# $\frac{n \rightarrow n}{s}$ Scouts <br> 1st Digital 

## Mission Statement

Your mission is to escape from the Wilds of the Derbyshire Peak District. From your starting point at Kinder Down Fall (Grid Reference 083 889) you have to try and make a route that gets as far away from this location as possible as the crow flies. However you only have 6 hours of walking time available. You are not allowed to deviate from paths so you will Il have to plan your route carefully. Kinder Scout is the top of a big mountain so you will want to make sure you use your knowledge of contours to make sure that you are walking the easiest and fastest route possible. You will need to calculate how long your walk is going to take you so that you can get as far away from the start point as possible. Below are some helpful reminders of how grid references work, how to calculate distance and how to calculate how long your walk will take.

## How Grid References Work

Throughout the map there are long blue lines with large blue numbers. Each of these large blue lines are 1 kilometre apart. These are called your grid lines. If you follow these grid lines to the end of the map you will see small, divided sections as shown in the picture below. These are each 100m apart.


When you are looking to record a grid reference of a location, we look to see what $1 \mathrm{~km} x 1 \mathrm{~km}$ box our location or checkpoint in located in. When we are writing down grid references we also make sure we read the numbers that run from left to right first, then the numbers from top to bottom. So for the example above, Point Farm is in the box 39 24. What you then need to do is imagine that that one box identified in your four figure grid reference is broken down into smaller squares $-10 \times 10$ squares, which are marked all around the edges of your map. So for example, Point Farm is at 392 244. This gives us the location much more accurately.

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## How to Calculate Distance

Normally when we are using a paper map we would use a piece of string to run along the route and then align that to the grid lines along the side to estimate the distance travelled along the route. This is more tricky when we are running virtually so we can use a tool on Bing Maps to help measure the route.

To measure using Bing Maps, right click with your mouse on the start location of your route and click "measure distance".


Then left click at point along your route. The most point you do, the more accurate the measurement will be. On the left hand side it tells you how far the distance is!


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## How to Calculate Time Taken for a Route

Calculating the amount of time it take to walk a route is very easy. We assume that the average scouts takes 20 minutes to walk 1 km . However, if you are walking up hill your speed is much slower as it is more effort. Therefore, for every 10 metres you climb (use your contour lines that you cross to calculate this) you add 1 additional minute to your timings. If you are going downhill then no need to add any extra time so make sure you know if you are going up and down on your route. Its as easy as that!

## Now It's Your Turn

Below is a table that will help you with planning your route. Make sure you record a grid reference at major points along the route to make it easy for some to look back, so for example at a fork in the path or at a road crossing. Once you have completed your route and you have calculated the time taken to make sure it is 6 hours, then you can use the Bing Maps measurement tool to measure the direct distance from one to another. Compare your route with other members of your troop to see who has managed to get the furthest from the start point! We have completed the first check point for you to get you started but you don't have to use our example. Good Luck!

| From | To | Distance | Height Climbed | Total Time |
| :--- | :--- | :--- | :--- | :--- |
| 083889 | 095873 | 2.72 km | 5 m | 55 minutes |
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Example Checkpoint 1:

Measure Distance \& Area

Click or tap on the map to create a new point. Tap and
drag an existing point to move it Right-dick (or tap and
holdd) on a point tor temove it:
Distance: 1.45 mi ( 2.34 km )
Reset Done Close shape


