Preface

Cunning Running is one of a suite of computer programs that have been written to complement Moving Into Maps, the pre-atlas activity book in the Jacaranda Atlas Programme. Designed for use by students from 7 to 13 years of age, Cunning Running provides an extension activity for the “What’s It Say?” section of Moving Into Maps. However, as the computer program is entirely self-contained and self-explanatory, it will be useful in any classroom where basic map concepts are being taught. It is not necessary that schools be using other materials from the Jacaranda Atlas Programme in order to use Cunning Running.

Aim of the program

Cunning Running simulates an orienteering course and provides an opportunity for students to practise applying the basic map skills of

- reading and understanding map language,
- understanding and using grid reference systems, and
- identifying compass directions.

About the program

Cunning Running simulates an orienteering activity where up to four students take turns to search for and locate a number of markers positioned in sequence by the computer. The computer screen displays a map. Features are represented by map signs. All signs are explained in a key given in the Student’s Guide. A variety of signs have been used, including

- point signs, e.g. bridges, mountains,
- linear signs, e.g. tracks, a river, a cliff, and
- area signs, e.g. forest, swamp and open ground.

The map also has a grid with columns labelled A to R across the top and bottom, and rows labelled 1 to 11 up each side. (Note: Because of limited space and the need to make large, clear type, the Apple version has the letters A to R across the top of the screen only.) Students use grid-square references to identify positions to which they wish to move their stick figures.
Each student will have a different set of markers to find, and these will also vary from game to game. However, the computer will control the random placement of markers so that each player's task is of roughly the same difficulty.

**The importance of the map signs**

In choosing a route from one marker to the next, students must decide which route is fastest with the least physical hindrance. Students will discover that speed is directly related to the nature of the terrain being traversed. Consequently, movement is fastest along a track (up to 3 squares), slower when negotiating open ground (up to 2 squares), and very slow when wading through swamp or pushing through forest (one square only). In addition, students must avoid dangers such as the cliff, the swiftly flowing river, high mountains and a deep lake.

By studying the map and understanding the information given by the signs on it, students will learn that the shortest route is not necessarily the one they can cover in the least time.

Each student's objective is to locate as many markers as possible before the game ends (it will end automatically when each student has found at least four markers). New markers are displayed only when the previous marker has been located; thus a player must study the map frequently to plan the best route to the new marker.

**Prerequisite understanding**

Students should be aware that map signs represent the location and features in an area depicted by a map, and that the explanation of the meaning of these signs is found in a key. Students should also have an understanding of the use of grids and grid references, and be able to interpret information containing compass directions. Although this program is designed to place an emphasis on the reading and understanding of map language, the program is not intended to teach students how to do this. Rather, *Cunning Running* will allow students to practise this skill in a challenging and entertaining manner.
Time required to use this program

Completing the program may take from ten to twenty minutes depending on the number of players and the "running" strategy employed by each student. Normally the program continues until every student has found at least four markers. Students who find four markers ahead of others playing the game will be given new marker locations. However, once the final player finds a fourth marker, the game will end and the results will be displayed.

Teachers can end the program before everyone has finished by pressing CTRL-P at certain stages during the running time. (Please refer to the operating instructions (page 8) for information on the use of CTRL-P.)

Scoring

During the game, a student may see current scores by typing "S" when starting a turn. Seeing the scores does not use up a player’s turn. Scores for all players will be shown, including each student’s name, the number of markers he or she has located, and the number of mistakes that he or she has made.

A mistake will be counted in these situations:

- trying to move onto a square containing a mountain, part of the cliff, part of the river (except on the bridges) or part of the lake,
- trying to move too far, e.g. more than 3 squares along a road, more than 2 squares across open ground, or more than 1 square through the swamp or the forest,
- typing something unacceptable, e.g. a nonexistent grid reference or senseless input.

At the game’s conclusion, students will be given their final scores, which will show the number of markers each student found, the number of moves each made to find those markers and the number of mistakes each made. A winner is not identified. Students may decide for themselves the conditions which will determine who “wins”.

Teacher involvement

It is usually unnecessary for the teacher to supervise students to any great extent when they are playing Cunning Running. The
program is easy to use and students will get greater educational benefit from correcting their own errors. However, it is important to ensure that they understand

- when to use the RETURN key (see page 4 of the Student's Guide), and
- what the SPACE BAR is.

Noises?

You can cancel all the various tunes and noises that are produced in Cunning Running by pressing “Q” instead of the SPACE BAR at the very beginning of the program. The operating instructions (page 5) give full details.

Conclusion

In Cunning Running we have tried to embody the Jacaranda Software philosophy:

- Students drive the computer, not the other way round.
- The computer doesn't replace teachers, blackboards, playgrounds or books — it complements them.
- Activities that may be inaccessible, time consuming or expensive can, through computer simulation, be made readily available in the classroom.
- Education should be fun, exciting and effective.

Operating instructions

Getting started on the Apple

1. Insert the Cunning Running disk (label side up) in the disk drive. (Do not shut the door of the drive yet.)
2. Switch on the monitor.
3. Switch on the computer.
4. When the red light on the disk drive is glowing, shut the door of the drive.
5. The Jacaranda Software logo will appear on the screen. Pressing any key will cause the Cunning Running title screen to
appear; otherwise, if no key has been pressed, the title screen will load automatically after a short pause.

6. When the title screen has appeared, there will be a short pause and an information screen will appear.

7. Once the information screen has appeared, press the SPACE BAR to start the program. If you wish the program to run silently (that is, with no music or error noises), press “Q” to start the program instead of pressing the SPACE BAR.

Getting started on the BBC

1. Switch on the monitor.
2. Switch on the computer.
3. Insert the Cunning Running disk in the disk drive (label side up) and shut the drive door.
4. Hold down the SHIFT key and press the BREAK key, then release the BREAK key before taking your finger off the SHIFT key.
5. The Jacaranda Software logo will appear on the screen. Pressing any key will cause the Cunning Running title screen to appear; otherwise, if no key is pressed, the title screen will load automatically after a short pause.
6. Once the title screen has appeared, press the SPACE BAR to start the program. If you wish the program to run silently (that is, with no music or error noises), press “Q” to start the program instead of pressing the SPACE BAR.

Getting started on the Commodore 64

Cassette:

1. Switch on the computer.
2. Switch on the monitor.
3. Put the tape into the cassette drive (label up).
4. Rewind the tape, then stop.
5. Hold down the computer’s SHIFT key and tap the RUN/STOP key.
6. Press play on the cassette drive.
7. The screen will go blank for several minutes.
8. When the program is loaded, the Jacaranda Software logo will appear. Soon after, the title screen will appear. Press the
SPACE BAR to start the program. If you wish the program to run silently (that is, with no music or error noises), press "Q" to start the program instead of pressing the SPACE BAR.

Disk:

1. Switch on the computer.
2. Switch on the monitor.
3. Switch on the disk drive.
4. After the light goes out, insert the disk (label side up) and shut the door of the disk drive.
5. Type LOAD "CUNNING*",8: (Don't forget the colon.)
6. Hold down the SHIFT key and tap the RUN/STOP key.
7. Wait for the program to load. When it has loaded, the Jacaranda Software logo will appear. Soon after, the title screen will appear. Press the SPACE BAR to start the program. If you wish the program to run silently (that is, with no music or error noises), press "Q" to start the program instead of pressing the SPACE BAR.

Getting started on the Microbee Cassette:

Important: The cassette has the program recorded on both sides, but at different speeds. Side A is at 1200 baud, which is the normal speed. Side B is at 300 baud, or four times slower. The program should normally load from side A; however, some cassette recorders do not work reliably at 1200 baud. If you have any difficulty loading from side A, try loading at 300 baud from side B.

1. Turn on the monitor.
2. Turn on the computer.
3. Type NEW and then press the RETURN key.
4. Type LOAD and then press the RETURN key.
5. Start the tape.
6. Wait until the computer beeps to indicate it has loaded the program (2–3 minutes at 1200 baud).
7. Turn off the cassette and rewind the tape.
Disk:
1. Turn on the monitor.
2. Turn on the computer.
3. Put the MASTER disk into the disk drive (label side up). If you have a dual disk drive, put it into the one with the light on.
4. Type BASIC and then press the RETURN key. Wait until the computer beeps.
5. Take out the MASTER disk and insert the Cunning Running disk in the same drive, label side up.
6. Type RUN "CRUN" and press the RETURN key.

Note
Students should be aware that, whenever they see the → sign on the screen, they will be required to type an answer and press the return key (the ← key on the Apple IIe). See page 4 of the Student's Guide.

Introduction
1. The program begins with an introductory screen that advises students to read the notes in the Student's Guide. It is important that they do this before they try to play the game.
2. Next, students are asked to enter the number of players (1–4). (If a mistake is made, use the DELETE key on the BBC or the ← key on the Apple.)
3. The player's names must be entered one by one. Press the RETURN key at the end of each name.

Playing the game
1. When the Cunning Running map appears on the screen, this message is shown at the bottom of the screen:

IT IS YOUR TURN, (name of player will appear here).
YOUR MARKER IS (information here will vary).
WHERE ARE YOU RUNNING TO (OR TYPE S TO SEE THE SCORES)? →
Note: Whenever the screen shows this text, you may end the program. If you hold down the CTRL key and press the P key, this message will appear at the bottom of the screen:

TYPE END TO FINISH THE GAME NOW, OR ANYTHING ELSE TO CONTINUE.

2. By choosing a grid square, typing the correct alphanumeric reference for it and pressing the RETURN key, a student will see his or her stick figure moved to the desired location, and the student will be informed that the action has been completed.

3. Students should be familiar with the “rules” of the activity (explained on page 6 of the Student’s Guide), and with the constraints imposed on their movements by the nature of the terrain (explained on pages 4–6 of the Student’s Guide).

End

1. The game will end once every player has found a minimum of four markers. The game can also end if the CTRL-P option is used.

2. At the end of the game students should follow the instructions given on the screen.