

## Rules for Grim Reaper © Wyon Stansfeld

**Brief description:** This is a game where two populations compete for survival. Pieces have gender, can 'mate', give birth, age and die. The game is won by the player whose population lives longest or who connects two sides of the board. The longevity of pieces gets around the diagonal cut problem of playing a connection game using a board with squares. This has been solved elsewhere by going into three (physical)- dimensions, - here the extra dimension is time. The unusual theme of the game keeps it fun whilst also enabling considerable strategic variety and depth.

**Board and piece description:** The game is played on a square board, size 6 X 6 or 8 X 8. One player is red, the other blue. Male pieces are represented by triangles, females by circles. Each piece also has a number written on it. This is the piece's remaining **life turns** (lifespan) i.e number of 'turns' left before it dies (higher numbers meaning greater longevity).

### Turns

There are four phases in each 'turn' (the last two phases being automatic):

1. **Placement/Movement** Each player either places a new piece on the board or moves an existing piece.
2. **Birth** Each player gives birth, if they wish, anywhere where the conditions for birth are met (see below for these).
3. **Ageing** All pieces age (their remaining life turns are reduced by one)
4. **Death** Pieces that have no life turns left die (disappear), and any player who has met one of the **Objects** of the game wins.

If no-one has won then a new turn begins.

Because it is usually advantageous to make a placement/movement just before the birth phase (rather than before the other players placement/movement), play proceeds to allow both players to be in this situation alternately. This means that the player who has made a placement/movement just before the birth phase is the first to make a placement/movement after the birth phase is completed (the next time round this will be the other player). *It is important tactically to take this sequence into account when playing the game.*

Here is how the sequence works:

Turn 1

Red places or moves

Blue places or moves

Blue gives birth (if possible and wanted)

Red gives birth (if possible and wanted)

All pieces age and some may die

Turn 2

Blue places or moves

Red places or moves

Red gives birth (if possible and wanted)

Blue gives birth (if possible and wanted)

All pieces age and some may die

And then the sequence returns to that at the start of turn 1, etc.

To help you during play there is an aide-memoir to the right of the board which tells you what the next 5 phases will be.

## Movement/Placement

In this phase the player must choose to either place a new piece on the board or to move an existing one. It is compulsory to make a movement or a placement if it is possible (no passing). If it isn't possible then play passes on to the next part of the turn.

### 1. Placement

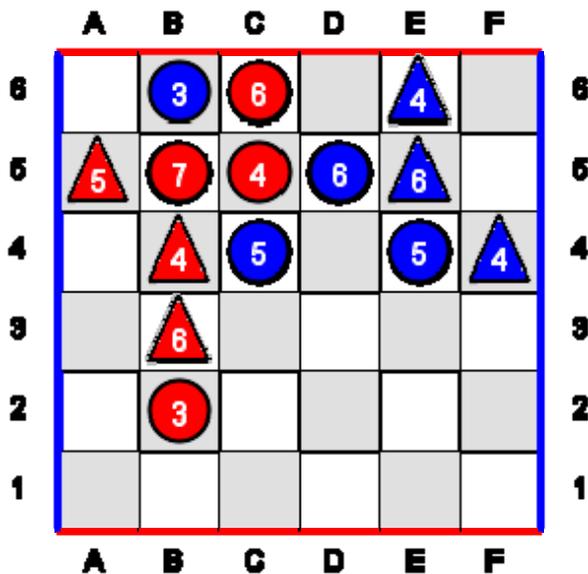
At the beginning of the game each player has an equal, pre-determined **life reserve**. This is the supply of **life turns** that can be drawn from and allocated to pieces that he/she introduces to the board through placement. A piece can be placed on any vacant square of the board. When doing this the player needs to decide the gender of the piece, and also the number of life turns from his/her life reserve that he/she wishes to allocate to it.

e.g. M10a1 means place a male with 10 life turns on A1  
and F2b3 means place a female with 2 life turns on B3

There are no restrictions as to the number of males or females that can be placed (though only one can be placed each go). However each time a placement is made the player's life reserve is reduced (by the amount of life turns given to the new piece being placed), and once their reserve reaches zero no further pieces can be placed on the board by that player.

### 2. Movement

One of the player's pieces may be moved one or two squares, orthogonally or diagonally to a vacant square. Where a piece moves two squares then both squares need to be vacant.



Here the red male on B4 can be moved to any of the following: A4, A3, A2, C3, C2, D4, D3, and D2. Note that D4 has the effect of jumping over the piece on C4 but is only possible because C3 is vacant. Note also that red cannot move to A6 because there is no vacant square on the way. Moves are written in the format: b4-a4 (move piece from B4 to A4)

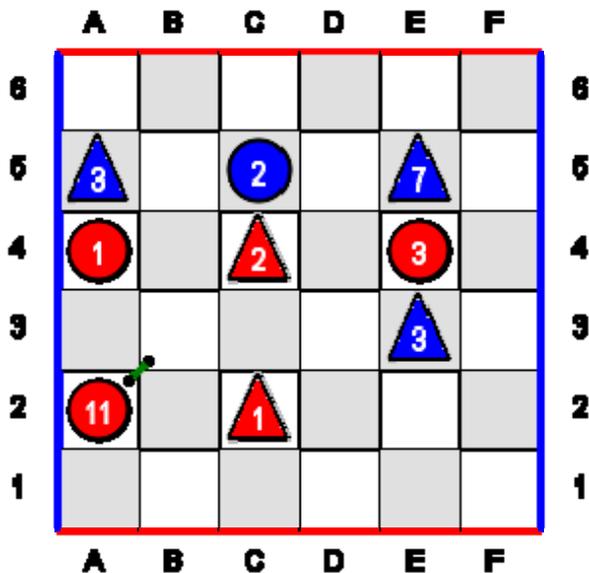
### Birth

In the birthing phase, players can elect to give birth to new pieces providing they have two 'parents' of their side and of opposite gender with an unoccupied square between them (orthogonally or diagonally). The unoccupied square also needs not to be a competing birth

square with the opposing side (explained below). The new piece is 'born' into the space between them. This piece will be 'born' with the number of 'life turns' decided as one of the initial parameters before the start of the game.

Extra conditions around giving birth are:

- Females can only give birth to one piece each birthing time.
- Males can fertilise two or more females in one go
- Neither side can give birth on a square where there is competition between the two sides to birth there.
- Players do not necessarily have to give birth even if they can, and if they have several options they can choose any number of permissible births.
- Where a female can give birth to two or more different fathers the player can choose which one to go with (even if that male has already impregnated another female that go).
- Only one birth is allowed in each square (even if there are two or three sets of potential parents from the same side who could give birth there).



Examples:

- The female on A2 (who has just moved from B3 as shown by the green line) could give birth on B3 in conjunction with the male on C4, or on B2 in conjunction with the male on C2, but could not give birth twice in one go. If she elects to give birth with the male on C4 he is still allowed to give birth with the female on A4 (into B4).
- The male on C2 could in the same go fertilise the females on A2, A4 and E4
- Neither side can give birth on D4 because the pairs on C5 and E3, and C4 and E4 are competing for the square and are from different sides. This is true even if the female on C5 elects to give birth elsewhere or the male on C4 fertilises another female (or more).

Newly born pieces are fertile and can give birth to others the following turn (provided the other conditions are met).

Notation for birthing starts with a '+', eg +Fc4, Ma2 means give birth to a female on C4 and a Male on A2

## Ageing and Dying,

After the birthing period, all pieces age. This means that the number of turns left for each piece goes down by one. Pieces with no turns left 'die' and are removed from the board. For clarity this is indicated on the following go by RIP (rest in peace!) on the square where they have died, (pieces can still be placed to these squares).

## Objects

The game can be won in either of two ways both assessed only after the ageing/dying phase of each turn:

1. If one player is the only one with pieces left alive. This includes the other player having no reserve life turns (so a player is still alive if they have no pieces on the board provided they have at least one reserve life turn left to make a placement with the following turn.)
2. By one player connecting two sides of the board through a continuous series of their pieces which are all orthogonally connected (similar to hex). For Blue this will be connecting the two vertical sides, for Red top and bottom.

	A	B	C	D	E	F	
6		△ 6	△ 8	△ 11	○ 10	○ 6	6
5		○ 10	△ 9	○ 6	△ 10		5
4			○ 8	△ 4	○ 9	○ 8	4
3			○ 9				3
2			△ 8	○ 7			2
1				○ 4			1
	A	B	C	D	E	F	

Here, red has won (provided this is the situation *after* all the pieces have aged and died.). Note that if there wasn't a red piece on C2 it wouldn't be a win (the connection has to be entirely orthogonal).

(The shading on d6 indicates that the last thing to happen before the ageing phase was that a blue piece was born on that square).

## Initial set up

The non standard variables to chose from at the challenge stage are:

- Maximum life span – this is the maximum life turns that you want new born males or females to be born with. You can select different amounts for the different sexes. 6 makes for a fast turn over of population (pieces only surviving for 6 turns after being born).
- Random life- for lighter hearted (and more realistic) play- allows pieces to be born with a random life expectancy in the range 2 to max life for that gender.
- Reserve Points X2 and X3. This is the size of your initial life reserve. Default (X1) is the average maximum lifespan of one piece. X2 or X3 multiplies this by 2 or 3.

## **.Notes on the mechanics of play**

- Even when a player cannot do anything the system will wait for a pass entry (there is no 'auto-pass'). This is to enable players to keep track of the situation and it gives them the option to take back their most recent move. Occasionally, and always after the first placement, all that can be done in the birthing phase is to pass.
- Movement, placement and birthing are greatly facilitated by selecting the 'view all moves' option and then using the drop down menu. Placements are listed before moves.
- When selecting entries it is easy to confuse the column 'F' with 'F' for female. If this happens just undo your move and adjust your notation. In general gender is represented by a capital letter and location by small case.

## **Tactics**

A population can be destroyed if the males and females can be kept separate or if it can be hemmed in so that there isn't enough space for it to reproduce.

There is a play off between maximising early reproductive possibilities through high value early placements, and keeping some of the reserve life-turns back for emergency and/or later development.

Obviously there is little value of making a placement with a life-turn value of one on your first move as it will die out before it can reproduce. Such placements can be of value later, however, if they are correctly timed.

There is often a play off between maximising the strength of your population and going for the connection- i.e the two ways of winning can compete in importance.

When placing new pieces or giving birth it is important to give careful consideration to which gender to choose- a population can die out if it has only one effective gender.

Providing your move is in the right part of the sequence an opponent can be prevented from producing offspring by

- a) moving or placing a piece between his male and female.
- b) having a male and female of your own competing for the birthing space.

Frequent choices must be made between making sure your pieces produce offspring and preventing your opponent from doing the same. If you can do both it usually helps.

## **Credits**

Game completed in July 2007 after about 29 years incubation! Conscious influences: 'the Game of Life', Hex, Mamba, Akron and Druid.

Many thanks are due to Aaron Dalton for very generously and persistently programming the game, and to Keith Carter, Larry (papa\_bear), Jesse, and Stephen Taverner (mrraow) for their testing, encouragement and intelligent analysis. Programming and testing contributed several new facets to the game. Thanks are also due to my wife for her forbearance.

I hope you enjoy playing it as much as I did designing it. Do challenge me!

Wyon Stansfeld (wyons)