Loci: Where required, for all the following use the scale 1cm=1mile

Part 1: You must...

Jack knows that there is some hidden treasure near two towns, Sillythorpe and Cleverville.

Represent the following criteria on one diagram

1) Sillythorpe and Cleverville are 6 miles apart
2) The treasure is within 4 miles of Sillythorpe
3) The treasure is closer to Cleverville than Sillythorpe

Shade where the treasure might be

Part 2: You should...

Sally knows there is some hidden treasure near three towns, Clappers, Quietville and Intelligentsia

Represent the following on one diagram.

1) The three towns lie on a circle with a radius of 4 miles
2) Clappers and Quietville are 2 miles apart
3) Intelligentsia is equidistant from the other two towns and as far away as it could be
4) The treasure is exactly 2 miles from Intelligentsia
5) The treasure is equidistant from the other two towns

Mark the treasure with an X

Part 3: You could...

Invent your own treasure stories and represent them using a diagram involving loci

Create an interesting story to accompany the situation

Part 4: You could also...

Draw some triangles of your choice. Construct the perpendicular bisector of each of the three sides.

Do these always meet inside the triangle? Can you produce a general rule?

Part 5: How about...

Construct as many accurate angles as you can without using a compass.

Examples you can do include 60, 45, 90, 30, 15, 75 etc...