SHEEP~DOG TRIAL

TRIAL

Teacher's Guide

Jacaranda
Software

A product of Jacaranda Software

Program designers: Rosanne Gare and David L. Smith
Production editor: Wynne Webber

Apple version programmed by Bevan Leviston
BBC version programmed by David L. Smith

Preface

Sheep-Dog Trial 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, *Sheep-Dog Trial* provides an extension activity for the "Where Is It?" 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 for schools to be using other materials from the Jacaranda Atlas Programme in order to use *Sheep-Dog Trial*.

Aim of the program

Sheep-Dog Trial is a game for two that provides students with an opportunity to practise using alphanumeric grid square references.

About the program

The computer screen displays a grid (interpreted as a sheep paddock). Columns are labelled A to R across the top and the bottom and rows are labelled 1 to 11 up each side. The top left and bottom right corners of the grid are interpreted as sheep pens and each student has a dog which must single out five sheep of the same colour from the ten displayed, and "muster" them to his or her sheep pen

Sheep are randomly positioned on the grid at the start of the game and each student's dog is positioned in its own sheep pen. Students must use grid square references to "tell" the dog where to go. If the dog is placed in a grid square adjacent (horizontally, vertically or diagonally) to a sheep, that sheep will "run" to another grid square, keeping at least one empty grid square between it and the dog.

In order to muster sheep, each student must repeatedly position his or her dog in such a way that sheep will "run" in the desired direction. A sheep will usually run directly away from any dog that is moved next to it.

Each student's objective is to muster his or her five sheep into the right pen as quickly as possible. Nonetheless, while they play the game, students soon will realize that a certain degree of cooperation is required if mustering is to be efficiently and quickly handled. For example, if players cooperate, it is much easier to split up mobs of sheep of different colours and shift sheep away from the boundary. Therefore, as well as providing an opportunity for students to practise the basic mapping skill of using alphanumeric grid square references, the program encourages discussion and the development of logical thinking.

The strategy for mustering sheep

Students must understand how the sheep move. The following points give a brief outline of the strategy employed in this program.

1. At each turn a student may move his or her dog anywhere except
   (a) into a grid square occupied by a sheep or the other dog,
   (b) into either pen,
   (c) into an area 4 grid squares high by 2 grid squares wide directly outside the other player's pen.
2. Sheep will always move to avoid being next to either dog. Also, sheep will not go into the area near the other player's pen, nor into that pen.
3. Moving a dog next to the other dog causes a dog fight. After a fight, pressing the SPACE BAR returns each dog to its pen without affecting the sheep.
4. Sheep tend to stick together and follow each other. This can be helpful, as it is more efficient to move the sheep in a mob. However, this can be a disadvantage if sheep of different colours are together. Some cooperation with the strategic placing of dogs may be needed to split up mixed mobs.
5. Sheep can be hard to shift away from the edges of the grid (the "fence"). It may be helpful for students to cooperate in placing their dogs if sheep are stuck on the boundary.

6. If a sheep is cornered or is in a place where another dog blocks its movement, it will "panic" and may go some distance to escape.

Diagrams illustrating some of these aspects are included in the student's guide.

Prerequisite understanding

To use this program successfully, students should have some understanding of the use of grids and grid references. The program is not designed to *teach* students how to interpret a grid. Instead, *Sheep-Dog Trial* will allow students to practise this skill in an entertaining manner.

Time required to use this program

Completing the program may take from five to twenty minutes, depending on the mustering strategy employed by each student. The program continues until both students have mustered all their sheep into the right pens.

Scoring

Players are aware of their scores throughout the game. Scores are based on the number of moves each student's dog makes in mustering the five sheep into the pen. The winner, therefore, is the student who has finished in fewer moves.

However, the game is more enjoyable when students cooperate so that they can both finish quickly. Teachers should encourage pupils to aim for the "best score" in the whole class, rather than merely beating their opponent in a particular game.

Teacher involvement

It is usually unnecessary for the teacher to supervise students to any great extent when they are playing *Sheep-Dog Trial*. The program is easy to use and the visual display is very clear. However, it is important that students understand
● when to use the RETURN key, and
● the location and use of the SPACE BAR.

Noises?

You can cancel the various tunes and noises that are produced in *Sheep-Dog Trial* by pressing "Q" instead of the SPACE BAR at the very beginning of the program. The operating instructions give details on pages 4 and 5.

Conclusion

In *Sheep-Dog Trial* 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 *Sheep-Dog Trial* 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 *Sheep-Dog Trial* title screen to appear; otherwise, if no key has been 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 BBC

1. Switch on the monitor.
2. Switch on the computer.
3. Insert the *Sheep-Dog Trial* disk (label side up) in the disk drive 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 *Sheep-Dog Trial* 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.

Note

Students should be aware that, whenever they see the $\longrightarrow$ 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 2 in the Student's Guide.

Playing the game

1. The program begins with three screens of brief explanation. Press the SPACE BAR to advance each screen.
2. Students are then asked to enter their names. Two names are expected.
   (If a mistake is made, use the DELETE key on the BBC or the ← key on the Apple.)
   As each name is entered, the computer will inform the student of what colour sheep, dog and pen he or she has been allocated.
3. After a brief delay in which you are asked to PLEASE WAIT, the game will begin. The message at the bottom of the screen will show

5

IT IS YOUR TURN, (name of player will appear here)
TO WHICH GRID SQUARE DO YOU WANT YOUR DOG TO
MOVE?

4. At each turn, the player must choose the grid square to which his or her dog should move, and then type the appropriate reference as a *letter*, followed by a *number*, followed by pressing the RETURN (or ⤶) key.
5. The game will end once both students have mustered all their sheep into their pens.
6. At the end of the game, players should follow the instructions given on the screen.

Jacaranda Software

a division of Jacaranda Wiley Ltd
G.P.O. Box 859, Brisbane 4001

IMPORTANT
Please read this immediately.

---

1. If a disk we have sent you is found to be defective within a period of thirty (30) days after you receive it, the disk should be returned and it will be replaced at no charge. However, we cannot offer free replacement of disks damaged or erased through negligent use or normal wear and tear, or lost while in your possession.

2. You are authorized to use this software only on a microcomputer located within your own school or educational institution.* The disk may not be lent, resold or hired out to any other person or institution unless permission in writing has first been obtained from Jacaranda Wiley Ltd.

3. You must not prepare derivative works (an alternative version or format) based on the software supplied.

4. Jacaranda Software is protected under Australian copyright law. However, an educational institution* may make a back-up copy of a disk for use within that institution only.

5. Copying of disks while supplied on approval constitutes a serious obstacle to continuing software production and, therefore, is not permitted under any circumstances. Jacaranda Wiley Ltd, in its commitment to furthering the development of Australian-originated, high-quality school software, will not hesitate to protect the authors' and publisher's rights.