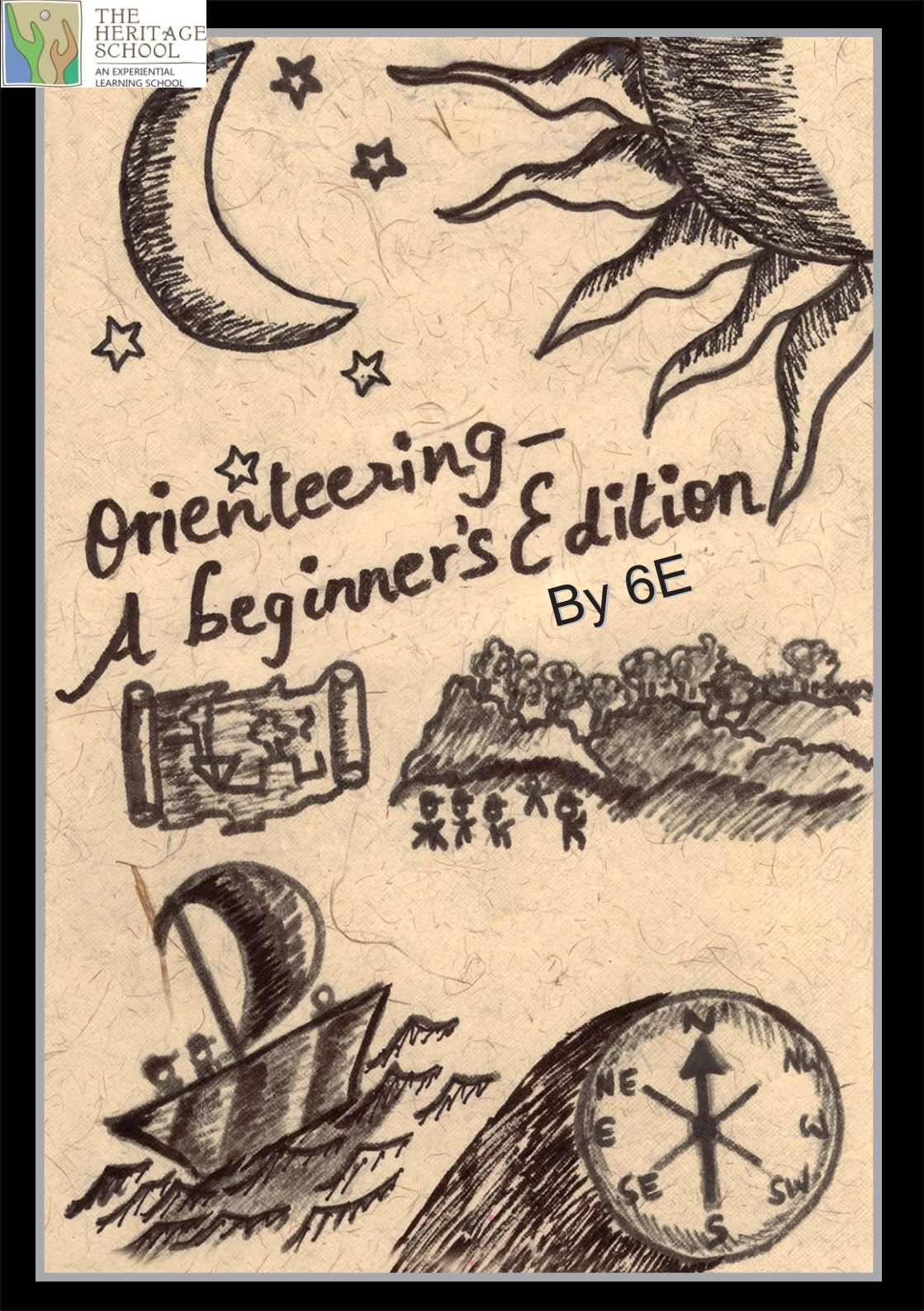
THE HERITAGE SCHOOL
AN EXPERIENTIAL LEARNING SCHOOL



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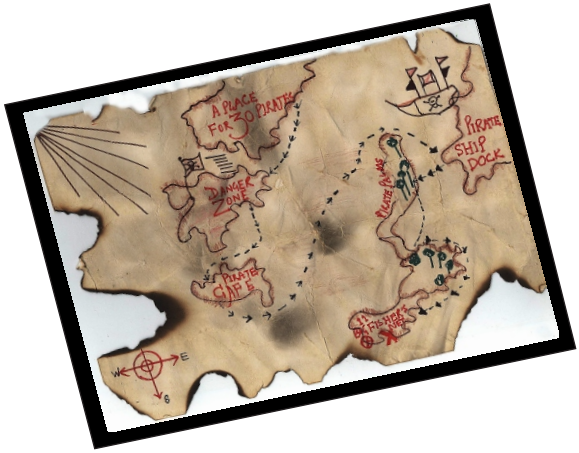

ACKNOWLEDGEMENTS

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We would sincerely like to thank Preeti ma'am for helping us throughout the whole project. She has instructed us right from the beginning and has also taught us how to read a map and especially the use of a compass.

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Last but not the least we would like to thank our school for organizing such a wonderful and exciting project.

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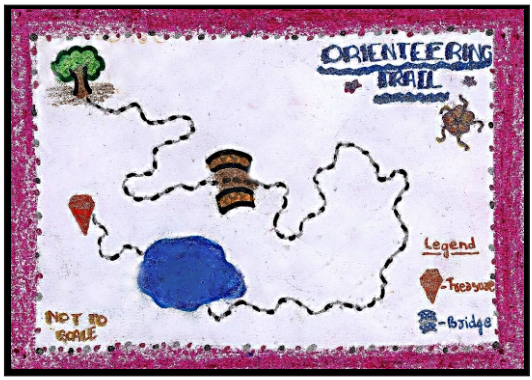
INTRODUCTION

What is orienteering?

Orienteering is a sport in which participants use an accurate, detailed map and a compass to find points in the landscape. It can be enjoyed as a walk in the woods or as an adventure sport.

Through this guide book we are going to take you to a journey where compass and maps take you to your destination.

Orienteering can be a lot of fun once you know how to do it; you can take our word for it. Orienteering is also very useful as it helps you to not only develop map and compass reading skills but also spatial intelligence. So turn this page to take a first step towards becoming an orienteering expert.



WHY AND FOR WHOM...

Orienteering is a sport which you will learn with us. So are you curious to know why is orienteering important? Do keep reading till the end of this page, and we promise that you will be excited and ready to play this sport.

Why is orienteering important?

- Orienteering is important for army men to plan the positions for a battle.
- Tourists also use this sport to find tourist spots without the help of a guide.
- Historians and explorers use orienteering during their expeditions.·
- Orienteering is adventure sport too.·
- Students use orienteering during their trips.
- It helps in building team spirit as all work together with a common aim.
- The achievement of skill of reading maps and compass will help you to enjoy wilderness without the fear of getting lost.

Now as you know about orienteering, it would be easy for you to know more concepts regarding this topic. So enjoy reading and we hope that you have learnt the basic information about orienteering.

HOW TO PLAY THE SPORT

THE 3 D'S - DETAILS,DIRECTION AND DISTANCE

Details

Map Familiarization

A. Colors: Each color represents a different class of features:

Blue: Water (streams, marsh, pond)

Green: Vegetation (dense woods, individual trees)

Yellow: Clearings & fields

Brown: Earth topography or contours (valleys, hills)

Black: Natural objects (boulders, cliffs) Man-made features (trails, buildings)

White: Forest

B. Map Symbols: Use map legend and symbols to locate various features on the map. You can also relate surrounding features to symbols shown on the map.

Direction

Orient the map

A. Using the terrain: Turn the map until what is in front of you in the terrain (land) is in front of you on the map

B. Check using a compass: The north lines on the map should align with the compass needle.

Compass Bearings

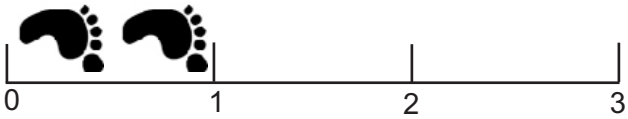
A. Always check that the white line on compass wheel matches the destination bearings.

B. Turn yourself (not the compass wheel) to align the red end of the compass towards north. The directional arrow will point towards the direction of your next destination point. Refer page 12 for more detail.

DISTANCE

Pace counting: Determine your pace

Then scale distances from the map and use your pace to locate controls.



For most adult 1 walking pace = 5 feet
10 pace=50 feet

POINTERS TO KEEP IN MIND

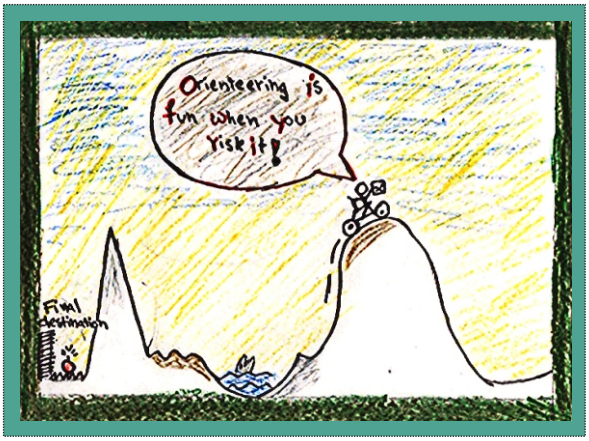
Map Walk: Read the map as you go along

A. Point out features as you go along and identify the same on the map.
B. Check map orientation as you go along.
C. Check what features you will be seeing next.

How to overcome an obstacle during orienteering

During orienteering, when there is an obstacle between two points, you cannot just take another path as it will spoil your calculation of distance. You will have to THINK SMART. For that you can just look at the diagram given below.

So to overcome the obstacle you need to walk straight at 90 degree and count the steps or paces. Then take a turn again at 90 degree from the point where path is clear count the paces and then again a turn of 90 degree this time your paces or steps should be equal to the first count i.e. from point A to point Q. The paces/ step/distance you counted from point Q to point R should be equal to the original distance between point A and point B .



DETAILS- SYMBOLS & LEGENDS

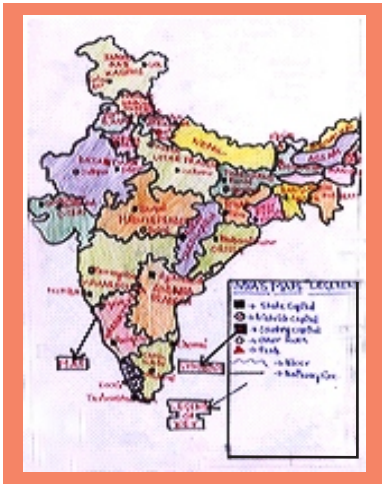
Symbol is the one of the important components of a map. Different features such as buildings, roads, bridges, trees, railway lines or a well are represented by using symbols such as certain letters, shades, colours, pictures and lines.

Importance of symbols- These symbols give a lot of information in a limited space. The use of symbols make maps easy to understand. They also serve the purpose to overcome the boundaries of language and literacy.

Types of symbols -There are 2 types of symbols they are:

- Conventional symbols
- Non- conventional symbols

Conventional symbols are those which are used commonly and are known worldwide.
Non- conventional symbols are those which are not used commonly. We find non- conventional symbols in thematic maps. If you are using non- conventional symbols it is a must to have a legend.



Maps use key or legend to explain the meaning of each of the symbols used in a map. These keys usually show small picture of each of the symbols used on a map along with the written description of the meaning of each symbol.

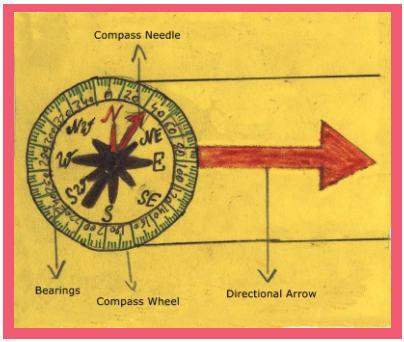
The key or legend is the box in left hand side or right hand side corner of the map.

Legend / key is important part of a map it is important because it explains each symbol ,it is also important to mark any part that needs to be identified .It also helps the readers to understand what the non conventional symbols represent .

HOW TO USE A COMPASS

To do orienteering, we need many skills, one of them is orienteering a compass. To know about using the compass you should first know the cardinal and sub-directions. There are 4 cardinal directions and 4 sub-directions. The cardinal directions are north, south, west and east. The sub-directions are north-east, north-west, south-east and south-west. A compass rose is how the directions are drawn on a map. This is how a Compass Rose looks like:

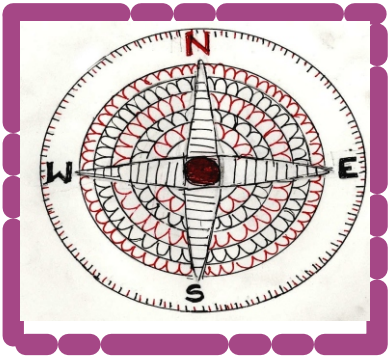
A compass looks like:



A compass divided into 360 degrees is the most common unit of measurement. Each degree is divided into 60 minutes, each minute into 60 seconds. A handheld compass is not able to measure down to a minute, let alone a second, but those units are used for precise locations using latitude and longitude.

North is at 0 degrees (and 360 degrees), East is 90 degrees, South is 180 degrees, and West is 270 degrees.

Bearings are the number of degrees to a point. If you want to find the bearings of a point from where you are standing, first, you have to point the directional arrow to the object which you want to find the bearings of. Then, rotate the compass ring of the compass until the red needle aligned with north.



There are two types of orienting North and South
North: To go to a place with a given bearing
South: To trace back come to initial point.
To do North orienting first take the bearings on the white line near the directional arrow. Then move the compass to align the North needle with the directional arrow.

North orientation of the map:- The north lines on the map should align with the compass needle.

To do South Orienting, follow the same procedure as North orienting but just align the South needle with the red arrow.

When the compass is oriented we will-

- Hold your compass steadily in your hand so the base plate is level and the direction-of-travel arrow is pointing straight away from you.
- Hold it about halfway between your face and waist in a comfortable arm position with your elbow bent and compass held close to your stomach.
- Look down at the compass and see where the needle points.
- This compass is pointing due North (also 0 degrees)
- Turn your body while keeping the compass right in front of you.
- Notice that as the compass rotates, the needle stays pointing the same direction.

DISTANCE- SCALE & ESTIMATION

To cover the topic of distance in maps we need to learn about Scale. Scale is the ratio between the actual distance on the ground and the distance shown on the map. For example, the distance from your home to school is 10km.If you show this 10km as 10cm on map, it means 1cm on the map represents1km on the ground. So the scale of your map will be 1cm=1km.Scale is very important in any map. If you know the scale, then you can calculate the distance from one place to another place.

Scale used in orienteering

When you go for orienteering, you will need a map to guide you through the orienteering trail. If the map has a scale then you will be able to calculate the distance and then use estimation skills to know how far you have to go to reach your destination. You will learn about estimation in next chapter.

Crow flight

Crow flight is the straightest and the shortest distance from one point to another point. For example, the road or path between point A and point B is curved.

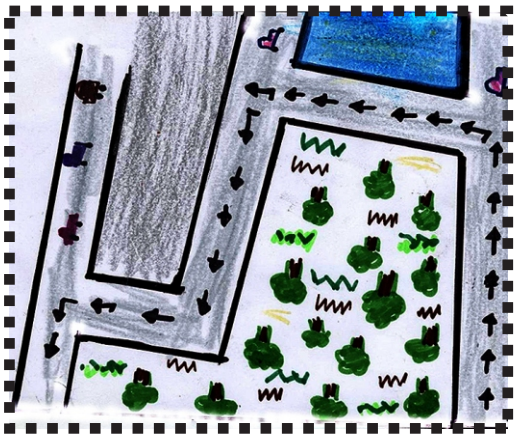
A scale will always give the straight distance between these two points shown by the red line in the diagram also known as crow flight.

“Remember that the distance represented by scale is the crow flight distance.”

ESTIMATION

Estimation is a skill in which we roughly calculate a distance or measurement. Estimation is a prediction made on some evidence or approximation. Estimation should be accurate and not have a huge difference in the actual measurement and the estimated measurement. It is one of the most important skills we need to know as we need to use it a lot in our daily life. When we don't have any measuring tools we use the skill of estimation. When we estimate it is good to use rounding of numbers such as 8.7 to 9 or 7.3 to 7. It is a skill which comes with a lot of practice.

It is always good to know how much is 1mm, 1cm, 1m, 1km as when we have to measure a long distance we have a rough idea you can always break a long distance into smaller parts and then it would be easier for us to estimate. For e.g. I m = 2 strides or 4 paces.



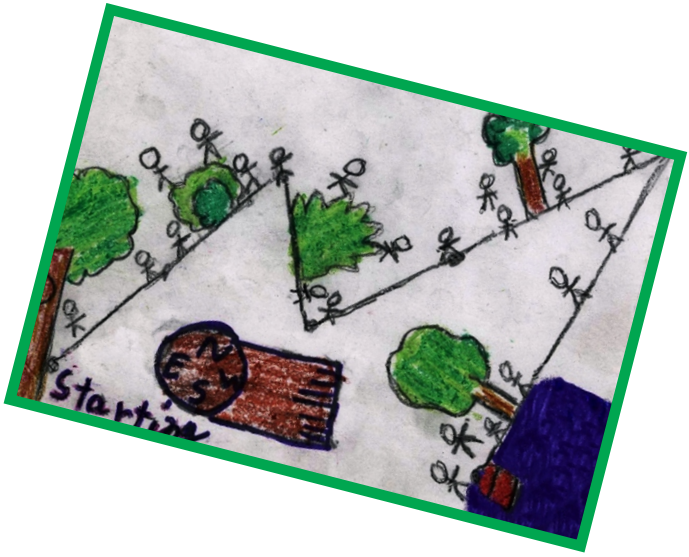
ACTIVITY 1

AIM

To practice the skill of estimation

INSTRUCTION

Take some objects and then estimate its length, then measure the actual length. Compare and see the difference in the actual measurement and the estimated measurement. With practise you will be able to master this skill. Slowly move from smaller measurement to big ones.



EQUIPMENT AND ESSENTIALS REQUIRED FOR ORIENTEERING

1. Water
2. Cap/hat
3. One small bag pack
4. Food
5 Juice/energy drink [optional]
6. Full sleeves t-shirt and full track pants[comfortable]
7. Sport shoes
8. Compass
9. Map
10. Sun screan
11. A bag for trash/waste

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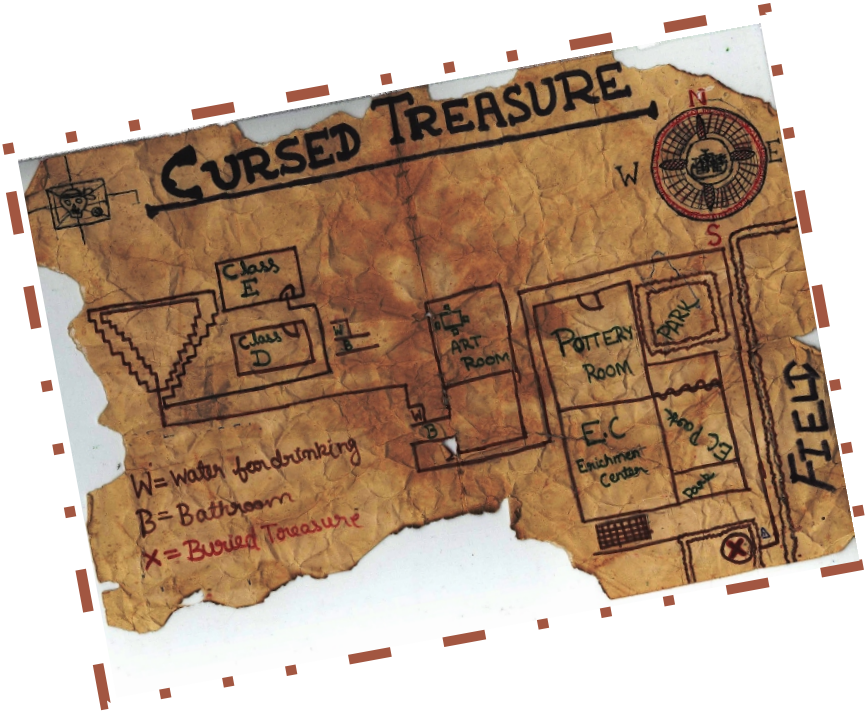


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