



**Blob**



**Spikey**



**Chompy**



**Tor**

## **Contents**

1. Machine requirements
2. Installation
3. Settings
4. Introduction
5. Starting to use Blob 1 & 2
6. Levels
7. Game controls
8. Input selection
9. Blob 1 - description of the games
10. Blob 2 - description of the games
11. Working with Blob
  - Starting to make selections on a screen
  - Making choices
  - Right and wrong
  - Cognitive development
  - Relating the Blob computer activities to other situations
12. Making prints of the characters and games
13. Finding out more

## **1. Machine Requirements**

### **Screen resolution**

As stated in the Widgit Catalogue, Blob for Windows needs a reasonably fast 486 or Pentium processor in the computer in order for it to run well. Such machines usually run in 800x600 screen resolution. We asked on a Special Needs Email Forum whether anyone felt we should produce software for lower resolutions. The opinion was that this was not necessary. You can change the display if your machine is set to run in a lower resolution.

### **Colour**

If you have the colour settings on your computer to very high colour modes, you may find that the program runs slowly. If this is the case you can reset your machine to run in 256 colour mode.

Please refer to your Windows manual for information on changing the screen resolution or colour setting.

## 2. Installation

### CD-ROM

You can either install Blob for Windows so that you can run it from the CD-ROM or you can fully install it onto your hard disc. Click on your CD-ROM drive icon and select **setup.exe**. Follow the on-screen instructions to select the appropriate installation.

### Floppy disc version

Put the Disc 1 into the Floppy drive.

**Windows 95** users: click in the start button on your screen, select Run, and type A:\setup. You will be prompted when to change discs.

**Windows 3.1** users, select Run from the Program Manager, type A:\setup. You will be prompted when to change discs.

Two programs will be installed : Blob1 and Blob2. The general procedures for operating both sets of games are the same.

## 3. Settings

When the program is first installed you will be asked to select the input devices and settings. The default is keyboard using two inputs (Spacebar and Enter). These programs are designed to be used with just one or two input keys on the keyboard, mouse buttons, or through switches connected via a serial port. The selected settings are saved to your hard disc, and apply to both Blob1 and Blob2.

The keyboard will always act in parallel to any other device selected, for adult/partner use.

The section **Input Selection** describes the different devices and settings, with advice on choosing the most appropriate settings for different users.

#### **4. Introduction**

Blob for Windows is a suite of programs for young children and for children with learning difficulties. The programs explore very basic visual concepts. They also provide activities for young children with physical disabilities who are learning to develop control over a computer input device. The programs can be operated with the keyboard, mouse buttons or switches.

**Note: The games are not operable using a mouse pointer.**

Blob for Windows contains a carefully structured set of activities aimed at developing cognitive skills and control over a computer. There are 5 games in each of Blob1 and Blob 2, and each game has a number of levels of difficulty to aid progression.

**Blob 1** is a first introduction to using a computer. The activities are simple, with clear graphics, animation and sound. Although there are goals to achieve, children will enjoy playing with Blob, and those who make progress in very small steps will not be discouraged. At the first level the activities give experience in cause and effect, attention to the screen and making choices.

**Blob 2** continues with skills, taking them to higher levels. Activities involve colour and shape matching, visual discrimination and mazes. At this level the user will also be concentrating on developing control skills.

Details of the content of each game is given further on.

The section **Working with Blob** gives ideas on how to make the most of the suite and shares some ideas that teachers have developed.

## 5. Starting to use Blob 1 & 2

The first screen shows the menu from which you choose the games to play and also the setup and input configurations. The icon for each game is highlighted when the mouse passes over it. The settings icon and exit icons in the top corners of the screen are not highlighted. This is to discourage children from unnecessarily choosing these options.

## 6. Levels

These games have been carefully developed to provide opportunities for acquiring a number of early skills, and the levels have been structured to enable progression. The games each have different numbers of levels, depending on the nature and steps within the task. Levels are changed by the up and down arrows on the keyboard. When a level is changed, the level number is briefly shown in the top left corner of the display. A number on a blue background indicates the highest level for that game.

## 7. Game controls

- Press **ESCAPE** to leave a game and return to the main menu at any time.
- Change levels in a game using the **UP** and **DOWN** arrows. The new level is shown in the top left corner of the screen. A white number on blue indicates the top level for that game.
- To quit the program select the top left icon.  
*Escape only exits from a game and not to quit the entire program. This is to avoid a keyboard user quitting by mistake.*

## 8. Input Selection

Children who are able to use a keyboard or mouse buttons will be able to use the program in two input mode. This is generally preferable as it is both easier to use and teaches important skills in computer operation.

Learners with special needs, who are not able to use two inputs, either because of physical disabilities or learning difficulties, may need to use only one input. In this case there is an auto-move action on any indicating graphic. The user presses a key, mouse button or switch to make a selection. If these ideas are new to you, explore the programs yourself using the two different types of setting.

In this documentation these two functions are called **MOVE** and **SELECT**. **MOVE** is for moving an indicator (often an arrow) and **SELECT** is for selecting or choosing what is currently indicated.

On the settings page you will select (a) the input device from keyboard, mouse or switches, (b) single or double inputs and (c) other relevant settings depending on these selections. The icons are explained on the opposite page.

The auto-move option, where the arrow or indicator moves at a pre-set rate, can be initially very difficult for learners. It is often better to start by using two input operation, with the learner using the selection device (**SELECT**) and the partner (who may be a teacher, carer or older sibling) using the move device (**MOVE**). In this way the rate at which the indicator is moved can be controlled to fit with the learner's attention and control skills.

Research has shown that many children with special needs are more motivated by activities with a social context and that working with a partner who can give feedback and share in the game can greatly increase pleasure as well as benefit. The program options, such as changing levels, leaving a game, and the settings are designed to be done by the partner using the mouse and keyboard. The child can share in choosing new games by indicating a preference as the games are highlighted on the Main Menu screen.



Main menu icon to go to the **Settings** page.



Main menu icon to **Exit** the program.



Keyboard. The active keys are the **Space bar** (MOVE) and the **Enter** key (SELECT). You could put coloured stickers on the keys for first users.



Mouse buttons. This choice also works with switches connected through the mouse socket. The LEFT button acts as MOVE, and the RIGHT button as SELECT.

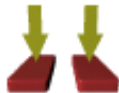
**The games do not operate with a mouse pointer.**



Switches connected through an interface box attached to a serial port.



If you have selected switches you will need to indicate the socket to which they are connected. (Normally this is Com1 or Com2). This icon does not become active until switches are selected.



Select this if you are using two inputs.

Keyboard - Spacebar for MOVE, Enter key for SELECT  
Mouse buttons: Right button for MOVE and left button for SELECT.



Select the one switch icon for single input use. This is auto-move mode for the indicating arrow. All input devices will act as press S.



Sets the scanning rate for the auto-move used with single input. This does not become active unless single input is selected.

## 9. Blob 1

### Meet Blob

Introduction to Blob and his friends. This is the simplest activity in Blob 1. It encourages attention to the screen through animation and sound. Each character has his own sound.

- Level 1 Introduction to using a single press (either input). Simple cause and effect. Start the animation with one press, change the character with another.
- Level 2 The order in which the characters appear in level 1 is fixed. In level 2 it is random to encourage interaction or 'conversation' with an adult.

### Behind the wall

Blob and friends are hiding behind the wall. Level 1 is a more dramatic cause and effect activity. The higher levels encourage making choices and controlling the input device. See the section on Working with Blob on how to help the child choose the character he or she wants.

- Level 1 Press MOVE or SELECT to make him appear. Press again to make him go. Press again to make someone else hide.
- Level 2. Learning to make a selection. Make Blob come up to see the star. MOVE/auto-move controls the star, SELECT activates the character under it.
- Level 3 Choose who is going to see the star.
- Level 4 Make all of the characters behind the wall come up in turn.

### Spikey's balloons

An exercise to press at the right time to cause an effect. Single press (MOVE or SELECT) to make Spikey jump. In levels 2 and 3 there is an emphasis on controlling the switch by pressing at the right time.

- Level 1 Just make Spikey jump at any time.
- Level 2 Can he jump up to burst the balloon?
- Level 3 Burst two balloons.

## 10

### **Going home**

Help Blob to get to his house. An exercise in choosing with a pointing arrow, and to explore directions. It will stimulate visual scanning and introduce vocabulary. MOVE/automove the arrow to show which way he will move. SELECT make Blob move. In the first 3 levels there is no choice of direction, the arrow shows which way Blob will move.

- Level 1 Left/right only.
- Level 2 Up/down only.
- Level 3 Up/down or left/right presented randomly.
- Level 4 Find the way from an adjacent corner.
- Level 5 Blob is always in the opposite corner to the house.
- Level 6 There are many different routes Blob could take here.

### **Tunes**

Each of the characters has his own tune. This game encourages listening as well as choosing. The second level could be played as a shared activity.

- Level 1 MOVE/auto move to make the arrow point to the one you want to hear. Press S to select him. MOVE or SELECT again will stop the tune ready to start again.
- Level 2 Blob and friends play together. Choose a character to make him play, choose another and make them play together. Simply select a moving character to make him stop again.

In this game switch selections are shown by a yellow cursor surrounding the chosen character, but the relevant tune stops or starts at the end of the currently playing phrase. This is to synchronise the tunes.

*You could make print outs of each character and use these to encourage naming and recognition. Non-speaking children could eye-point to the appropriate picture. See page 19 on how to print pictures to use in this way.*

## 10. Blob 2

### Colours

Colour Matching. Blob wants to go up in his hot air balloon. Move Blob to the balloon which matches the colour of his basket.

- Level 1 Four primary colours: red blue, green and yellow.
- Level 2 More colours to match: orange, white and pink.
- Level 3 Memory: As soon as you press a key/switch the mist comes down and hides the balloons. Can you remember where the right balloon was? Incorrectly selected balloons are uncovered and remain visible while others are chosen.
- Level 4 As level 3, but wrong balloons are recovered.
- Level 5 Additional colours: light blue and light green.
- Level 6 Selection from complete colour range
- Level 7 As level 6, with cover as in level 4.

### Shapes

Spikey is in his factory. Can he get a shape to match the one he already has? Move Spikey's platform up and down the shelves to find the match. The shapes used are:

- Level 1 Two basic shapes from square, circle or triangle.
- Level 2 Three shapes from square, circle, triangle, diamond, oval and rectangle.
- Level 3 Size discrimination. One shape in large and small
- Level 4 Shape discrimination: Pairs of similar shapes -triangle and inverted triangle, circle and oval, horizontal and vertical rectangle.
- Level 5 Shape matching from a set of four small shapes, including cross.
- Level 6 Size and shape mixed.

### Mazes

A structured set of mazes of increasing complexity. Guide Blob through the mazes by choosing the direction of movement (MOVE/automove) and making him move in that direction (SELECT). When Blob reaches the flower which marks the end of the maze, more flowers grow to show where Blob has been. 16 levels, divided into 4 levels.

### **Where's Spikey**

Spikey hides behind various objects. Can you see where he is? MOVE/automove to move the indicator and SELECT to choose.

- Level 1 Two objects on screen. Only one possible hiding place for each.
- Level 2 Three identical objects, which one is Spikey in?
- Level 3 Three identical objects, but different hiding places available.
- Level 4 Different objects, one hiding place for each.
- Level 5 Different objects and various hiding places.

### **Find Me**

Blob and friends are all in this matching game. One of the characters, Blob, Spikey, Tor or Chompy, is in the centre of the screen. Help him find his twin. At the highest level the characters hide when the first press is made, making this a visual memory game. MOVE/automove to move the arrow to point to his twin, and Press S to choose the character that it points to.

- Level 1 Two characters shown. Point to the matching one.
- Level 2 Two characters shown but no indicating arrow. Press to start and a screen comes down to cover them up. Remember where the twin was.
- Level 3 All four characters are on the screen. Find the matching one.
- Level 4 All four characters but the characters are covered up when the first press is made. Incorrect choices remain uncovered.
- Level 5 As level 4, but incorrect choices are recovered before a new selection can be made.
- Level 6 See where the characters are first, but nobody is in the middle. On the first press the characters are covered and then someone appears in the middle. Incorrect choices remain uncovered. A harder memory game.
- Level 7 As level 6, but incorrect choices are recovered before a new selection can be made.

## 11. Working with Blob

To be able to use the computer as an effective learning tool, the child must first be able to pay attention to the screen and to show some interest in what is happening. Secondly the child must have a means of input to the computer which he/she can control comfortably. This is not always easy to achieve until there is some way of finding what the child can do. There may well be a chicken and egg situation here. The first three programs, Meet Blob, Behind the Wall and Spikey's Balloons provide activities for observing a child's responses to the sound, animation and action.

In helping a child to understand and work with actions on a computer screen, it is important that there is as much consistency as possible in the choice and positioning of the switch. It is also important that the effects which the child produces are immediate and obvious until the relationship between the cause (switch) and effect are understood. If there is a delay in the effect, or the effect is not obvious, the child may not realise that he or she alone has caused it. For this reason some toys with delayed action might be avoided at this stage.

The games in **Blob 1** cover a wide range of activities at a variety of developmental levels. The simplest activity is Meet Blob. This encourages attention to the screen through the animation and sound. Each character has his own sound to help recognition.

*You could make screen prints of each character and use these to encourage recognition. Non-speaking children could eye-point to the appropriate picture. See page 19 on how to print screens to use in this way.*

Behind the Wall level 1 has a more dramatic cause and effect. Pressing the switch causes a character to appear and start to move. Pressing it again makes it disappear. At the next level, there is a moving star. The child has to press the select switch when the star is over the character to make him come up.

### **Starting to make selections on a screen**

Some children at these early development levels may find two input devices difficult, especially if he/she is a switch user and has some degree of physical disability. Two switch operation requires quite a good understanding of the switch/screen relationship. However, using a program on single switch means that the child needs to have good switch control to press the select switch at exactly the right time.

#### **(a) A child who has difficulty pressing a switch**

If the child does not quite manage to press it when he/she intended, a 'wrong' response is registered causing frustration, and giving a sense of failure. Sometimes the stress of trying to respond correctly to an automatically moving indicator can cause more difficulties, such as spasm. A good way of helping the child make selections is one where the adult uses the moving switch and the child the select switch. The adult can move the indicator (such as the star or pointing arrow) at a rate which reflects the child's attention and physical capabilities. If the adult sees that the child is trying to get to the switch, there need be no rush, and success can be assured. The child can make the selection at his/her own rate.

#### **(b) a child who has difficulty in NOT pressing a switch.**

Some children may rapidly press a switch and have difficulty in leaving it alone. In this case it may make sense for the child to have the moving switch and the adult to have the select switch. The child has to stop pressing the switch for a choice to be made by the adult. The adult can confirm verbally with the child whether this is the one he/she wants and respond accordingly.

Eventually the child will start to develop enough cognitive and control skills to either use two switches for indicating and selecting, or will be able to select an automatically moving indicator with a single switch. The approach that is ultimately the most appropriate will depend on the child. Where the child has severe physical disabilities expert help and advice will be needed in selecting appropriate switches, positioning of the child, switch and screen, and development programme which is appropriate to the individual.

### **Making Choices**

Children who have severe disabilities may not have as many opportunities to play and express choice as their more agile peers. The activities in Blob for Windows are aimed at helping a child play, make choices and show understanding. The child who has extreme physical disabilities will need a lot of reward and positive feedback for the effort put into the activity. It may be enough to press a switch and see a character pop up from behind the wall to start with, but this can be much more rewarding if there is additional feedback from the adult or sibling playing with the child and the computer. Research has shown that children are much more motivated when there is social feedback as part of an activity. The use of screen prints, toys and physical actions to support the computer activities can greatly enhance the effectiveness of the whole development programme.

### **Right and Wrong**

It may well not be helpful for a child struggling with understanding what is happening and to control a switch, to be faced with right or wrong situations. Simply to have pressed the switch or to have made a choice may be enough at this level. For this reason there are a number of activities in **Blob 1** where there is no right or wrong at the earlier levels. There may also be times when a child actually chooses to be wrong. Maybe the child wants to explore the different outcomes, and choosing 'wrong' can be part of that exploration. For example in Going Home the child may like to go the long way home. And in Mazes, the child may like to plant seeds all over the route, and whose to say that the shortest way is the only right way?

For this reason there are no 'automatic' interference such as switching off after so many wrong attempts. It would not be envisaged that a very young child, or an older child with disabilities would be working alone at the computer for more than a few moments, and the adult can successfully intervene and guide, using verbal and physical prompts where appropriate, which will be in tune with the child's behaviour - something which no computer can do.

### **Cognitive development**

**Blob** was originally designed as part of a project at Great Ormond Street Hospital, London, England, to help children with cognitive and physical disabilities to encounter some of the skills which other children are able to explore through manipulative play. Games like hide and seek, Peek-a-Boo, matching puzzles, and playing with wheeled toys give experience of essential concepts upon which the child can build. The suite of games in Blob aims to give access to just some of these. Although there are many programs and toys which offer access to similar concepts, the structured nature of the Blob suite offers a series of steps to work through, giving both the child and parent or teacher a sense of progress.

The direction language and systematic selection of direction introduced in Going Home, and carried on in most of the other games is particularly valuable for children with restricted mobility. Such children need opportunity to explore orientation at an early stage, and for a child who may eventually use a motorised wheelchair, this is an essential skill.

### **Relating the Blob computer activities to other situations**

The kinds of games in Blob can be reflected in other activities away from the computer. The ideas below have come from parents and teachers.

- A nursery school made coloured 'lollipops' of the Blob characters which the child could hold up when the characters appeared on screen, and also when coloured pictures or similar toys were played with away from the computer.
- Coloured pictures can be used in matching games, snap, visual memory, (e.g. look at the cards, turn them face down, and then find 'Blob'.)
- Stick coloured pictures onto card to use in 'hide and seek' games.
- Draw mazes similar to those in Going Home and the Maze games, for the child to draw on for early pencil work, or to encourage finger tracing.
- In the music game you could use screen prints of each character for one child to choose, or give each of four children one character each, ask them to hold up, or point to their character when he is playing his tune. This requires careful attention in level two when all the characters could be playing at once.
- Puppets can be simply made by sticking pictures onto sticks, or attaching wire. One group made glove puppets to match the characters. These can be used in puppet shows, to re-enact the activities in the Blob programs, and as familiar characters 'telling' or acting a story.

## 12. Making screen prints

On the CD-ROM there is a directory called **BlobPics**. This contains two sets of graphics which can be opened in a painting package such as MSPaint, to be printed out. They are on a white background, which is preferable for printing. The pictures with names starting with C are coloured and those with G are in grey. Installation from Floppy Disc puts BlobPics in both the Blob1 and Blob2 folders.

Other displays can be made by making a copy of the screen. This can be done by running Blob until you get to a point which you would like to capture. Then press the Print Screen key. This copies an image of the screen into the computer's memory. Exit the Blob program and load up your painting or graphics program and select Paste from the Edit Menu. This will paste the copy of the screen into the package. You can then save it for future use or print it.

Print-outs from activities is a useful way of recording achievement. Displaying screens can help the child remember and celebrate their experience.

## 13. Finding out more

Over the years that **Blob** has been in schools, many teachers have shared their ideas. Some of these have been given in this booklet. It is a very long time since a teacher in Scotland made a class birthday cake to celebrate Blob's first birthday. The name of Blob was chosen because it is fairly easy to articulate. In choosing the names for the other characters which have gradually joined Blob, we have tried to make names which are distinctive but not too difficult to articulate.

More ideas will be shared on the Widgit web site: <http://www.widgit.com/>

We would like to encourage you to let us know what you think about **Blob**, and how you are using it.