

INTRODUCTION TO STRATEGIC BOARD GAMES

Classroom activity

Equipment: Whiteboard and pens for teacher, pencils and paper for pupils

Prior knowledge: none required

Ask pupils about board games: some games are pure luck, depending on the roll of the dice or the drawing of a card (snakes and ladders), some games are partly luck and partly skill, some games are all skill. We're going to look at games of skill.

NOUGHTS AND CROSSES is a simple example. If both players play well, the game will be a draw. There are two ways you might win.

1. You create a THREAT to make a line and your opponent doesn't notice the threat.

X	O	O
X		

You're playing CROSSES. Your opponent hasn't noticed your THREAT. Do you see how you can win? What do you have to do to avoid making a mistake, as NOUGHTS has done here? You have to concentrate, focus, pay attention, look at the board. If you play without thinking, you'll lose.

2. You create TWO THREATS at the same time.

X		O
O		
X		X

Do you see both your THREATS here? If NOUGHTS plays in the middle you can win by making a line in the bottom row. If NOUGHTS plays in the bottom row you can win by playing in the middle and creating a DIAGONAL line.

This is much harder. There are two ways you can avoid losing like this. The first way is to LOOK AHEAD, to think about what your opponent is going to do next before making your move. The second way is to REMEMBER the PATTERN.

You can play a game online: <http://www.chesskids.org.uk/tictac.htm>.

These three ideas will be even more important when you come to look at harder games.

1. Concentrate and look at the board
2. Look ahead – ask yourself what will happen next
3. Remember patterns.

Outcomes:

Chess knowledge: none

Chess skills: none

Cognitive skills: concentration, foresight, taking care, long-term memory

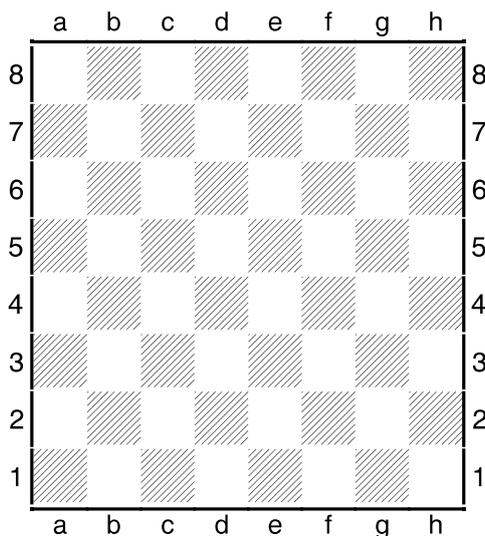
INTRODUCTION TO THE CHESSBOARD

Classroom activity

Equipment: smartboard, demonstration board or laminated chessboards for pupils

Prior knowledge: maths (multiplication, calculation of areas of rectangles, square numbers)

Most board games are played on square boards. Board games might involve placing pieces on the board, moving them around the board or taking pieces off the board. 'Big chess' involves moving and taking off (capturing). Noughts and Crosses, for example, only involves placing pieces on the board. Most of the games we'll be looking at will be played on 8x8 boards, looking like this. We talk about the WHITE (or light) SQUARES and the BLACK (or dark) SQUARES even though the colours might be different on your board.



How many small squares are there on the board? How can you work it out quickly?

How many squares are there on the perimeter (outside) of the board? (Most children will get this wrong, multiplying 4x8 to get 32. This is a test of a good mathematician.)

You can make other squares as well. For instance a1, b1, a2, b2 is a square, as is b1, c1, b2, c2. The whole board is also a square.

Can you work out how many squares of all sizes there are in total on the board? Is there an easy way to work this out? How many squares would there be on a 10x10 board?

Note that you ALWAYS place the board with a WHITE SQUARE in your right hand corner. It's also helpful if you start with the white pieces on the ranks numbered 1 and 2, and the black pieces on the ranks numbered 7 and 8.

You'll find an online lesson on the chessboard here: <http://chesskids.org.uk/newcourse/ck311.htm>

Outcomes:

Chess knowledge: familiarization with chessboard

Chess skills: none

Cognitive skills: increased maths knowledge, problem solving skills

CHESS NOTATION: NAMING THE SQUARES

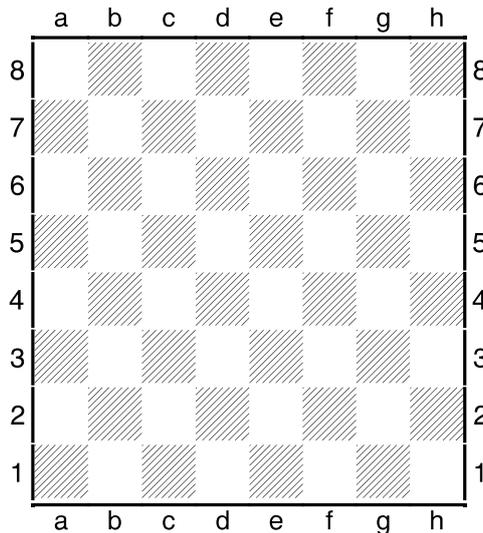
Classroom activity

Equipment: smartboard, demonstration board or laminated boards for pupils

Prior knowledge: letters a-h, numbers 1-8

It's much easier to talk about games played on a chessboard if we give each square a name.

Here's the board again.



Notice the letters and numbers round the board.

The VERTICAL lines going up and down are FILES. Each file has a letter, from a to h.

The HORIZONTAL lines going left and right are RANKS. Each file has a number, from 1 to 8.

In maths we name the corners of the squares, but in chess we name the squares themselves.

Each square has a name based on the LETTER of the FILE followed by the NUMBER of the RANK.

For example: a1, e4, h8.

Practise finding and naming the squares. Visit <http://www.chesskids.org.uk/findsquare.htm> to see how many squares you can find in one minute.

Knowing the names of the squares will enable you to read chess books, and to understand online chess lessons.

Outcomes:

Chess knowledge: familiarization with chessboard and names of squares

Chess skills: none

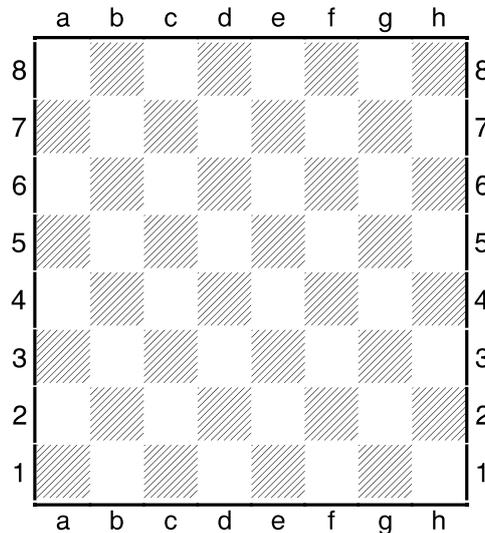
Cognitive skills: maths skills: coordinates, language skills: starting to learn a new language based on letters and numbers

THE EIGHT OFFICERS PUZZLE

Group activity

Prior knowledge: none

Equipment: each group will need a chess board and eight pieces (for example, counters or pawns from a chess set)

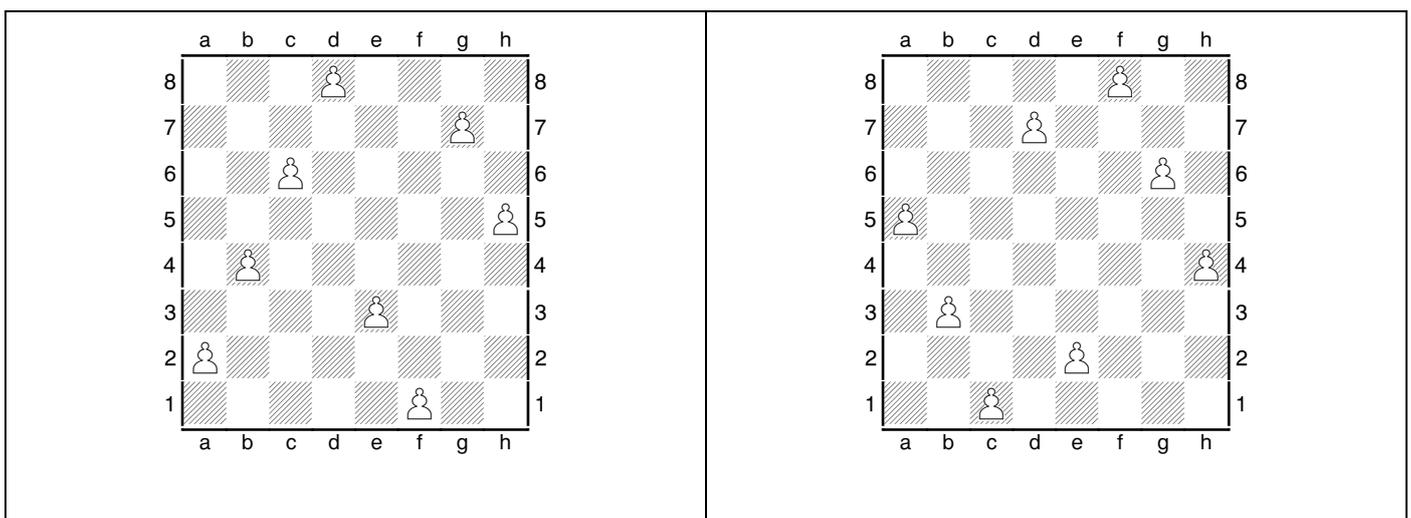


The aim of this puzzle is to place the eight officers (pawns or counters) on the board so that there are no two officers on the same RANK, FILE or DIAGONAL. (This is sometimes also called the EIGHT QUEENS PUZZLE.)

This is best used as a team building activity in the classroom. It's easy to place seven according to the rules, but eight is a lot harder. Pupils can try it for themselves at <http://www.chessheroes.uk/minichess/8queens.html>: drag the pieces onto the board.

Pupils usually get the idea of placing the pieces a knight's move away, even if they haven't yet learnt the knight move. This is a very good way of trying to solve the puzzle, but if you start on, say, a1 and b3, it's not going to work. Only two of the 12 possible solutions use the corner square.

Here are the two most intuitive solutions:



Outcomes:

Chess knowledge: the queen move (indirectly), even more indirectly, the knight move (distance between some of the pieces)

Chess skills: chessboard familiarisation and visualisation

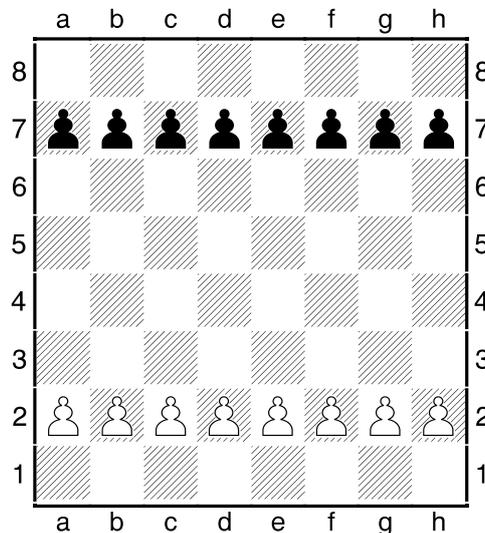
Cognitive skills: teamwork, problem solving, patience, thoroughness, carefulness, double checking your work

THE PAWN MOVE

Classroom activity

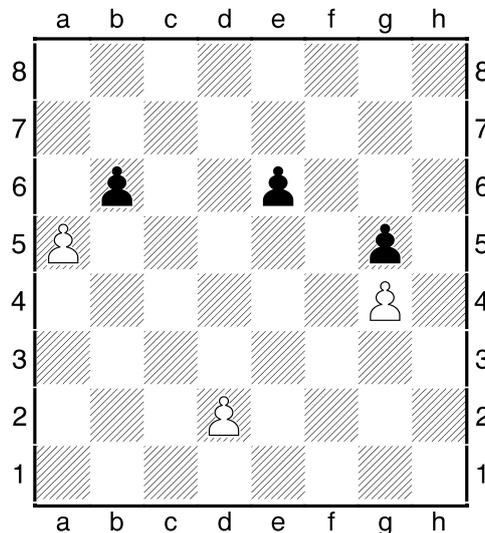
Equipment: smartboard or demonstration board

Prior knowledge: none



Here are the PAWNS at the start of the game. Each side has eight of them.

The PAWN moves ONE SQUARE FORWARD as long as that square is empty. On its first move, it may also move TWO SQUARES FORWARD as long as both squares are empty. The PAWN may also CAPTURE a piece one square diagonally in front of it. In chess you capture by removing the enemy piece from the board, and replacing it with your piece. (Not the same as draughts, where you capture by jumping over an enemy piece.)



In this position the pawns on g4 and g5 cannot move. The white pawn on d2 can move either to d3 or to d4. The black pawn on e6 can only move to e5. The white pawn on a5 could CAPTURE the black pawn on b6 or move to a6. Likewise, the black pawn on b6 could CAPTURE the white pawn on a5 or move to b5.

You'll find an online lesson on the pawn move here: <http://chesskids.org.uk/newcourse/ck3l3a.htm>

Outcomes:

Chess knowledge: the pawn move

Chess skills: none

Cognitive skills: concentration, memory

THE EN PASSANT RULE

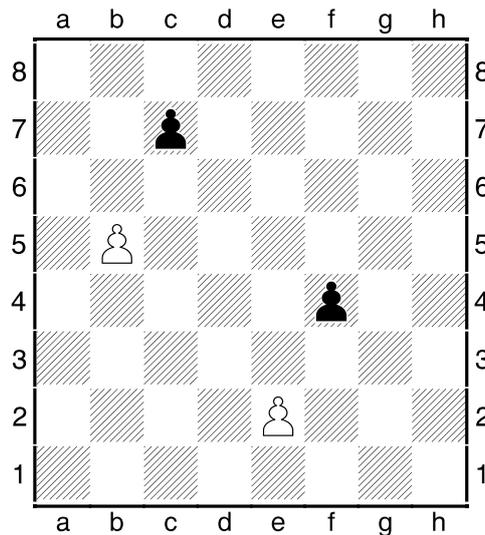
Classroom activity

Prior knowledge: the pawn move

Equipment: each group will need a chess board and eight pieces (for example, counters or pawns from a chess set)

This is the hardest chess rule for children to understand.

You can play without it if you want, but children who want to play 'big chess' will need to know it. So you might want to introduce it now, because it's much more likely to arise in minigames with pawns than in 'big chess'.



To make this capture you have to have a pawn which has already moved three squares forward (so it's on the rank numbered 5 if you're white, or 4 if you're black).

If your opponent moves a pawn on the NEXT FILE TWO SQUARES you can capture it as if it moved one square.

In this position, if White moves the pawn from e2 to e4, Black can, BUT ONLY ON THIS MOVE, capture *en passant*. The white pawn is removed from the board and the black pawn moves to the e3 square.

If it's Black's move, and the pawn on c7 moves to c5, then White can, BUT ONLY ON THIS MOVE, capture *en passant*. The black pawn is removed from the board and the white pawn moves to the c6 square.

Children will usually forget this or get confused and make the capture at the wrong time. You'll need to repeat it on a regular basis for it to sink in.

It might help them to remember if they think about *en passant* being French for 'in passing'.

You'll find an online lesson on the *en passant* capture here: <http://chesskids.org.uk/newcourse/ck314a.htm>

Outcomes:

Chess knowledge: the en passant pawn capture

Chess skills: none

Cognitive skills: concentration, memory

CAPTURE THE FLAG PAWN GAMES: INTRODUCTION

Group activity

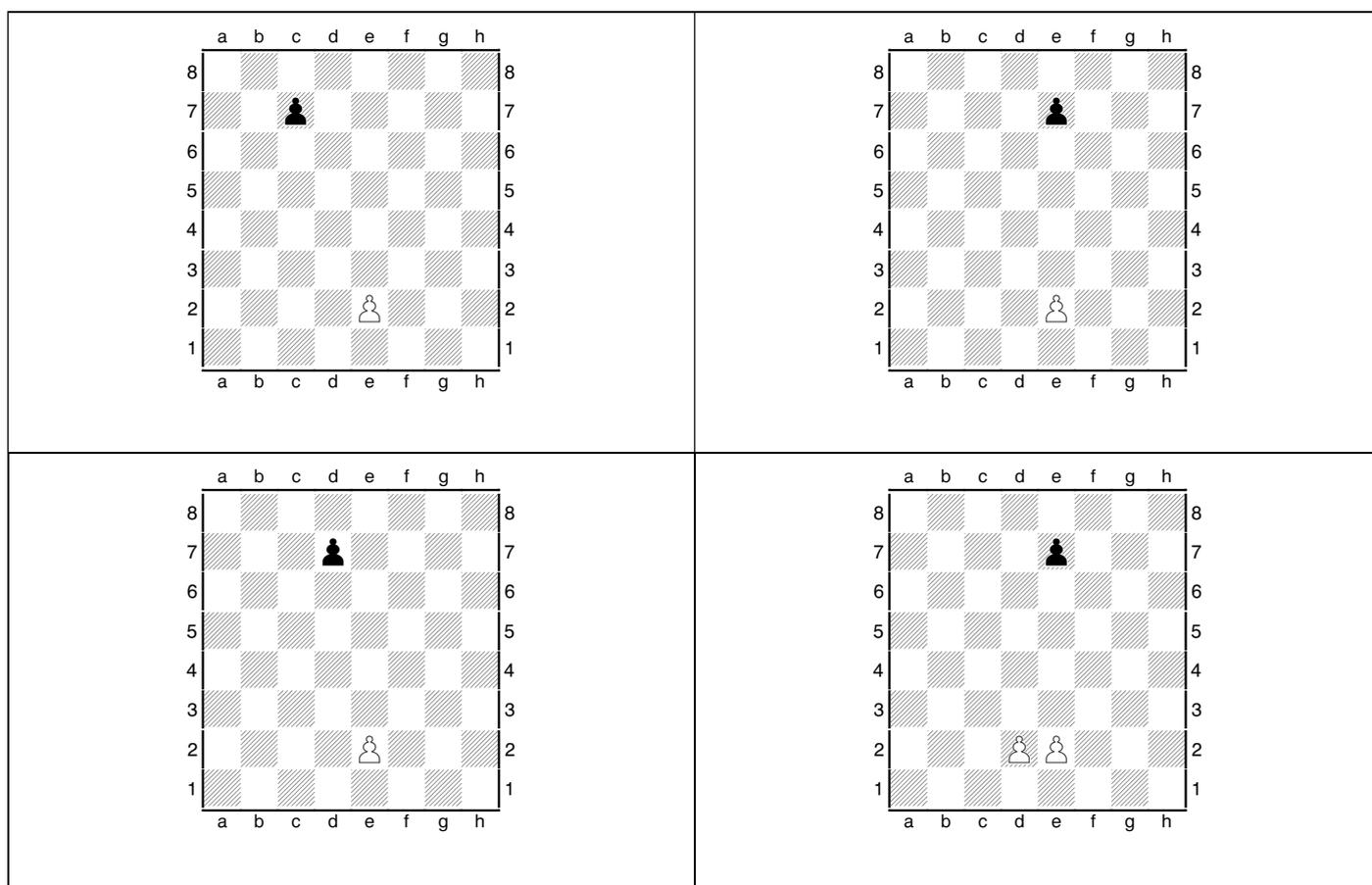
Prior knowledge: the pawn move

Equipment: each group will need a chess board and pawns or two sets of different coloured counters

CAPTURE THE FLAG rules apply to a type of minichess game without kings. There are THREE ways to win:

1. Get a pawn to the end of the board safely
2. Capture all your opponent's pieces
3. Reach a position where your opponent cannot make a move (note that in 'big chess' and minigames with kings this is STALEMATE: a draw)

It's a standard convention of chess that in all games White starts. The players then take it in turns to move.



Consider each of these positions in turn. Would you rather be White or Black? What would your winning strategy be? You can play some of them here: <http://chesskids.org.uk/newcourse/sincomb.htm> and some harder games here: <http://chesskids.org.uk/newcourse/doubcomb.htm>.

Answers: Top left: White wins by moving two squares. Top right: Black wins by copying White
Bottom left: Black wins by doing the opposite to White. Bottom right: White wins with any first move – but sometimes you have to be careful later on.

Outcomes:

Chess knowledge: none

Chess skills: gaining fluency at playing pawn moves

Cognitive skills: thinking ahead, considering opponent's move, making decisions, pattern recognition

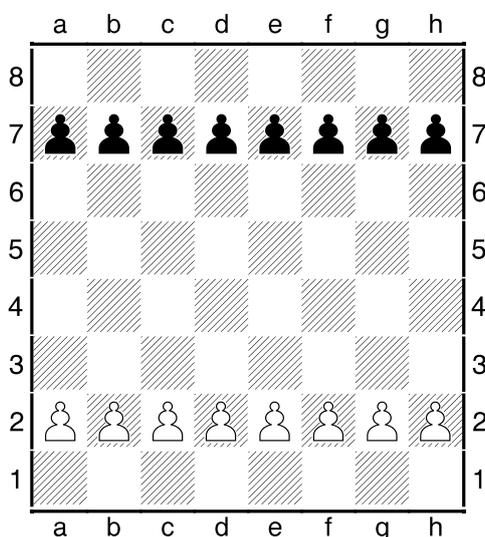
CAPTURE THE FLAG PAWN GAME

Competitive game

Prior knowledge: the pawn move

Equipment: each pair of players will need a chess board and pawns or two sets of different coloured counters

The full competitive game starts with this position:



As the game is short, you could play two games, swapping colours after the first game.

Standard chess scoring: 1 point for a win, 0 points for a loss. A draw is not possible in this game. (You can also play that if the player to move has no moves you count the pawns, in which case a draw would score $\frac{1}{2}$.)

For younger players you could start with just the four centre pawns each. Then move onto six pawns each (omitting the pawns on the a and h-files).

This is an important minichess game: children enjoy playing it and the games don't last long. At the same time, some of the principles will be very useful for those children who move on to play 'big chess'.

There are separate documents on how to run chess tournaments and matches, and how to play this game well.

The teacher should ensure that children are thinking about their moves and trying to look ahead rather than just playing random moves and hoping for the best.

You can use a handicap system. A more experienced player might start without one of the centre pawns. For a game between teacher and pupil, the teacher might start without the pawns on the c and f files.

If you visit <http://www.chessheroes.uk/minichess/pawngame3.htm> you can play this game against the computer.

Outcomes:

Chess knowledge: important pawn ending knowledge: passed pawns, waiting moves, breakthroughs etc

Chess skills: chessboard vision, gaining fluency at looking ahead

Cognitive skills: concentration, forming plans, thinking ahead, considering opponent's move, making decisions, pattern recognition

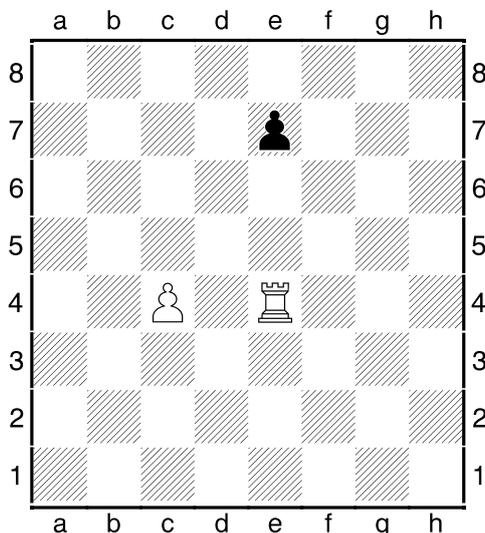
CAPTURE THE FLAG ROOK GAME

Classroom activity or competitive game

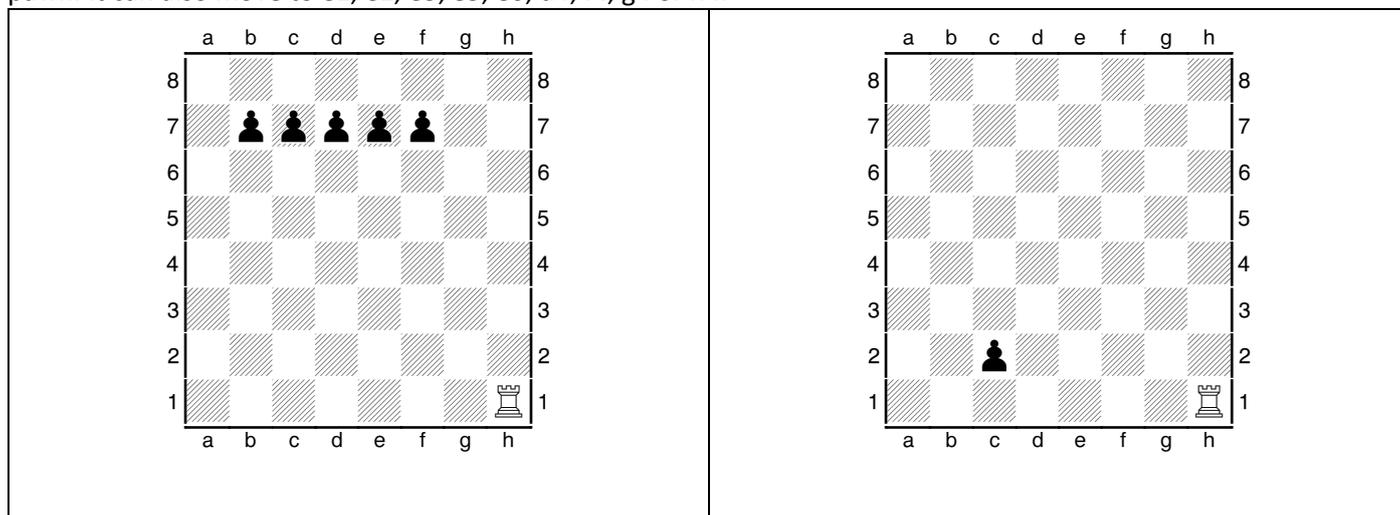
Prior knowledge: the pawn move: this game also introduces the rook move

Equipment: each pair of players will need a chess board and pieces or two sets of different coloured counters

First, if this hasn't yet been learnt elsewhere, introduce the rook move.



The ROOK (this, not CASTLE, is the correct name) moves horizontally and vertically as far as it likes unless it is impeded by another piece. It captures the same way that it moves. In this position the rook can CAPTURE the black pawn. It can also move to e1, e2, e3, e5, e6, d4, f4, g4 or h4.



On the left is the starting position of the CAPTURE THE FLAG ROOK GAME.

White wins by capturing all the black pawns. Black wins by getting a pawn to the end of the board SAFELY or by capturing the white rook. On the right, if it's Black's move, the black pawn will reach the end but White will be able to CAPTURE it and win the game. If it's White's move, moving to c1 will win as Black has no moves. Moving to g1, f1, e1 or a1 will also win. Moving to b1 or d1 will lose: Black will CAPTURE the rook and reach the end safely. Moving up the h-file will also lose as Black will then promote safely. Try varying the game by starting with Black having four or six pawns, or with the pawns further up the board.

You can play this game against the computer at <http://www.chessheroes.uk/minichess/rc2.htm>.

Outcomes:

Chess knowledge: the rook move

Chess skills: chessboard vision, gaining fluency at looking ahead

Cognitive skills: concentration, forming plans, thinking ahead, considering opponent's move, making decisions, pattern recognition

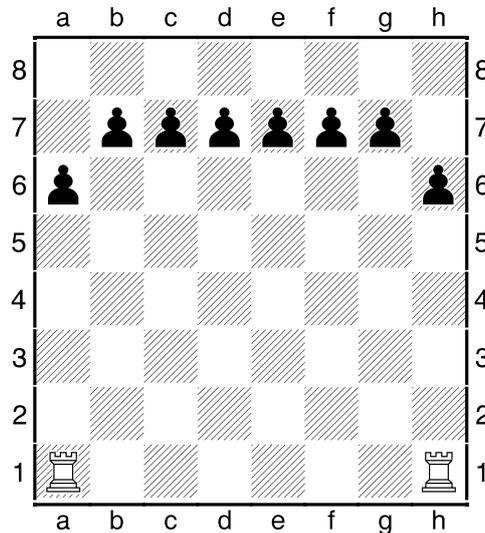
CAPTURE THE FLAG TWO ROOKS GAME

Classroom activity or competitive game

Prior knowledge: the pawn move, the rook move

Equipment: each pair of players will need a chess board and pieces or two sets of different coloured counters

If you want to play a longer game you can play two rooks against eight pawns, starting from this position.



Variants: try playing with the pawns further advanced. Let the pupils choose the starting positions (as long as it's not possible for a rook to capture a pawn on the first move).

You can play this game against the computer at <http://www.chessheroes.uk/minichess/rc4.htm>.

Outcomes:

Chess knowledge: reinforcing the rook and pawn moves

Chess skills: chessboard vision, gaining fluency at looking ahead

Cognitive skills: concentration, forming plans, thinking ahead, considering opponent's move, making decisions, pattern recognition

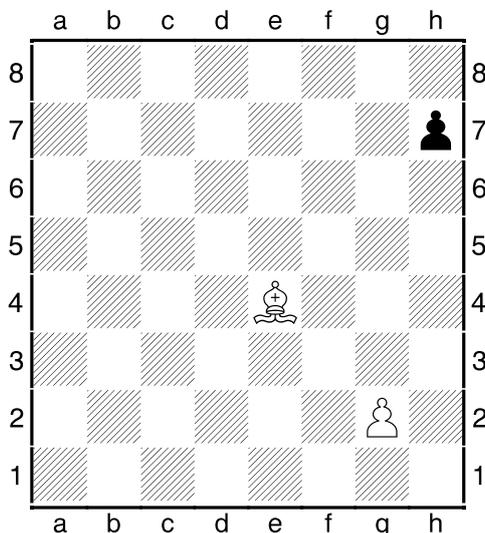
CAPTURE THE FLAG BISHOP GAME

Classroom activity or competitive game

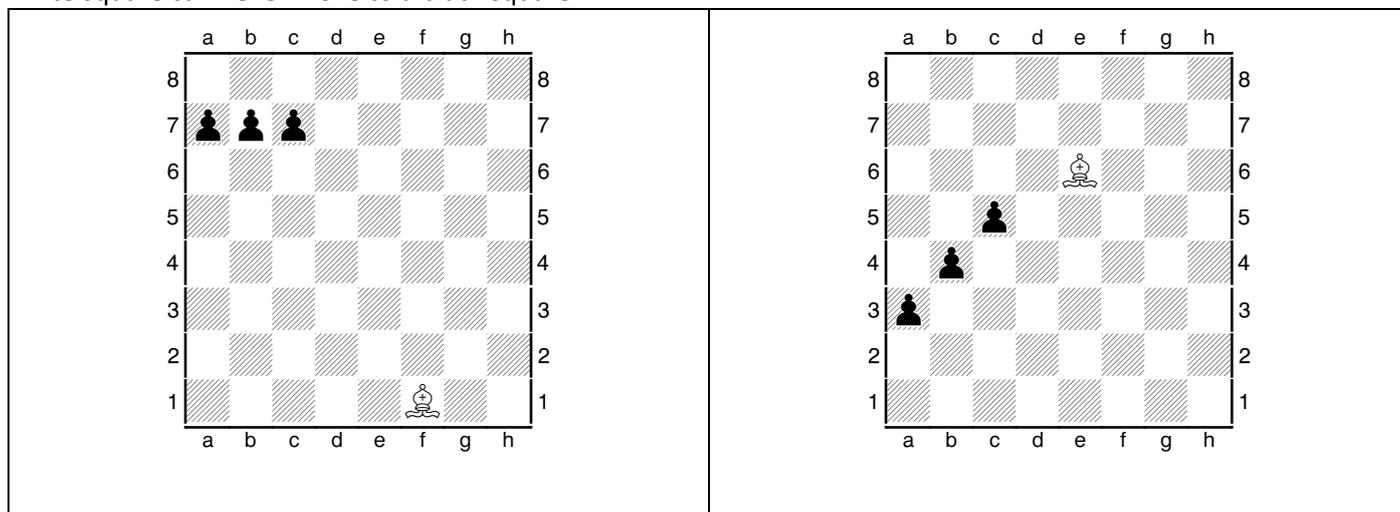
Prior knowledge: the pawn move: this game also introduces the bishop move

Equipment: each pair of players will need a chess board and pieces or two sets of different coloured counters

First, if this hasn't yet been learnt elsewhere, introduce the bishop move.



The BISHOP moves diagonally as far as it likes unless it is impeded by another piece. It captures the same way that it moves. In this position the bishop can CAPTURE the black pawn. It can also move to b1, c2, d3, d5, c6, b7, a8, f3, f5 or g6. Moving to g6 would be UNSAFE, though: the black pawn would be able to CAPTURE it. Note that a bishop on a white square can never move to a black square.



On the left is the starting position of the CAPTURE THE FLAG BISHOP GAME.

White wins by capturing all the black pawns. Black wins by getting a pawn to the end of the board SAFELY or by capturing the white bishop. On the right is a position Black must try to avoid. White will be able to capture all three black pawns on the next three moves. Try varying the game with Black starting with two or four pawns, or with the pawns on different squares.

You can play this game against the computer at <http://www.chessheroes.uk/minichess/bc2.htm>.

Outcomes:

Chess knowledge: the bishop move

Chess skills: chessboard vision, gaining fluency at looking ahead

Cognitive skills: concentration, forming plans, thinking ahead, considering opponent's move, making decisions, pattern recognition

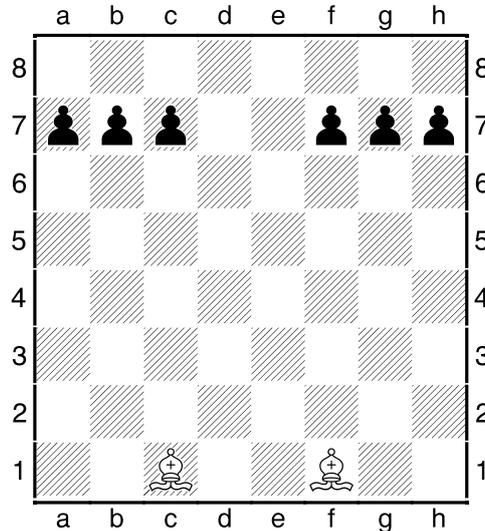
CAPTURE THE FLAG TWO BISHOPS GAME

Classroom activity or competitive game

Prior knowledge: the pawn move, the bishop move

Equipment: each pair of players will need a chess board and pieces or two sets of different coloured counters

If you want a longer game you can play the Two Bishops Game. Here's the starting position.



Variants: try playing with the pawns further advanced. Let the pupils choose the starting positions (as long as it's not possible for a bishop to capture a pawn on the first move).

You can play this game against the computer at <http://www.chessheroes.uk/minichess/bc4.htm>.

Outcomes:

Chess knowledge: the bishop move

Chess skills: chessboard vision, gaining fluency at looking ahead

Cognitive skills: concentration, forming plans, thinking ahead, considering opponent's move, making decisions, pattern recognition

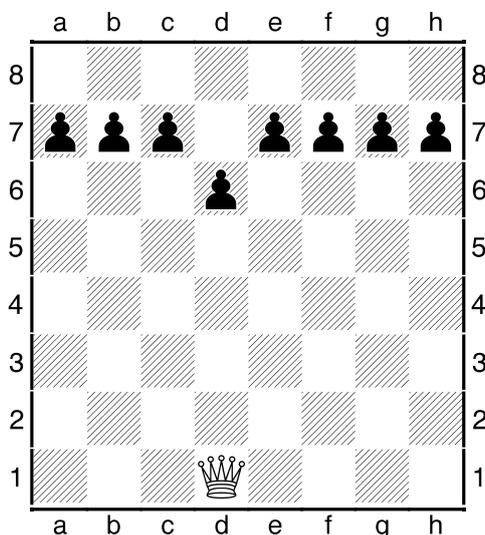
CAPTURE THE FLAG QUEEN GAME

Classroom activity or competitive game

Prior knowledge: the pawn, rook and bishop moves: this game also introduces the queen move

Equipment: each pair of players will need a chess board and pieces or two sets of different coloured counters

First, if this hasn't yet been learnt elsewhere, introduce the queen move. The rook and bishop moves should be learnt first. Then the queen move is easy: a queen can do whatever a rook can do plus whatever a bishop can do.



This is the starting position of the CAPTURE THE FLAG QUEEN GAME.

White wins by capturing all the black pawns. Black wins by getting a pawn to the end of the board SAFELY or by capturing the white queen.

This is a good time to introduce the idea of the FORK. First, we differentiate between an ATTACK and a THREAT. In the position about the white queen is ATTACKING the pawn on d6. It's not a THREAT, though, as the pawn is safely defended: White would lose at once by capturing this pawn on the first move.

White has several moves here which create TWO THREATS. For example, moving the queen to d5 THREATENS to CAPTURE on either b7 or f7.

You can also play this game with nine pawns, adding an extra pawn (borrowed from another set) on d7.

Alternatively, for pupils playing white against teachers, or less experienced players playing white against more experienced players, you might want to remove one or two black pawns.

You can play this game against the computer at <http://www.chessheroes.uk/minichess/qc3.htm>.

Outcomes:

Chess knowledge: the queen move, the fork

Chess skills: chessboard vision, gaining fluency at looking ahead and looking for forks

Cognitive skills: concentration, forming plans, thinking ahead, considering opponent's move, making decisions, pattern recognition

THE KING MOVE

Classroom activity and quiz

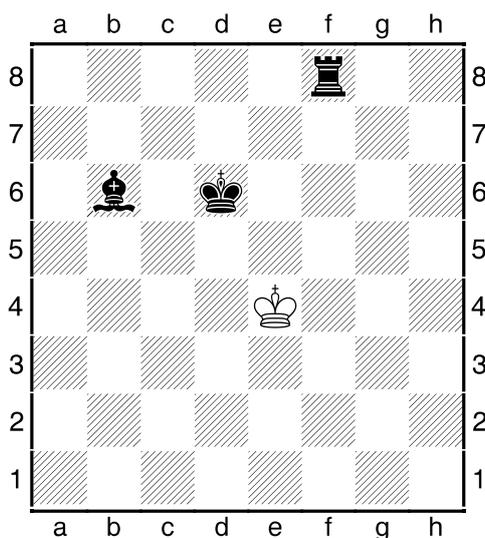
Prior knowledge: the rook move, the meaning of ATTACK

Equipment: smartboard or demonstration board

The king move looks easy. It just moves one square at a time in any direction: forwards, backwards, sideways or diagonally.

But there's one thing about the king move that makes it one of the hardest pieces to understand.

The king cannot move to, or stay, on a square which is ATTACKED by an enemy piece.



In this position the white king CANNOT move to f3, f4 or f5 because of the rook on f8. It CANNOT move to e3 or d4 because of the bishop on b6. It CANNOT move to d5 or e5 because of the king on d6. Note that TWO KINGS CAN NEVER STAND NEXT TO EACH OTHER.

The only square the king CAN move to is d3.

If you play a move that ATTACKS the enemy king this is a CHECK. You say the word CHECK to warn your opponent.

If it's BLACK'S move here, the rook could move to e8 saying CHECK. The white king could move to f3, f4, f5 or d3 in reply.

The black rook could also CHECK the white king by moving to f4. This wouldn't be a good move as the white king would be able to capture the rook. Moving the rook to e8 is SAFE: moving the rook to d4 is UNSAFE.

Visit <http://www.chessheroes.uk/minichess/quiz1.htm> for a quiz about checks.

Outcomes:

Chess knowledge: the king move, check

Chess skills: chessboard vision, looking at all possible ways to give check

Cognitive skills: concentration, thoroughness, accuracy, pattern recognition

THE KING BATTLE

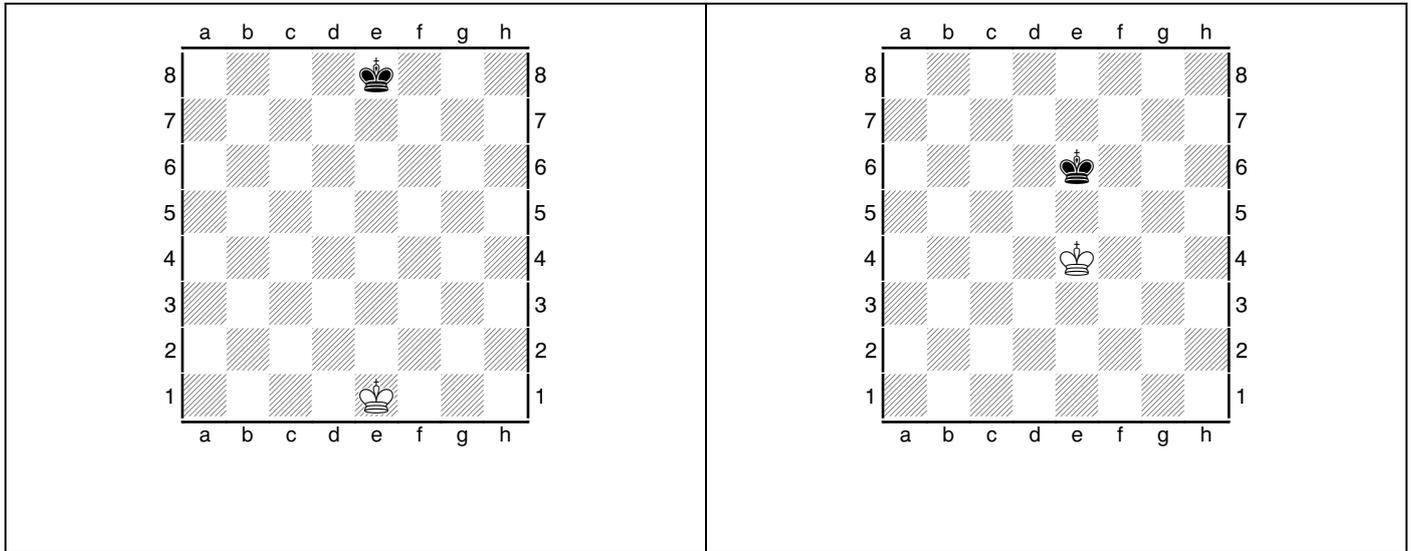
Two player game

Prior knowledge: the king move

Equipment: chess boards and two kings (or counters) for each pair of players

This is a very simple game played with just two kings. It may be simple but it's not at all easy to play well.

You start from the position on the left:



The kings move one square at a time in any direction, but you can never play a move which leaves the two kings on adjacent squares.

White plays first. You can win the game if your king gets to any square on the back rank (White wins by getting to any square from a8 to h8, while Black wins by getting to any square from a1 to h1.) The game ends as a draw if neither player is able to make progress.

Consider the position on the right (you might want to demonstrate this in a lesson). If it's Black's move the king must give way, allowing the white king to advance. If it's White's move it's not possible to make progress as long as the black king follows the white king. In this type of position we say that the side NOT having the move has the OPPOSITION.

Variant: you only win if your king reaches a8 (White) or a1 (Black).

White can win the main game with best play, but the variant is drawn with best play.

Outcomes:

Chess knowledge: reinforcing the king move

Chess skills: understanding the opposition (this will come in very useful in 'big chess')

Cognitive skills: concentration, thoroughness, pattern recognition

GETTING OUT OF CHECK

Classroom activity and quiz

Prior knowledge: the rook, bishop and queen moves, the king move, check

Equipment: smartboard or demonstration board

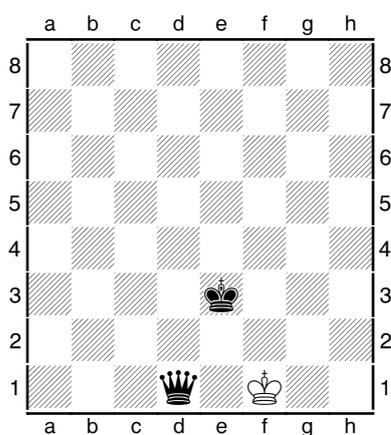
You are not allowed to play a move which LEAVES YOUR KING IN CHECK. So if you're in CHECK you have to do something about it.

There are THREE WAYS you can GET OUT OF CHECK. You can remember them using the letters A, B and C.

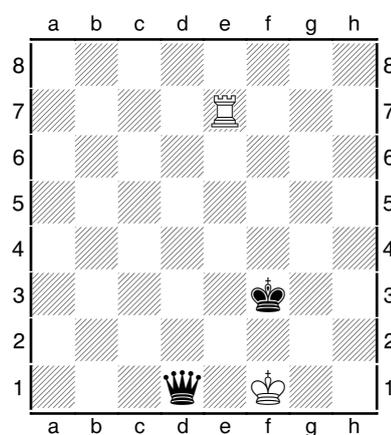
A: AVOID or MOVE AWAY. You can move your king to a safe square.

B: BLOCK. If your king is in CHECK from a QUEEN, ROOK or BISHOP you can BLOCK by putting a piece in the way.

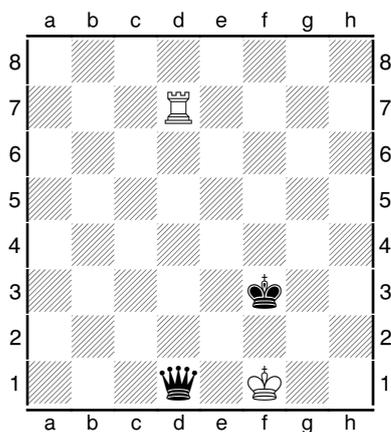
C: CAPTURE. You can CAPTURE the piece that's giving CHECK, either with your king or with another piece.



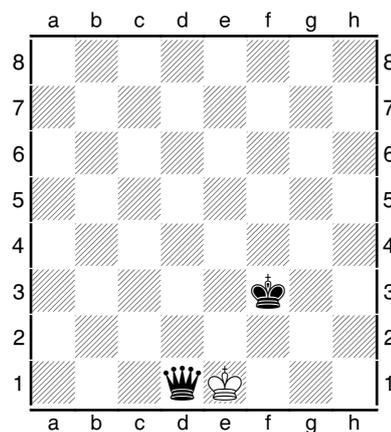
White can AVOID the CHECK by moving AWAY to g2, the only safe square.



White can BLOCK the CHECK by moving the rook from e1 to e3.



White can CAPTURE the queen using the rook on d1.



The white king can CAPTURE the black queen.

Visit <http://www.chessheroes.uk/minichess/quiz2.htm> for a quiz about getting out of check.

Outcomes:

Chess knowledge: checkmate and how to find it

Chess skills: chessboard vision, looking at all possible ways to get out of check

Cognitive skills: concentration, thoroughness, accuracy

FINDING CHECKMATES

Classroom activity and quiz

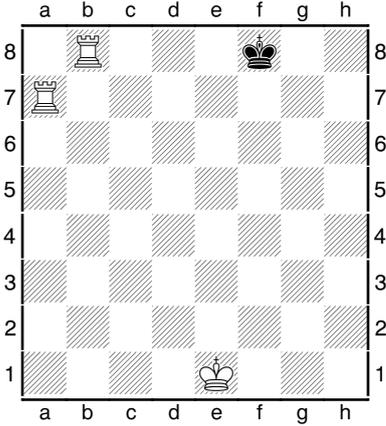
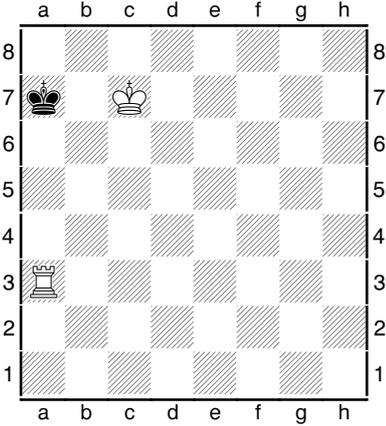
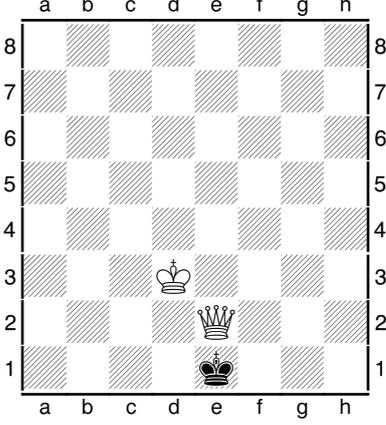
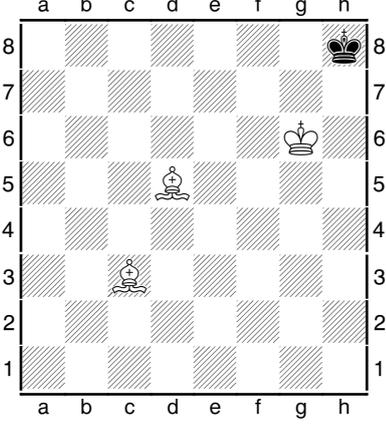
Prior knowledge: the rook, bishop and queen moves, the king move, check, the three ways to get out of check

Equipment: smartboard or demonstration board

If you CHECK your opponent's king and there's no way to get out of CHECK, this is called CHECKMATE.

This is how you win a real game of chess. You never capture your opponent's king. The game stops when you deliver CHECKMATE.

Here are some simple CHECKMATES.

 <p>One rook CHECKS the king: the other rook stops him escaping.</p>	 <p>This time the white king stops the black king escaping. Don't forget two kings cannot stand next to each other.</p>
 <p>The queen surrounds the black king and is defended by the white king.</p>	 <p>The white bishops and king work together to trap the black king.</p>

Visit <http://www.chessheroes.uk/minichess/quiz3.htm> for a CHECKMATE quiz.

Visit <http://www.chesskids.org.uk/newcourse/ck3120.htm> for a lesson about CHECK and CHECKMATE. You'll need to know the knight and pawn moves as well for this lesson.

Outcomes:

Chess knowledge: the three way to get out of check

Chess skills: chessboard vision, looking at all possible checks and seeing if there's an escape

Cognitive skills: concentration, thoroughness, accuracy, scientific method

STALEMATE

Classroom activity

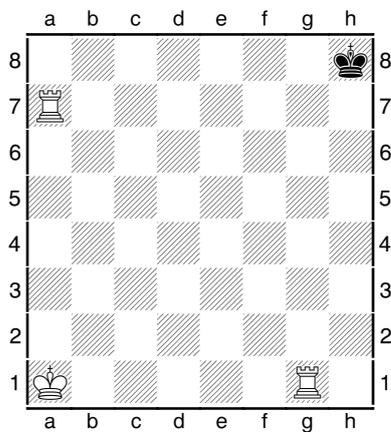
Prior knowledge: the rook, bishop and queen moves, the king move, check

Equipment: smartboard or demonstration board

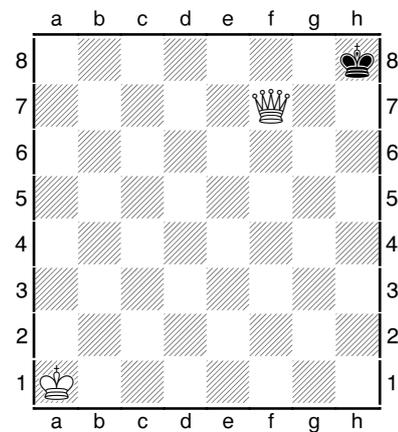
If you are not in CHECK and you cannot move any of your pieces this is STALEMATE. In CAPTURE THE FLAG games you lose if you cannot move anything. But in a real game of chess STALEMATE is a DRAW.

A real game of chess might end in CHECKMATE or STALEMATE. It might also end in a position where it is not possible for either player to get CHECKMATE. This is also a draw.

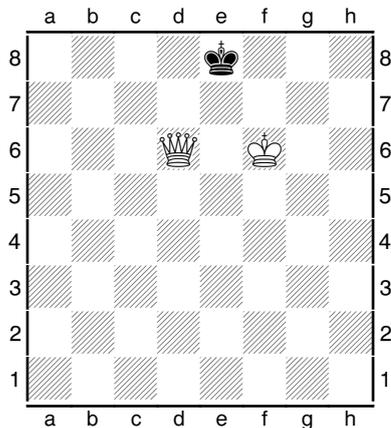
Here are some STALEMATES with queens and rooks. You'll need to know these before you learn more about how to get CHECKMATE. In each position it's Black's move.



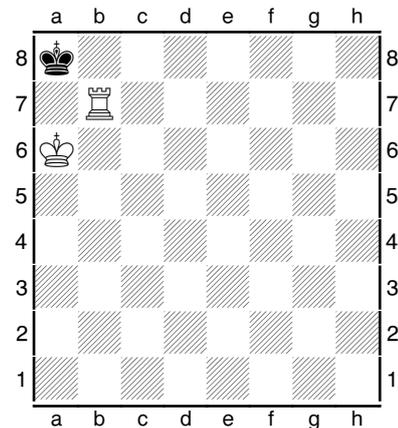
The black king has no moves: look at the white rooks.



If the king is in the corner and the queen a knight's move away it's stalemate.



This is another very common stalemate with king and queen against king.



Here's a stalemate with king and rook against king. The rook could be anywhere from b1 to b7.

Visit <http://chesskids.org.uk/newcourse/ck3l21.htm> for a lesson about STALEMATE.

Outcomes:

Chess knowledge: stalemate

Chess skills: chessboard vision, learning common stalemate positions

Cognitive skills: thoroughness, accuracy

THE KNIGHT TOUR

Classroom activity

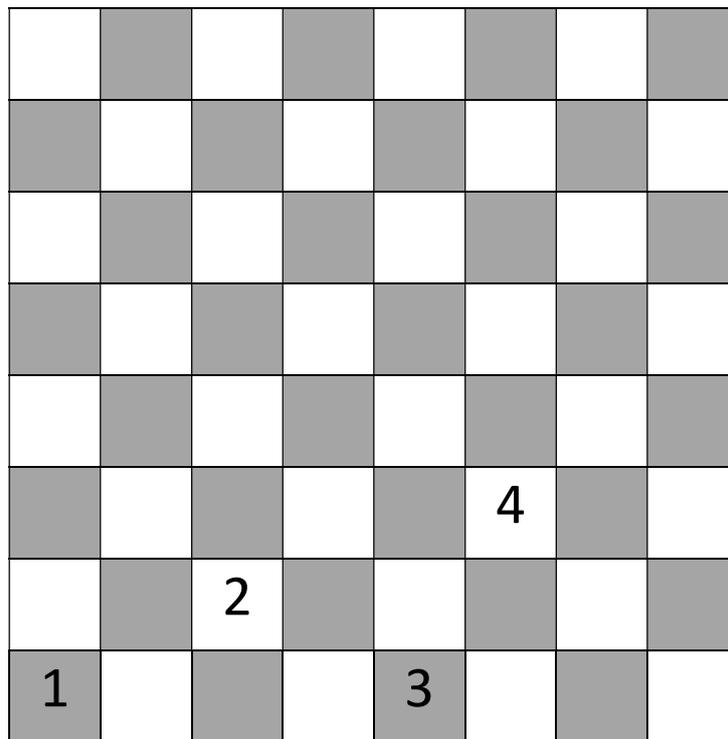
Prior knowledge: the chessboard

Equipment: smartboard, demonstration board or boards for each group of children

The KNIGHT is one of the hardest pieces to learn. There are also a number of maths-related knight activities.

It moves to the opposite corner of a 2x3 rectangle, and can jump over pieces of either colour in doing so. It captures the same way as it moves. For example, a knight on a1 can move to either b3 or c2. You'll see that a knight on a light square always moves to a dark square, and a knight on a dark square always moves to a light square.

In this activity you have to attempt to complete a KNIGHT TOUR. In a KNIGHT TOUR the knight tries to visit every square on the chessboard, but is not allowed to visit any square more than once.



Here's how you might start. See how far you can get before running out of moves. Completing the tour is possible, but very hard unless you know how.

There are a couple of websites where you can practise this online:

<https://www.brainbashers.com/knight.asp>

<http://www.maths-resources.com/knights/>

Visit <http://chesskids.org.uk/newcourse/ck3l15.htm> for a lesson about the KNIGHT MOVE.

Outcomes:

Chess knowledge: the knight move

Chess skills: chessboard vision, fluency in moving knights

Cognitive skills: concentration, looking ahead, planning, problem solving skills

KNIGHT JOURNEYS

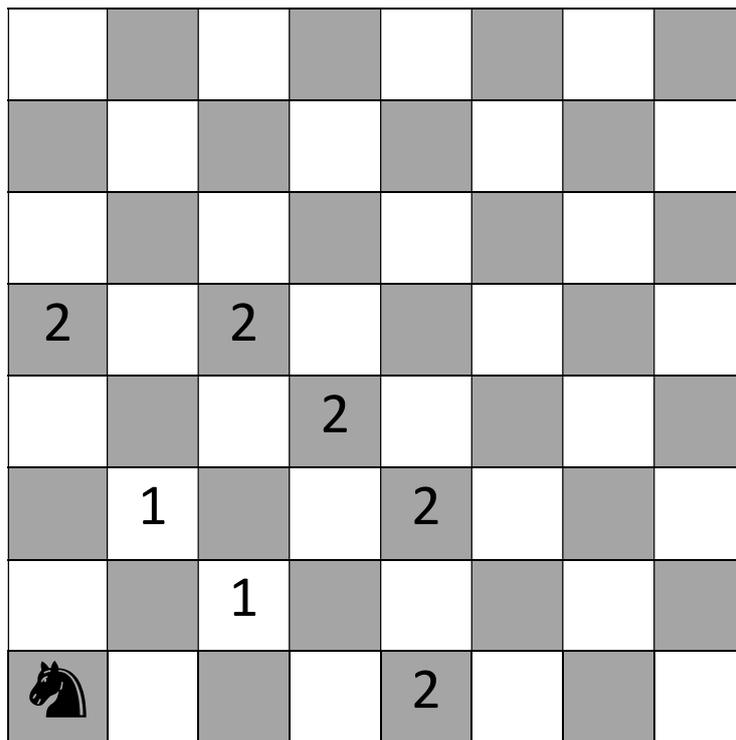
Classroom/group activity

Prior knowledge: the chessboard, the knight move

Equipment: smartboard, demonstration board, boards printed on paper for each group of children

In this activity you have to work out the shortest routes for knight to get from one square to another.

Place a knight on any square on the chessboard. Then work out how many moves it will take for the knight to reach every other square on the board.



Here's how you'd start with the knight on the a1 square.

You might split the class into teams and see which team is quickest at completing the task correctly.

What do you notice about the patterns made by the numbers? How do the patterns differ if you start the knight on a centre square (e4, for example) instead of a corner square?

Visit <http://chesskids.org.uk/newcourse/ck3l17.htm> for a lesson about KNIGHT JOURNEYS.

Outcomes:

Chess knowledge: planning knight journeys

Chess skills: chessboard vision, fluency in moving knights

Cognitive skills: concentration, looking ahead, planning, problem solving skills

SQUARE CONTROL

Classroom/group activity

Prior knowledge: the chessboard, the moves of the pieces

Equipment: smartboard, demonstration board, boards printed on paper for each group of children

In this activity you start with a printed chessboard. Take a piece (you can choose rook, bishop, queen, king or knight). Different groups might want to work with different pieces.

Place your piece on any square and then write in that square the number of possible moves for that piece on an otherwise empty board. You might see a pattern emerging which will help you complete the grid more quickly.

3	4	6					
2	3	4					

Here's how you would start if you're producing the knight grid.

You might split the class into teams and see which team is quickest at completing the task correctly.

What do you notice about the patterns for each piece?

What does this tell you about which pieces are most powerful? What does this tell you about on which squares each piece might be most powerful? Why do you think the rooks start in the corners?

Outcomes:

Chess knowledge: reinforcing the moves of the pieces, the relative values of the pieces, the importance of the centre

Chess skills: visualisation of piece moves

Cognitive skills: concentration, thoroughness

KNIGHT CAPTURES

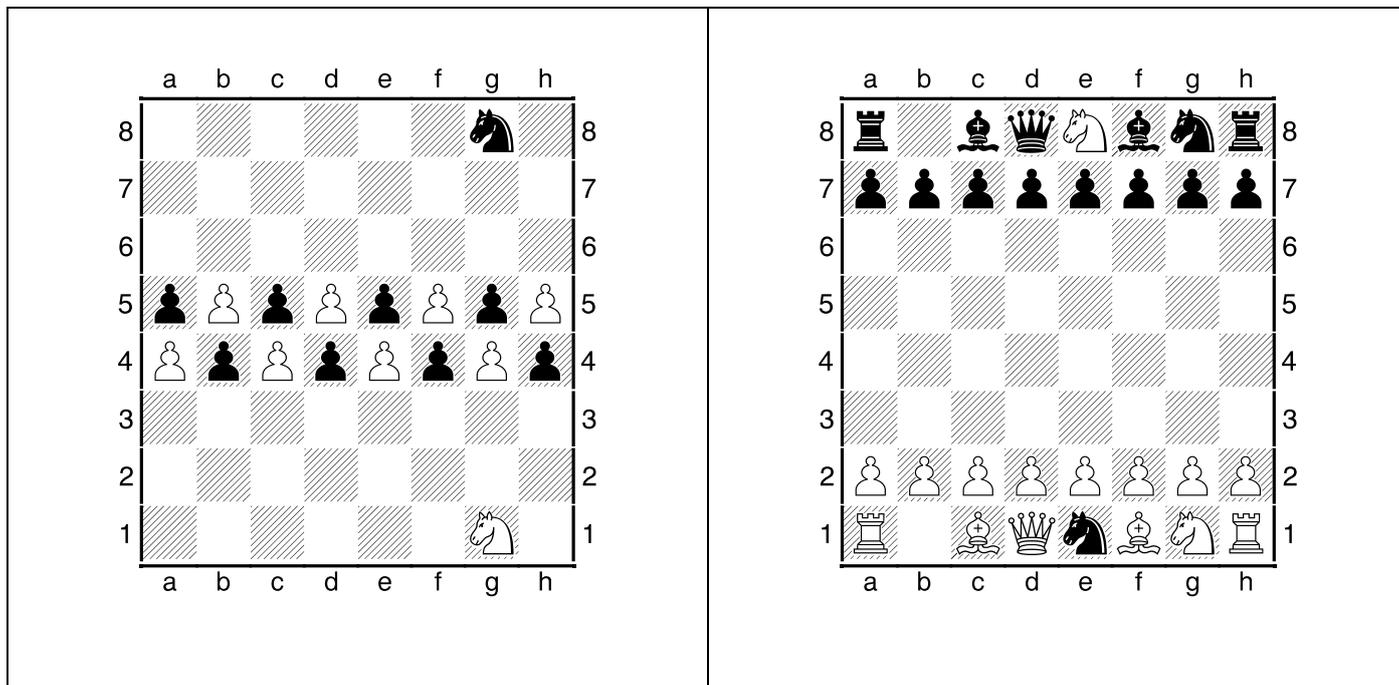
Two player game

Prior knowledge: the knight move

Equipment: chess boards and pieces (or counters) for each pair of players

This game reinforces the knight move and capture.

Here, on your left, is the starting position.



Only the knights move, and they are not allowed to capture each other. The winner is the first player to capture all the pawns of the opposite colour.

Variant: each player has two knights, the white knights starting on b1 and g1, and the black knights on b8 and g8.

On the right is a harder variation of the same idea. Only the knights on e8 and e1 are allowed to move. Again, the winner is the first to capture all the opponent's pieces. You could, if you wanted, replace the other pieces with counters.

Play two games, taking it in turns to play White. The winner is the player scoring more points.

Variant: Black has two knights, as in the position below. Here, if you capture one black knight the game continues. You score a point for each point you have left at the end if you capture both black knights.

Outcomes:

Chess knowledge: reinforcing knight move and capture

Chess skills: chessboard vision, fluency in moving knights

Cognitive skills: concentration, looking ahead, planning, problem solving skills

QUEEN AGAINST KNIGHT

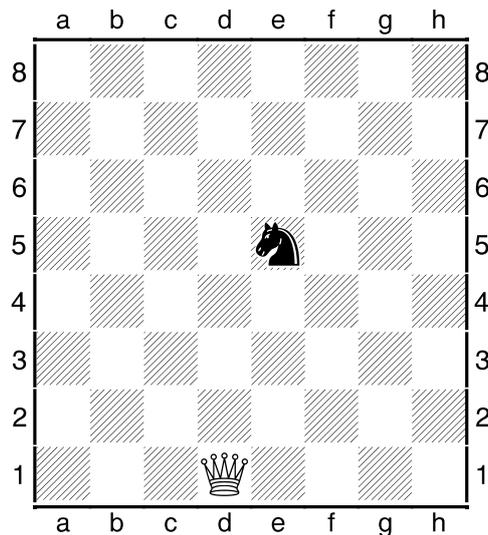
Two player game or class lesson

Prior knowledge: the queen and knight move

Equipment: chess boards and pieces (or counters) for each pair of players

This game involves a queen trying to trap a knight.

Here is the starting position.



White, as always, moves first. The aim is to trap the knight: to reach a position where the queen is attacking the knight, and the knight has no safe squares to move to.

With good play White can achieve this in a few moves, but, if you play random moves it will take some time.

A good way to present this game is as a class lesson, with the teacher playing the knight and the pupils suggesting moves for the queen.

If you want to play this as a game between two players you'll have to decide whether you can take a move back if you move a piece where it can be captured.

Outcomes:

Chess knowledge: queen and knight moves

Chess skills: understanding square control, the importance of the centre

Cognitive skills: concentration, looking ahead, planning, problem solving skills

QUEEN AND ROOK AGAINST BISHOP

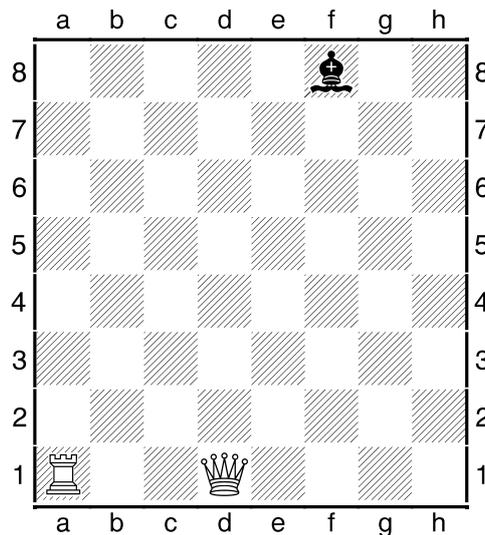
Two player game or class lesson

Prior knowledge: the queen and knight move

Equipment: chess boards and pieces (or counters) for each pair of players

This game involves a queen and rook trying to trap a bishop.

Here is the starting position.



White, as always, moves first. Perhaps surprisingly, this is much harder than a queen trapping a knight.

In order to trap the bishop you need to reach a position where the bishop can capture one of your pieces.

A good way to present this game is as a class lesson, with the teacher playing the bishop and the pupils suggesting moves for the queen and rook.

If you want to play this as a game between two players you'll have to decide whether you can take a move back if you move a piece where it can be captured.

Outcomes:

Chess knowledge: queen, rook and bishop moves

Chess skills: understanding square control, the importance of the centre

Cognitive skills: concentration, looking ahead, planning, problem solving skills

BACK TO THE START

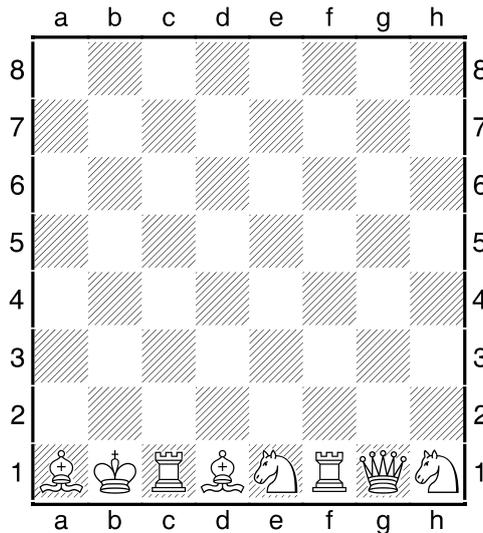
Two player game, group activity or class lesson

Prior knowledge: the moves and starting positions of the pieces

Equipment: chess boards and pieces for each pair of players or group

This game reinforces the moves of the pieces (except pawns) and the starting position.

You start by arranging the rooks, bishops, knights, queen and king in such a way that no piece is on its starting position and the two bishops are on opposite colour squares. There are many possible starting positions, such as the one in the diagram below.



There are several ways to play this:

- As a whole class activity – work out the quickest route
- As a team activity – which team can work out the quickest route first? Write down the moves if you know how to do so
- As a paired game: the players take it in turns: the player who uses fewer moves wins
- As a paired game: set up the white and black pieces in the same way. The players take it in turns, and are only allowed to use their own half of the board. The player who reaches the starting position first wins.

Outcomes:

Chess knowledge: the moves of the pieces: the starting position for a full game

Chess skills: working out piece journeys

Cognitive skills: concentration, looking ahead, planning, problem solving skills

KNIGHT AGAINST PAWNS

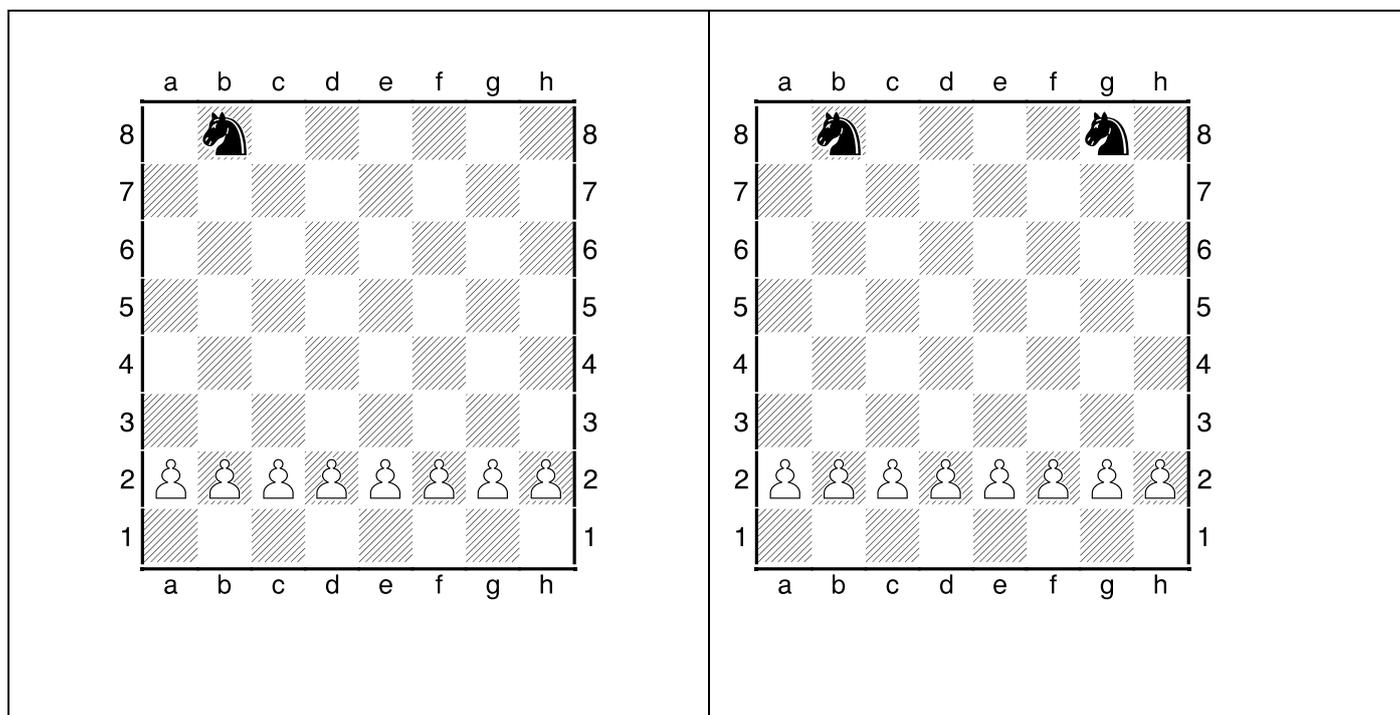
Two player game

Prior knowledge: the knight and pawn moves

Equipment: chess boards and pieces (or counters) for each pair of players

This is a CAPTURE THE FLAG variant using knights.

Here, on your left, is the starting position.



White's aim is to get as many pawns to the end of the board as possible. You score a point every time you get a pawn to the end of the board. If you capture the black knight you automatically score a point for every pawn you have left.

Play two games, taking it in turns to play White. The winner is the player scoring more points.

Variant: Black has two knights, as in the position below. Here, if you capture one black knight the game continues. You score a point for each point you have left at the end if you capture both black knights.

Outcomes:

Chess knowledge: knight and pawn moves

Chess skills: using knights to stop pawns

Cognitive skills: concentration, looking ahead, planning

TWO ROOKS CHECKMATE

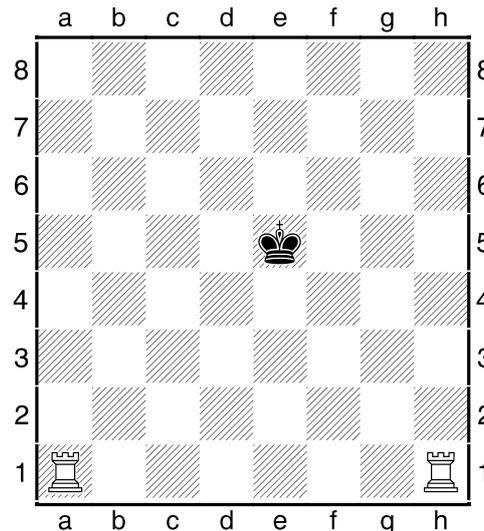
Classroom/paired activity

Prior knowledge: the chessboard, the king and rook moves, check, checkmate, stalemate

Equipment: smartboard, demonstration board, chess sets & boards for each pair of children if possible

In this game you're learning how to force CHECKMATE using two rooks.

Start by looking at this lesson: <http://chesskids.org.uk/newcourse/ck3l31.htm> which explains the technique for forcing the king to the edge of the board one row at a time.



Split the class into pairs and see if they can get CHECKMATE with White from this position.

The players should take it in turns to play White and Black.

You can make it into a competition if you like. Count the number of moves played by White.

Method 1: White wins by getting CHECKMATE within 10 moves. If White STALEMATES the black king, Black captures one of the rooks, or Black survives 10 moves, Black wins.

Method 2: the player getting CHECKMATE in the fewest number of moves is the winner.

You'll find an online lesson about the two rooks checkmate at <http://chesskids.org.uk/newcourse/ck3l31.htm>.

You can play this ending against the computer at <http://chessheroes.uk/minichess/playrr.html> (you'll find a white king on the board as well but try not to use it).

Outcomes:

Chess knowledge: how to checkmate with two rooks

Chess skills: fluency in checkmating with two rooks, co-operation between rooks

Cognitive skills: concentration, planning, looking ahead

KING AND QUEEN CHECKMATE

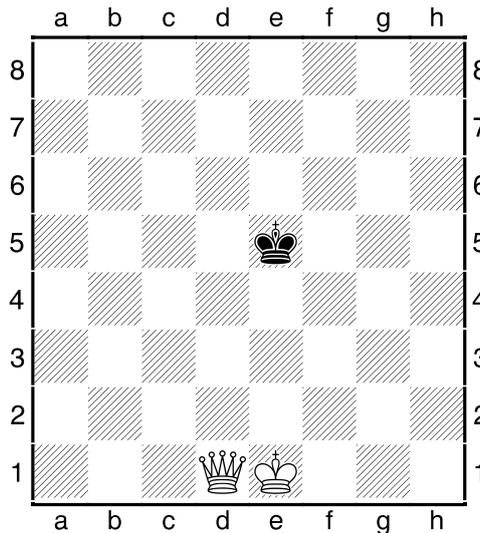
Classroom/paired activity

Prior knowledge: the chessboard, the king and queen moves, check, checkmate, stalemate

Equipment: smartboard, demonstration board, chess sets & boards for each pair of children if possible

In this game you're learning how to force CHECKMATE using a king and queen.

Start by looking at this lesson: <http://chesskids.org.uk/level2/ncl417.htm> which explains the technique for CHECKMATING with a king and queen.



Split the class into pairs and see if they can get CHECKMATE with White from this position.

The players should take it in turns to play White and Black.

You can make it into a competition if you like. Count the number of moves played by White.

Method 1: White wins by getting CHECKMATE within 15 moves. If White STALEMATES the black king, Black captures the white queen, or Black survives 15 moves, Black wins.

Method 2: the player getting CHECKMATE in the fewest number of moves is the winner.

You can find an online lesson about the king and queen checkmate at <http://chesskids.org.uk/level2/ncl417.htm>.

You can play this ending against the computer at <http://chessheroes.uk/minichess/playq.html>

Outcomes:

Chess knowledge: how to checkmate with king and queen

Chess skills: fluency in checkmating with king and queen, co-operation between king and queen

Cognitive skills: concentration, planning, looking ahead

KING AND ROOK CHECKMATE

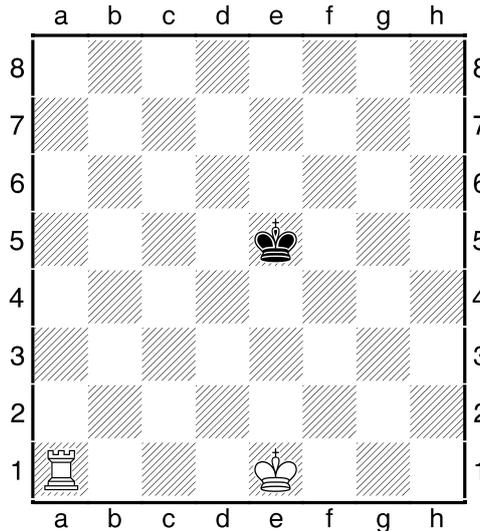
Classroom/paired activity

Prior knowledge: the chessboard, the king and rook moves, check, checkmate, stalemate

Equipment: smartboard, demonstration board, chess sets & boards for each pair of children if possible

In this game you're learning how to force CHECKMATE using a king and rook.

Start by looking at this lesson: <http://chesskids.org.uk/level2/ncl517.htm> which explains the technique for CHECKMATING with a king and rook.



Split the class into pairs and see if they can get CHECKMATE with White from this position.

The players should take it in turns to play White and Black.

You can make it into a competition if you like. Count the number of moves played by White.

Method 1: White wins by getting CHECKMATE within 20 moves. If White STALEMATES the black king, Black captures the white queen, or Black survives 20 moves, Black wins.

Method 2: the player getting CHECKMATE in the fewest number of moves is the winner.

You can find an online lesson about the king and rook checkmate at <http://chesskids.org.uk/level2/ncl517.htm>.

You can play this ending against the computer at <http://chessheroes.uk/minichess/playr.html>

Outcomes:

Chess knowledge: how to checkmate with king and rook

Chess skills: fluency in checkmating with king and rook, co-operation between king and rook

Cognitive skills: concentration, planning, looking ahead

KING AND PAWN AGAINST KING

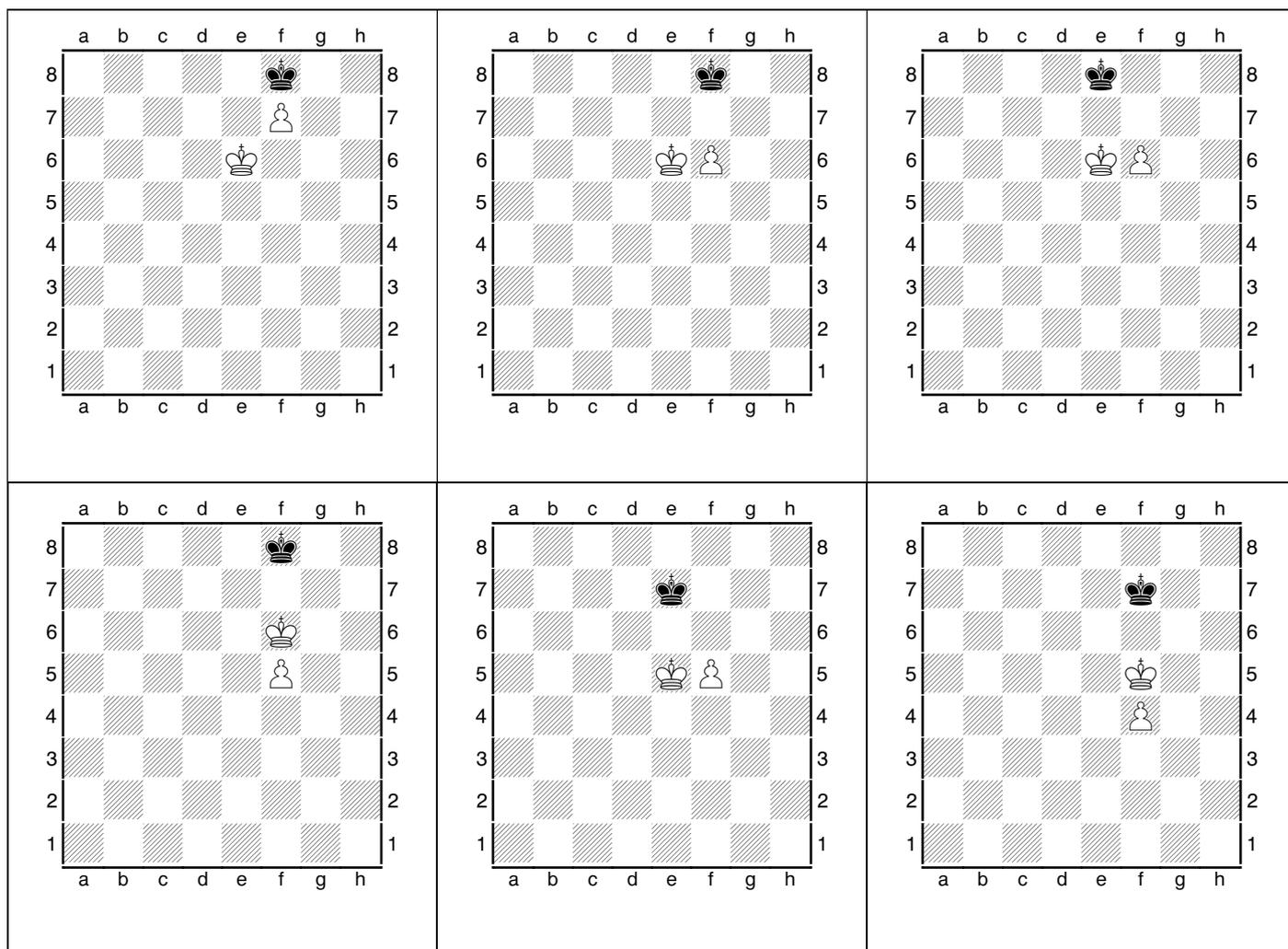
Classroom/group/paired activity

Prior knowledge: the chessboard, the king, pawn and queen moves, the king and queen checkmate

Equipment: smartboard, demonstration board, chess sets & boards for each pair of children if possible

Positions with king and pawn against king are very important if you want to become a good chess player.

We have a series of positions which can be analysed as a whole class activity, as group investigations or as games played between pairs of pupils.



If you want, you can stop if White promotes the pawn safely. Extension: play on until checkmate/stalemate to practise the king and queen checkmate.

You'll find an online lesson about these endings at <http://chesskids.org.uk/level2/ncl6l7.htm>.

You can play these ending against the computer at <http://chessheroes.uk/minichess/playkpp1.html>.

Outcomes:

Chess knowledge: basic endings with king and pawn against king

Chess skills: fluency in playing king and pawn endings: transference to analogous positions

Cognitive skills: concentration, thoroughness, thinking ahead

