

Getting Started

Double-click on **Start** to open the case study – a detailed introduction is included in the application.

Bowland Maths materials are free for educational use in the UK only. You may install the software on multiple computers or a school network provided it is only accessible to pupils and staff at your school.

Overview

Mission: Rainforest is a set of exciting interactive lessons themed around an environmental mission to save the rainforest from deforestation. Deep in a tropical rainforest, a team of 12 undercover environmentalists is on a mission to investigate and expose the illegal activities being carried out by a multinational logging organisation, Log Inc. This company is contributing to the deforestation that is destroying the planet. It will be a dangerous mission. Once they have set up base camp, the environmentalists will work in small groups to use all their cunning and intelligence to monitor the damage while evading detection and collecting evidence for UN international inspectors. The problems are intended to promote discussion, reasoning and creativity and to encourage pupils to apply their mathematical knowledge to real life situations.

Mathematical content

The mathematical content in Rainforest is suitable for pupils who are confident with level 5 of the National Curriculum, and some of the content at level 6. It should suit pupils of above average attainment in Year 7, and average or above average attainment in Years 8 and 9.

Some of the lessons are opportunities for pupils to focus on process skills as they select, apply and use mathematical techniques that they have previously been taught. Other lessons could be an opportunity to introduce new techniques and harder work in an enjoyable 'non-text-book' scenario from which the mathematics arises naturally.

In particular, pupils will need to be able to calculate with decimals and percentages; find perimeters, areas and volumes and convert between units of measurement; use coordinates, find the midpoint of a line segment, make and interpret scale drawings and draw simple plans and elevations.

Organisation and pedagogy

Mission: Rainforest involves four 50-60 minute lessons of classroom activity, each with optional homework.

A mixture of whole class and small group work is involved. The application is easy to operate and is designed for use in a normal maths classroom. It requires an interactive whiteboard or whiteboard, a laptop (to be used by the teacher to load and navigate around the resource), a data projector and speakers.

In keeping with the ethos of the Bowland approach, the teacher's role is to set pupils realistic targets, challenge pupils to think and reason for themselves and manage discussions and plenary reporting sessions. Techniques should only be demonstrated as a last resort.

Throughout, the goal is to develop pupils' ability to work and think independently.

Resources provided

This Case Study is presented as a browser-based application containing a collection of printable and ICT resources, including:

- **Introduction** – for teachers – read this first, as it contains more details than this overview.
- **Teachers' notes** – with lesson plans – for each of the four lessons.
- **Videos, audio clips and slides** – which tell the story and present the problems.
- **Pupil resource sheets** – to print and hand out.

Resource requirements (including hardware & software)

- The teacher will need a computer with data projector (or interactive whiteboard), sound output and speakers. The software is suitable for a Windows PC or an Apple Mac.

The software can be run directly from the Bowland Maths website, or you can download the case study and copy it to the computer(s) you will be using during the lesson, or to the school network.

The computer will need a modern web browser with [Adobe Flash Player](#) installed. Windows users will also need [Adobe Reader](#) to view and print resources. These are both available for free download from <http://www.adobe.com/downloads/>.

- Pupils will need calculators, graph paper, graphics calculators (optional), rulers, compasses, stiff card and squared paper.
- Each pupil, or pair of pupils, will need a printed copy of the resource sheets.

Note: When printing PDF files, please make sure that 'page scaling' is set to 'none', 'no scaling' or '100%' to ensure that diagrams are printed to scale.

Technical details

Minimum machine and software specifications

PC Windows 7, Windows Vista®, Windows XP, Windows Server® 2008, Windows Server 2003, Windows 2000 Intel® Pentium® II 450MHz, AMD Athlon® 600MHz or faster processor or equivalent 128MB of RAM 128MB of graphics memory Internet Explorer 6.0 and above, Mozilla Firefox 2.0 and above, Google Chrome 2.0 and above, Safari 3.0 and above, Opera 9.5 and above, AOL 9.0 and above.

Mac Mac OS X 10.6, Mac OS X 10.5, Mac OS X 10.4 (Intel), Mac OS X 10.4 (Power PC) Intel Core™ Duo 1.33GHz or faster processor Power PC G3 500MHz or faster processor 128MB of RAM Safari 3.0 and above, Mozilla Firefox 3.0 and above, Google Chrome 2.0 and above, Opera 9.5 and above, AOL Desktop for Mac 1.0 and above.

Linux & other systems – we do not officially support this, and the software has not been tested on Linux. However, it should work on systems with Adobe Flash Player installed. Note that although the download is a PC '.exe' it is actually a self-extracting ".zip" file which many Linux systems will be able to unpack.

Installing on a Web Server

If needed, the case study can be placed on an Intranet server: copy the complete "rainforest" folder to the server and, if necessary, rename "Start.html" to "index.html" or whatever name your server uses for index pages. To comply with the licensing terms, please ensure that access is limited to staff and pupils at your school.

Changing the video root folder/URL

This is only necessary for IT support and Webmasters who want to stream the video from a dedicated media server. All video content is stored in 'Assets/video' by default. This directory can be changed from inside the settings file (found in 'Assets/settings.txt'). In the settings file there is a parameter labelled 'videoroot'. To change this parameter you must overwrite the current value with a new path to the video folder. Trailing '/' must be included, for example: 'http://www.domain.com/video/'.