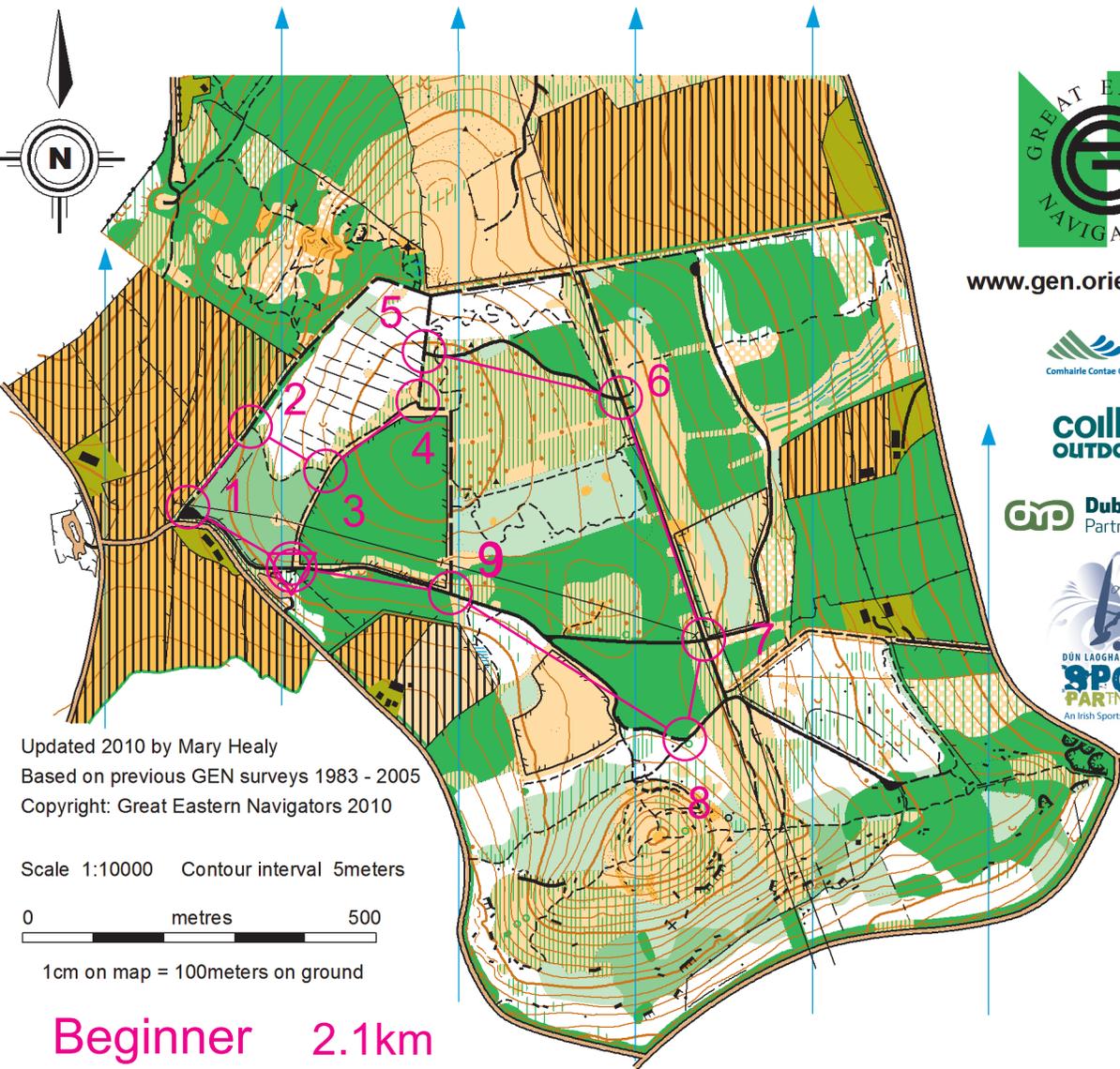


Carrickgollogan wood

Map Legend



Updated 2010 by Mary Healy
 Based on previous GEN surveys 1983 - 2005
 Copyright: Great Eastern Navigators 2010

Scale 1:10000 Contour interval 5meters

0 metres 500

1cm on map = 100meters on ground

Beginner 2.1km



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- Contour
- Index contour
- Form line
- Earth bank
- Earth wall
- Small earth wall
- Erosion gully
- Small erosion gully
- Knoll
- Small Knoll
- Elongated knoll
- Depression
- Small depression
- Pit
- Broken ground
- Rock pillars / cliffs
- Impassable cliff
- Passable rock face
- Rocky pit
- Cave
- Boulder
- Large boulder
- Boulderfield
- Boulder cluster
- Stony ground
- Bare rock
- Waterhole
- Minor water channel
- Marsh
- Distinct veg. boundary
- Indistinct veg. boundary
- Power line
- Major power line
- Stone wall
- Ruined stone wall
- High stone wall
- Fence
- Ruined fence
- High fence
- Building
- Settlement
- Paved area
- Out of bounds
- High tower
- Cairn
- Special man-made feature
- Minor Road
- Forest Road
- Vehicle track
- Footpath
- Small path
- Indistinct path
- Narrowride
- Open land
- Rough open land
- Rough open
- Forest: easy running
- Forest: slow running
- Undergrowth: slow running
- Forest: difficult to run
- Undergrowth: difficult to run
- Vegetation: impassable

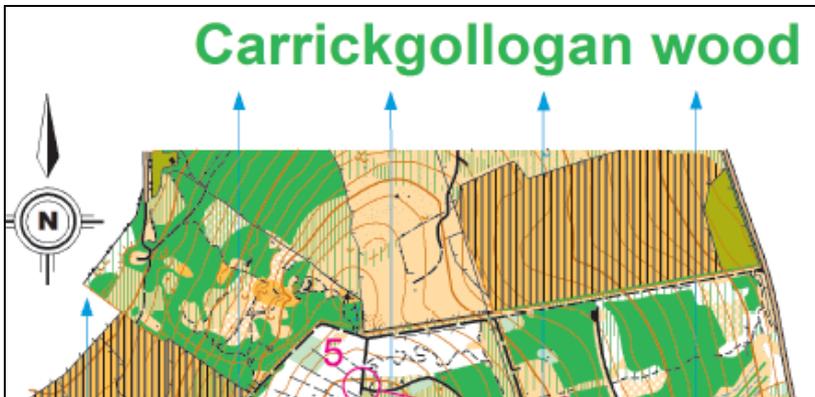
1:	2:	3:	4:	5:	6:	7:	8:	9:						
Road	Track	Track	Track	Road	Road	Road	Road	Road						
Track	Junction	Junction	Junction	Track	Track	Junction	Track	Junction						
Junction				Junction	Junction		Junction							

1. Find the controls in the order shown on the map. 2. Note the unique code on the control post in the corresponding box.

Name

Today's Date

There are 9 controls for you to find on this Adventure Challenge



Primary Schools Workbook



Control Point 1 – Data Collection

This activity runs throughout the trail. As you go around the course, collect a tally on the number of waymarker posts (only the ones with arrows marking walking routes) and orange directional arrow discs. Use this table to keep a record as you go. Keep your eyes peeled!

	Tally	Total
a) Waymarker posts		
b) Orange discs		

When you have completed the trail, work out:

If one waymarker post costs €12 and one orange arrow disc costs €4, what would be the total cost of waymarker posts and arrow discs?

Waymarker posts € _____

Orange arrow discs € _____

c) Total cost of posts and discs € _____

Control Point 2 - The Compass

Can you spot Three Rock Mountain in the distance – the one with the television masts on top of it?

a) How many masts are visible? _____

b) What direction is Three Rock Mountain? _____

Hint: Orientate your map correctly and look at the compass at the top left corner to help determine the direction.

c) If each mast is 20m tall, what is the height if all the masts were stacked on top of each other?

Remember to look out for waymarker posts and orange arrow discs!

Control Point 3 – Fencing calculation

What is the area of the forest enclosed within this fence, if one side measures 200m, and the area is square in shape?

How many metres of fence are required to enclose the entire area?

Remember to look out for waymarker posts and orange arrow discs!

Control Point 4 – How old is that tree?

Trees are the longest-living of all plants with some species living for thousand of years. If you know when a tree is planted in Carrickgollogan, you can easily and accurately determine its age. But how do you tell its age if you don't know this information? Although trees grow at different rates you can estimate the age of a living a tree, by measuring the circumference of its trunk (girth) – the older the tree, the greater its girth. On average, trees in Ireland increase their girth by 2.5cm a year.

Look at the pine tree with the yellow painted dot on it. What age do you think this tree is? Have a guess!

_____ years old approximately

Now for some measurements to figure out its actual age:

Experiment 1:

Using your measurement tape, measure the circumference of the tree trunk, at the standard height of 1.5 metres above the ground. If the ground is uneven, measure on the upper side of any slope. remember to change your measurement to centimetres.

What is the circumference of your tree's trunk?

cm/2.5cm = years old approx.

Why are you dividing by 2.5cm? _____

Do you need to make any adjustments because of its species or the thickness of the bark? YES / NO

Why? _____

Experiment 2:

This same pine tree has layers of branches (whorls) up the trunk.

How many whorls are there?

= years old approx.

Control Point 5 – Lead Mines Tower

From this point walk a further 100m north along the trail to the Lead Mines Tower.

From the early 19th century, up to the 1920s lead and silver were mined here. Ore was also brought from Glendalough for processing here. In front of you, you can see the granite chimney of the Ballycorus lead mine. The top third of the tower has been removed for safety reasons.

What do you think was the purpose of the chimney?

What do you think lead was used for back in the early 19th century?



Now walk back to the post at control point 5.

Control Point 6 – Energy

What are you standing under here?

What is the voltage of this power line?

What symbol is used to show this feature on your orienteering map?

Suggest three ways how you can save electricity in your home and help save the environment.

1.

2.

3.

Control Point 7 – Electrical transmission

Here the power line is supported by wooden posts.

How many wooden posts can you see from this point? _____

Martin has to paint each post so it does not rot. If it takes one and a half pots of paint to paint each post, and there are 10litres of paint in each pot. How many litres of paint does Martin need to paint all the posts?

Number of wooden posts? _____

Total number of pots of paint required? _____

Number of litres of paint in each pot? _____

Total number of litres of paint required? _____

Remember to look out for waymarker posts and orange arrow discs!

Control point 8 – How old is that tree?

Look at the log under the big tree to your left. The age of a tree can be measured accurately after it has been felled, by counting the growth rings. Some of the rings are much wider than others. In other words, the tree grew more in some years than in others.

Why do you think this might be?

Each ring is a layer of wood that took a season to grow i.e. each year has a light ring (springwood) and dark ring (summerwood) together. Trees do not grow at the same speed all year. In which season do you think trees in Ireland will grow most? Why?

To find the age of the tree when it was cut down just count the dark rings. So this tree is how many years old? _____

If this tree was cut down in 2006, what year was this tree planted?

Control Point 9 – Tree planting calculation

On your way to this control you passed a fenced area. Woody the forester wants to plant trees in this forest which he has divided into 6 blocks. Using the following information, answer the questions below:

- Each block of forest takes 50 trees
- Trees cost €50 for 100 trees
- It takes 1/2 hour to plant 50 trees

- a) How many trees will be needed? _____
- b) How much will they cost? _____
- c) How long will it take to do all the planting? _____

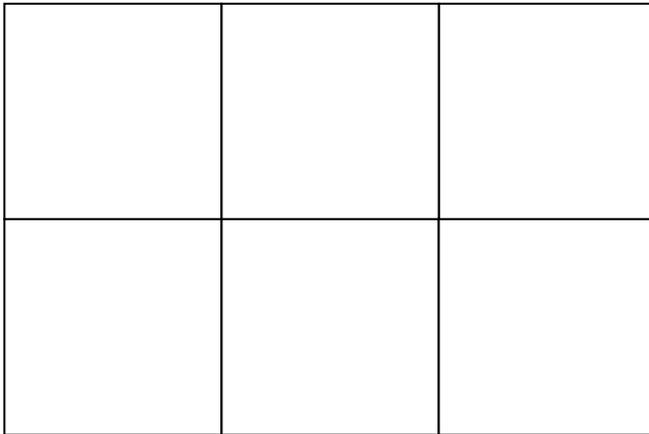


Diagram of the forest area

Primary Schools Workbook - Answer Sheet

Score

: 10 points per control point, total 90 points

Control Point	Score	Answers	
1	3	Tally Waymarker posts	14
	3	Tally Orange discs	27
		Cost waymarker posts	168
		Cost orange discs	108
	4	Total cost posts & discs	276
2	3	a) how many masts visible?	4
	4	b) what direction is Three Rock Mtn	NW
	3	c) Height if all masts stacked on top	80m
3	5	Area of forest within fence	4000m ²
	5	How many metres of fence	800m
4	2	Estimate age of tree	
		Expt 1	Circumference of tree trunk 93cm
		Approx age	37
		Adjustments for bark	Yes, bark on this tree is quite thick, so would take a few cm off the diameter
		Expt 2	How many whorls? About 33 (a few missing off bottom of tree)
5	5	What was the purpose of the chimney?	In the first quarter of the 19th century the Ballycorus lead mine was one of the most important of the Dublin and Wicklow group of mines. Not only were lead and silver mined directly on the spot but "dressed" ore was brought by horse and cart from Glendalough and other Wicklow mines for processing here. Up to the 1920s ore was melted and converted into ingots, the silver separated and refined, and litharge, red lead and shot manufactured. The chimney with its attendant flue which runs a mile or so westward downhill and which may still be traced, carried off the poisonous substances and the noxious fumes from the smelting process and deposited them in the air about 900 feet above sea level. On a regular basis workmen cleaned the flue by removing sulphate of lead in barrows through the various doors which ventilated it.
	5	What was lead used for in early 19th century?	To manufacture pipes and roofing as Dublin's suburbs expanded. Lead shot was manufactured

6	2	Standing under?	Powerlines
	2	Voltage	110kV
	2	Symbol	Look at map
	4	Suggest 3 ways to save electricity in your home	<ul style="list-style-type: none"> • Turn off lights • Unplug electrical items, don't leave on standby • Fit a lagging jacket around the hot water tank • Do not leave the fridge door open too long • Use energy efficient light bulbs
7	3	No of wooden posts	10
	3	Total no of pots of paint	15
		No of litres of paint in each pot	10
	4	Total no of litres of paint required	150
8	2	Tree grew more in some years than in others	Very dry summer - less growth, Long cold spring - growth delayed
	2	Season trees grow most	Summer, warmer weather, lots of rain
	3	No. of rings on log	Approx. 21
	3	Tree cut down in 2006, what year was it planted	1985
9	3	How many trees needed?	300
	3	How much will they cost?	€150
	4	How long will it take to plant?	3 hours
Total Score	90		