children have finished let them have a drink and a 5 minute break to talk about their course until the excitement has worn off, as it is part of the enjoyment of the exercise.

With punch controls don't bother checking all the punch marks. If you think that someone has 'cheated' or has too good a time, check their punch marks against those of someone reliable. Also don't design courses where cheating is likely.

Afterwards, send the maps home with the children to show their parents what orienteering is, or the class teacher may wish to use them, e.g. lots of Maths can be done with the maps, and it can be used in other subjects, or with a 'buddy class'.

If you set up a course for your class, let other classes use your work & vice versa.

Introduction and Teaching the Basic Skills

Years 3 & 4 students doing school ground orienteering for the first time will need a 30-40 minute introductory lesson and maybe a few scatter course controls to find at the end of the lesson, or to draw a walked route on the map. For older year levels, give a 15-25 min lesson followed by a scatter orienteering course. After the first year of orienteering only the upcoming Yr 3s will need a lesson and any new children can be buddied with someone to teach them.

First Lesson

Show a video clip, give a brief outline of the sport, and then teach:

Map Interpretation: A map equals 'a bird's eye view'. On the Smart Board use a JPEG aerial photo of school or Google Earth to show that everything can't be seen or interpreted from above – trees, shadows, verandahs. But a map uses symbols to represent things looking down on them. On a Smart Board use the PDF school map file to look at the legend, its colours and its symbols, plus scale bar & north arrow.

Map Orientation or 'map to ground': On the PDF map use 'View' – 'Rotate View' – 'Clockwise', to show what happens if the map isn't orientated or 'matching the ground' (e.g. oval or office is on the wrong side of us or the school). Then go outside, give out blank maps and ask children to hold flat so that features in front, right, left or behind in the grounds, are also in those directions on the map. Ask class to turn around - and to still have their map matching the ground, i.e. they need to turn the map in their hands so that it remains matching the ground. Use large recognizable features (oval, gym, road, fences, and buildings) to line up map to match these. To see if students have understood this, get them to walk the line around a netball court and see if they turn the map 90 degrees in their hands at each corner. Take class for a quick stop/start direction changing walk/run. Pick stops where you can get up onto a bench and look down onto their maps. Ask students to have their maps matching the ground & to point where they are on it. Then identify what features around them are mapped (e.g. is the flagpole/verandah/bin/tree on the map?). Knowing the direction of north to the position of the sun can be used to orientate the map, likewise one's shadow to south (north is at the top).

Other Basic Skills are: Teach these before the second or subsequent orienteering courses.

- Fold the map into sections so that it is easier to manage & so that you are only focusing on the part of the map where you, and the next few controls, are – i.e. fold under excess paper.
- Hold the folded map so that your thumb, is always pointing to where you are on the map, and also is pointing in the direction that you want to go on the map. Then if you move your body around to make sure the map is aligned to the ground (or north), you will be facing in the direction you need to go - and the symbols in front of your thumb should match the features in front of you on the ground. Compare to the display of a car GPS.
- Firstly focus on the big obvious features that are on the map and on the ground.
- Get a feel for distances by the arrangement of features on the map compared to the terrain.
- Aiming off, catching features, route choice, attack points, compass bearings, contour reading, relocating, pace counting, etc., are skills more for secondary students, or for more advanced primaries who do out of school grounds / bush orienteering. These skills shouldn't be taught until the others are mastered.

Other Orienteering Experiences for Schools

Schools Championships: There are annual SAPSASA and SASSSA Individual and Relay Championships To find out more go to our website www.sa.orienteering.asn.au and look under Juniors and Schools -> Schools. To prepare for these an OSA representative can organise a practice event at a location suitable to your school.

Permanent DIY orienteering courses have been set-up in a growing range of locations. These are suitable for school excursions, families & individuals and maps can be downloaded for no cost. Go to our website www.sa.orienteering.asn.au and click on DIY Orienteering on the menu.

Some school campsites are mapped and have permanent courses. To experience an unfamiliar map area, check with Orienteering SA whether a neighbouring school or nearby park is mapped.

Orienteering SA Program: Summer events are on Friday evenings in the metro area. On many weekends, March – Sep, there are events in the metro area to suit juniors and newcomers. The cooler months have 'bush events' in locations from the Adelaide Hills to the Flinders Ranges to Port Lincoln. On Wednesday mornings training events are held in the near Adelaide Hills (notify organiser if bringing a school group to these). Orienteering events in the program are open to all. Schools that are Orienteering SA members get cheaper rates as do their students at Orienteering SA events.

The family sport

For information on where to go for any of the above see 'Resources'.