

How To Play Go

Lesson 2: Living And Dead Groups

2.1 Dead Groups

A *group* is simply a collection of two or more connected or loosely connected stones.

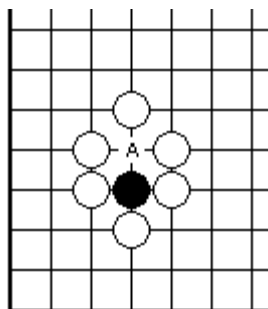


Diagram 2-1

It is obvious that the black stone in Diagram 2-1 is totally surrounded by the white stones. If it is white's turn white can play at A to remove the black stone from the board, but black can do nothing to stop white from removing that black stone. White can choose to remove the black stone whenever he likes. Hence, we say that the black stone is *dead*.

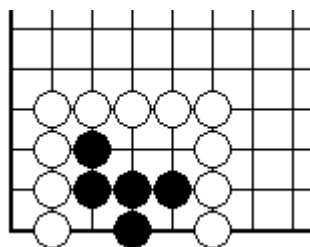


Diagram 2-2

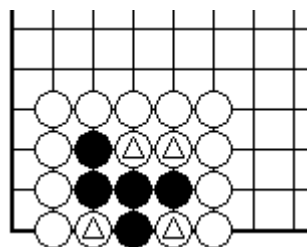


Diagram 2-3

It does not really matter how many liberties the surrounded group has. See the black group in Diagram 2-2 is completely surrounded but it still have four liberties. However, black cannot prevent white from playing the triangle stones progressively in Diagram 2-3 to remove the black group from the board. So this is proof that the black group is dead.

The question is: how do we prevent the *capture* of stones (to make the stones dead)? We can have *living* groups, that is, groups that will never be captured. To achieve this, a group needs to have at least two eyes. Read on the next section to find out what is an eye.

2.2 Eyes

An eye must satisfy the following two conditions:

- The group must completely surround at least one unoccupied point.
- The stones in the group must be connected (i.e. in a chain).

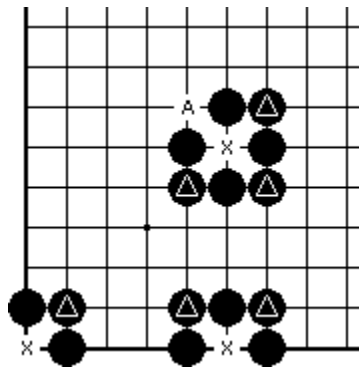


Diagram 2-4

Diagram 2-4 shows an eye in the center, an eye at the side and an eye at the corner. Notice these eyes fulfill the two conditions by surrounding a point X and all the stones are connected by the triangle stones. Note that for the eye in the center, it is not necessary for black to play at A because the other three triangle stones already ensures that the stones are all connected.

If a group surrounds a point but fails to ensure the connection of the stones, then such groups are known as *false eyes*. *False eyes look like eyes but they are not eyes*. The opposite of false eyes is known as *real eyes*; and *real eyes are eyes*.

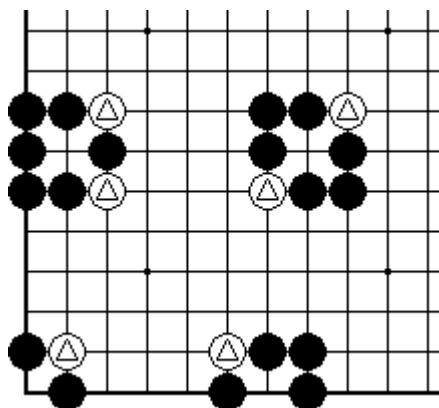


Diagram 2-5

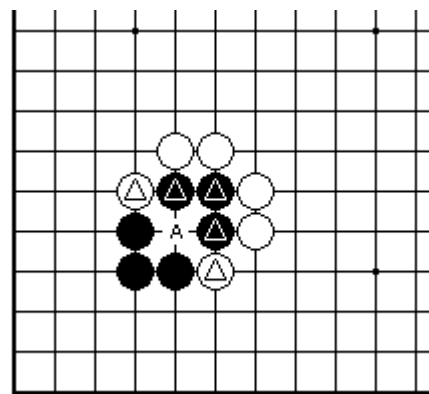


Diagram 2-6

Examples of false eyes are shown in Diagram 2-5, where the stones are not all connected in a chain due to the presence of the white triangle stones. Diagram 2-6 will further illustrate why false eyes are not eyes. The two triangle stones causes disconnection in the black group, and see that if it is

white's turn then white can play at A to remove the three black triangle stones from the board. It is obvious that if black allows white to remove the three black triangle stones from the board then there is no eye to talk about. However, if black connects at A to save the three triangle black stones then the group no longer surrounds an unoccupied point at A and thus this is not an eye either. Hence, Diagram 2-6 shows a false eye which is not an eye.

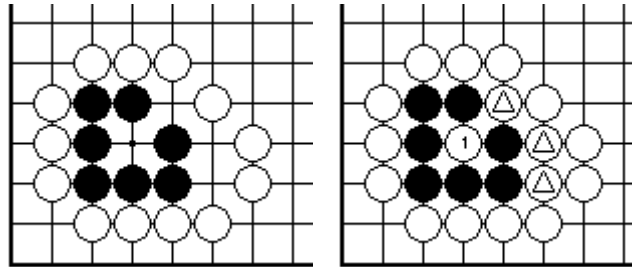


Diagram 2-7

Diagram 2-8

However, a group with only an eye can still be captured. Diagram 2-7 shows a black group with only an eye but is totally surrounded by white. White can start filling out the exterior liberties of the eye by playing at the triangle stones in Diagram 2-8 and finally at 1 to destroy the last liberty of the black group to remove this group from the board.

2.3 Living Groups

A living group is a group that cannot be captured; in majority of the cases it simply means that the opponent player cannot prevent the group from having *at least two eyes*.

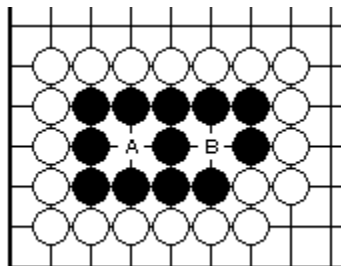


Diagram 2-9

Diagram 2-9 shows a group with two eyes at A and B. Although it is totally surrounded, white can never capture the black group. For white, playing at either A or B is suicide as the black still have a liberty from the other eye. So the black group is a living group. Warning: *the black player should never play at either A or B* – if he does so then he is killing this group by reducing his group to only one eye!

If a group has a mix of real eyes and false eyes, we count only the number of real eyes (remember false eyes do not count). If the group has two or more real eyes then this group is a living group. Otherwise, if a group possess less than two real eyes, then it cannot be considered to be living – it has to find means to create its two eyes before the opponent captures the group!

2.4 Seki

A *seki* is a condition where black surrounds white and in turn got partially or wholly surrounded by white, and surrounded groups of both colours are living.

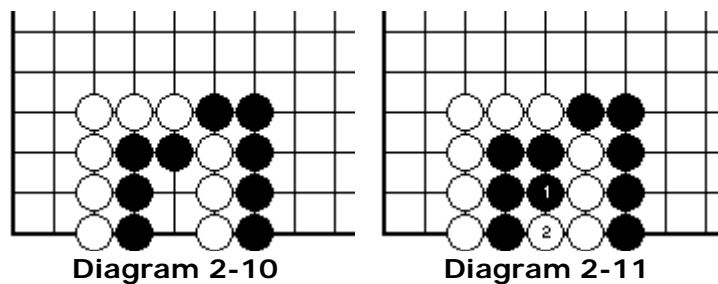
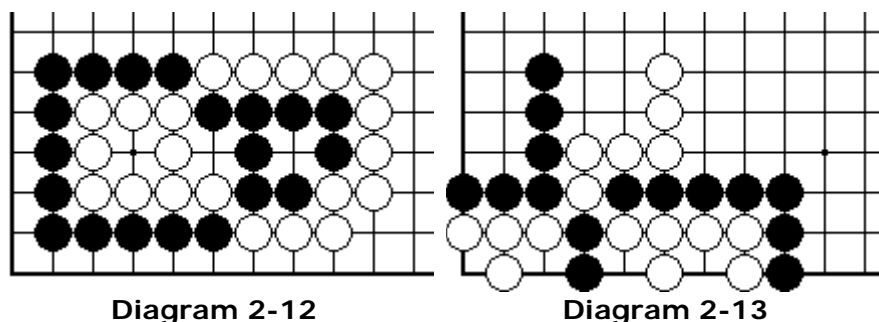


Diagram 2-10 is an example of seki. Black has surrounded three white stones but white has in turn surrounded 4 black stones. However, black is unable to play at 1 in Diagram 2-11, because in black's attempt to capture white, white plays at 2 and captures black instead. Similarly, black cannot play at 2 either. The same goes for white: white cannot capture the four black stones as well. Hence both the black and white groups are living groups and the condition in Diagram 2-10 is a seki.

Saying that a pattern is a seki naturally assumes that the exterior groups surrounding the interior groups are living as well. If let's say that the exterior white group is dead then the interior white group is dead as well. The reason is that black is able to reduce the liberties of the exterior white group to zero and remove the exterior white group from the board. So now black is able start to reduce the liberties of the interior white group. Just like a false eye, such a condition is known as a *false seki*.



More examples of sekis are shown in Diagram 2-12 and Diagram 2-13.

[More Stuff] – Efficiency Of Moves

When beginners capture his opponent's groups, it is noticed that they often like to waste many turns to reduce the liberties of these groups to zero and then remove the group from the board. Beginners often say that in doing so, they feel safe that they really got hold of the opponent's group. Actually, if you are confident that your opponent's group is dead, then you should not bother wasting moves to remove the group from the board. It is obviously better to play at another place more important and improve efficiency of your moves!

If a group is dead, then it is dead. Some beginners see that a group of theirs is dead, and play more and more stones to make the dead group larger and larger – it just does not make any sense and the opponent must be saying "thank you very much"! So if you recognize that a group is dead, then forget about this group and play elsewhere, hoping to recover the loss of that group from there.

There are also beginners who simply love to make eyes. Each group needs only 2 eyes to live, but they make more than 10 eyes, and continue making them. When a group has 2 eyes, then it is more efficient to play at another place, such as saving another group from being captured or to find more territories, as making 1 eye uses several moves but will produce only 1 point in territory!

Efficiency of moves is very important in Go. The more advanced you get the more important is efficiency in your games. It is always desirable to use fewer turns or stones to accomplish a certain goal, and use the excess turns or stones to do something else.