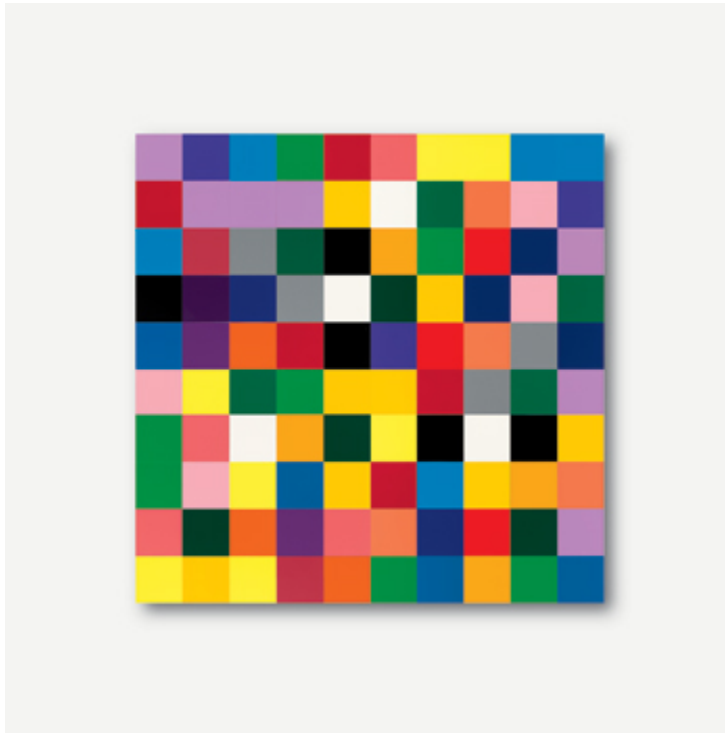


Serpentine Gallery

Gerhard Richter *4900 Colours: Version II*
23 September – 16 November 2008



Gerhard Richter
4900 Colours: Version II, 2007
Enamel paint on Aludibond
49 Panels, each 97 x 97 cm
La Collection de la Fondation Louis Vuitton pour la création
© 2008 Gerhard Richter

Gerhard Richter
4900 Colours: Version II

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These notes are designed to support your visit to the Serpentine Gallery, including planning prior to your visit and suggestions for discussion and activities back at school when you return. They are aimed primarily at Key Stage 3 but include activities that can relate to all key stages, enabling you to develop them to suit your needs and inspire discussion and practical work.

The *Gerhard Richter* Teachers' Notes are also available to download free at www.serpentinegallery.org along with Teachers' Notes for the previous exhibitions:

Richard Prince, 26 June – 7 September 2008
Maria Lassnig, 25 April – 8 June 2008
Derek Jarman, 23 February – 13 April 2008
Anthony McCall, 30 November 2007 – 3 February 2008
Matthew Barney, 20 September – 11 November 2007
Hreinn Fridfinnsson, 17 July – 2 September 2007
Paul Chan, 15 May – 1 July 2007
Allora & Calzadilla, 17 – 29 April 2007
Karen Kilimnik, 20 February 9 April 2007
In the darkest hour there may be light, works from Damien Hirst's murderme collection, 25 November 2006 – 28 January 2007
Runa Islam, 25 October – 5 November 2006
China Power Station: Part 1, 8 October – 5 November 2006
Uncertain States of America, 9 September – 15 October 2006
Thomas Demand, 6 June – 20 August 2006
Ellsworth Kelly, 18 March – 21 May 2006
Elmgreen & Dragset, 26 January – 26 February 2006
Ilya and Emilia Kabakov, 19 October 2005 – 8 January 2006
Oliver Payne & Nick Relph, 6 September – 2 October 2005
Rirkrit Tiravanija, 5 July – 21 August 2005
Andreas Slominski, 26 April – 12 June 2005
Tomoko Takahashi, 22 February – 10 April 2005
Monika Sosnowska, 5 December 2004 – 16 January 2005
Glenn Brown, 14 September – 7 November 2004
Gabriel Orozco, 1 July - 30 August 2004
Cy Twombly, 17 April – 13 June 2004
State of Play, 3 February – 28 March 2004
Hiroshi Sugimoto, 18 November 2003 – 18 January 2004
John Currin, 9 September – 2 November 2003
Cindy Sherman, 3 June – 25 August 2003
Takahashi Murakami, 12 November 2002 – 26 January 2003
Kutlug Ataman, 11 February – 9 March 2003

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- **Themes, ideas and questions to explore:**

These include useful cross-curricular links, classroom discussions, and activities.

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- **Further reading and related links**
- **Planning a visit to the Serpentine Gallery**

Background information

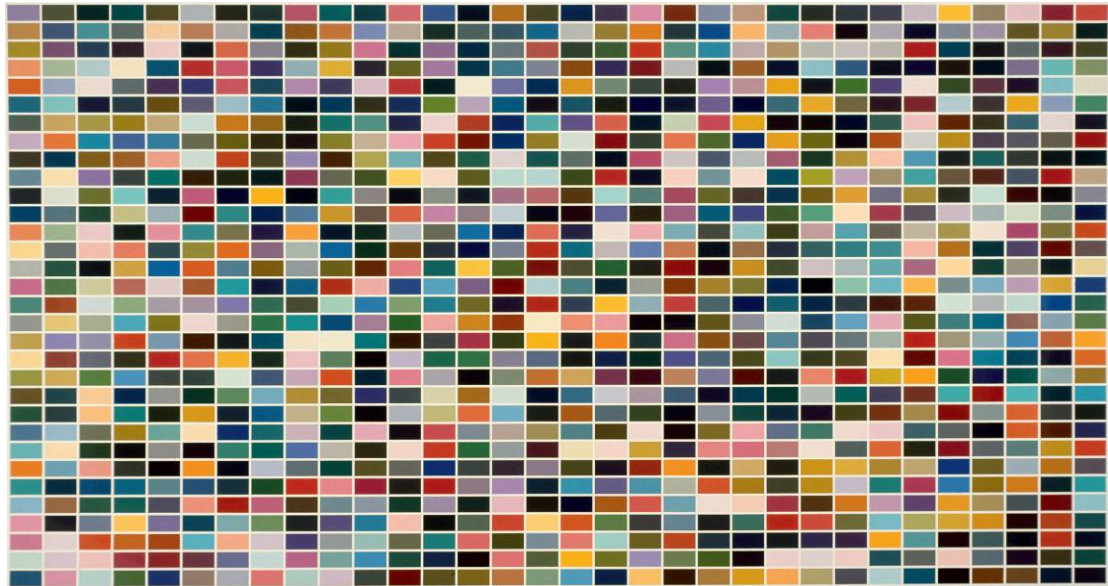
Gerhard Richter (born Dresden, 1932) is one of the world's greatest living artists. Since the early 1960s he has tirelessly explored the medium of painting at a time when many were heralding its death. He has produced a remarkably varied body of work, including photography-based portrait, landscape and still-life paintings; gestural and monochrome abstract works; and colour chart grid paintings. This autumn, the Serpentine presents *4900 Colours*, a major new work comprising bright monochrome squares randomly arranged in a grid formation to create stunning sheets of kaleidoscopic colour.

4900 Colours comprises 196 square panels of 25 coloured squares that can be reconfigured in a number of variations, from one large-scale piece to multiple, smaller paintings. Richter has developed a new version especially for the Serpentine Gallery exhibition: *4900 Colours: Version II*, formed of 49 paintings of 100 squares.

The exhibition *4900 Colours: II* is in the context of Richter's design for the south transept window of Cologne Cathedral, which replaced the stained glass that was destroyed in World War II. *Cathedral Window*, unveiled in August 2007, comprises 11,500 hand-blown squares of glass in 72 colours that are derived from the palette of the original medieval glazing.

Themes, ideas and questions to explore

1. Colour and painting



Gerhard Richter
1024 Farben (1024 Colours) 1966
Lacquer on canvas
254 x 478 cm
© 2008 Gerhard Richter

Many artists have been inspired by readymade colour and have made paintings either relying on chance or devised systems to make colour selections and compositions.

Richter's grid paintings began in 1966, in which he investigated the relationships of colour, abstraction composition and chance. He began to replicate industrial colour charts originally produced simply as tool to display colours. Similar to the colour wheel, these colour charts were reproduced, ordered and numbered. They had a smooth and precise quality that appealed to the artist. He began to replicate and enlarge these charts and in doing so, replaced the expression or representational intention of the artist with mathematical processes and systems.

Keywords

Colour chart – painting – design – abstraction – minimalism – colour mixing – programmes – systems – uncertainty – enlarge – predict – selection – differentiation – automatic – order – chance – refinement

Cross-curricular links

Art and Design – Mathematics – ICT – Design Technology – Graphic Design

Discussions

- What does the exhibition remind you of? What makes the paintings familiar? What makes them strange?
- What values and points of view about painting, are represented in Richter's *4900 Colours*?
- Discuss colour as a manufactured product.
- How is colour used to sell particular lifestyles, attitudes or values in a consumer context?
- What words or phrases would you use to describe the paintings?
- What similarities do the paintings in the exhibition have with each other?
- In what ways are the paintings in the exhibition different from each other?

- What patterns and symmetry can be found in the work?
- Do you think the squares are individually painted or produced by a machine or computer? Explain the reason for your choice.
- To make each painting, have the colours been arranged in a deliberate sequence or randomly? Explain the reason for your choice.
- Are Richter's paintings thematic or conceptual?
- Discuss if a coloured square appears any different when placed next to different coloured squares (lighter, darker, or brighter?)
- Which colours appear the closest and the farthest away? Why is this?

Practical Activities

- What is the role of colour in different aspects of life?
- How do we experience colour?

How do different colours link to places and environments in art?

Collect colour charts as used by Richter and investigate the names given to different colours. How does colour link to emotions and places? What do different colours symbolise or remind you of? Using the colour charts, match colours carefully to your school environment, and replace the existing names with new ones relating to your matches. Assemble your chosen colours to make a grid painting for your school environment, your home, local park, shop, leisure centre, place of worship. These paintings can be joined together to make one large, collaborative piece of work.

Consider how you would compose your own painting to convey an emotion or feeling. What colours would you chose and what shapes would make up the composition?

3. Numbers, chance and patterns

11	24	7	20	3
4	12	25	8	16
17	5	13	21	9
10	18	1	14	22
23	6	19	2	15

Gerhard Richter
The magic square
© 2008 Gerhard Richter

4900 Colours comprises 196 square panels of 25 coloured squares that can be reconfigured in a number of variations, from one large-scale piece to multiple, smaller paintings. Richter has developed a new version especially for the Serpentine Gallery exhibition: *4900 Colours: Version II*, formed of 49 paintings of 100 squares.

Starting from 25 coloured squares, numbered between 1 and 25 Richter's paintings investigate sequences, calculations, uncertainty, logic and order. To create each of Richter's paintings a computer operates, encodes, orders, combines, shifts and repeats the 25 different colours randomly. The paintings set up a game of colour and chance.

Magic squares

Richter's' composition of 25 coloured squares corresponds to a mathematical *magic square* in which the arrangement of numbers adds up to 65 in every direction.

Magic squares have fascinated people throughout history, and have been around for over 4,000 years. They are found in a number of ancient cultures, including China, Egypt and India, engraved on stone or metal and worn as talismans, the belief being that magic squares had astrological and divinatory qualities, their usage ensuring longevity and prevention of diseases.

Albrecht Dürer's magic square, *Melancholia I* (1514)

16	3	2	13
5	10	11	8
9	6	7	12
4	15	14	1

The magic square in Albrecht Dürer's engraving *Melancholia I* made in 1514, is believed to be the first time it was seen in European art. It is very similar to another magic square, which was created in China about 250 years before Dürer's time. The sum 34 can be found in the rows, columns, diagonals, each of the quadrants, the centre four squares, the corner squares, the four outer numbers clockwise from the corners (3+8+14+9) and likewise the four counter-clockwise, the two sets of four symmetrical numbers (2+8+9+15 and 3+5+12+14) and the sum of the middle two entries of the two outer columns and rows (e.g. 5+9+8+12), as well as several kite-shaped quartets, e.g. 3+5+11+15; the two numbers in the middle of the bottom row give the date of the engraving:1514

Keywords

Magic squares – symmetry – reflection – translation – sum of – rows – diagonals – grids – shapes – corners – rotation – pattern – chance – probability – sequence – repetition – logic – numbers

Cross-curricular links

Art and Design – Mathematics – Creative and Media Diploma – ICT – Design Technology

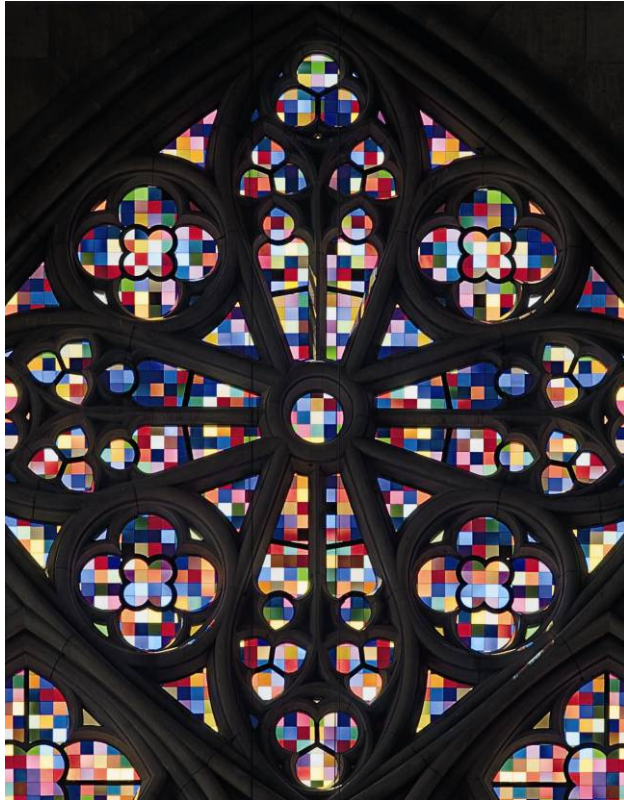
Discussions and activities

- Investigate Albrecht Dürer's background, why do you think he included a magic square in his engraving?
- If you were to make a magic square with the year Gerhard Richter was born, what size grid would you need to fill?
- Investigate symmetry using the following questions:
What patterns do you see in Richter's magic square?

What are the symmetrical relationships?
Can you find examples of rotation symmetry?
Can you find examples of translation symmetry?
Can you find examples of reflection symmetry?

- Can art or even everyday life be reduced to logical calculations?

3. Cologne Cathedral Window



Gerhard Richter
Cologne Cathedral: South Transept Window (detail) 2007
Courtesy Dombauarchiv Köln, Matz und Schenk
© 2008 Gerhard Richter

Chance as a process to create new art work was employed in Richter's design for the south transept stained-glass window of Cologne Cathedral in 2007. The gothic window is made from hand-blown coloured squares of glass in 72 different colours derived from the palette of the original medieval glazing. Richter used a specially developed computer programme to generate a digital design. The composition of coloured squares is generated by chance to create an unpredictable order. Random for half the window, the placement of colours is mirrored in the other half creating symmetry. The endless possibilities for the composition created are also amplified by the constantly changing weather and play of sunlight.

Keywords

Chance – design – light – colour – symmetry – composition – reflection – refraction – digital – spectrum – order – historical – contemporary – permanent – pattern – gothic – architecture – illuminate

Cross-curricular links

Art and Design – Mathematics – Physics – History – ICT – Design Technology – Architecture

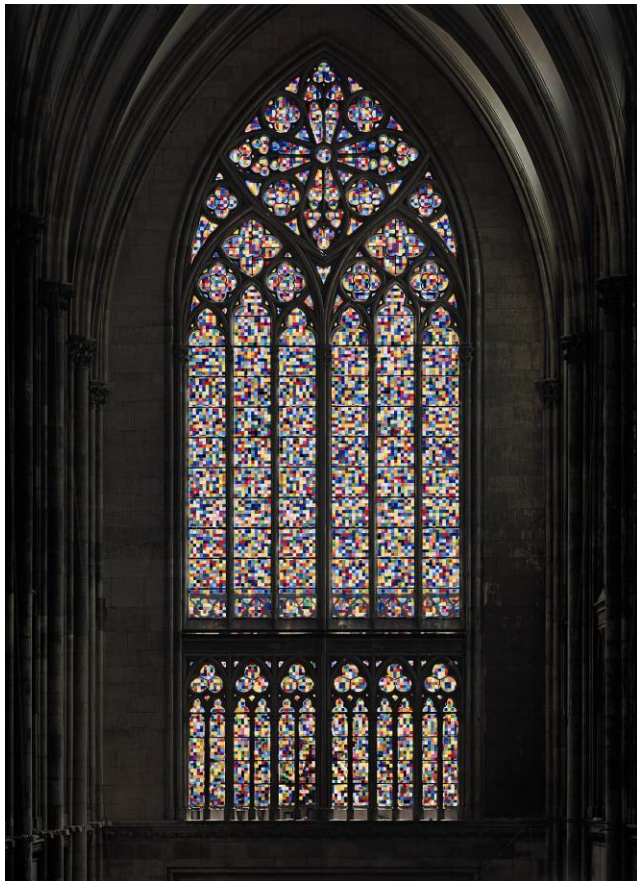
Discussions

- What symbolism is associated with stained glass windows in religious architecture?

- How does the concept of chance link to beliefs and religions?
- Discuss how light and colour can be broken down into three primary colours: red, green and blue. The red, green and blue colours of light are called *additive* colour, because when they are added together, they form white light.
- When sunlight falls on a coloured object, some of the sun's wavelengths are absorbed (or cancelled out), and others reflected, the result being that only those reflected colours are visible. On a yellow ball, for example, all the short (blue) wavelengths are absorbed and the long (red) and middle (green) wavelengths are reflected. This results in the colour yellow.
- How is colour generated mathematically for computers, television and printed imagery?

Activities

- How does Richter's design compare to other stained glass windows in London e.g. St. Paul's Cathedral, Southwark Cathedral or Westminster Abbey?
- Research Antony Gormley's artwork, *Sound II* installed in Winchester Cathedral's crypt in 1986.
- Experiment with light and colour to investigate light and colour to find out:
How does light travel?
Can light be bent?
How a rainbow is created.



Gerhard Richter
Cologne Cathedral: South Transept Window 2007
 Courtesy of Dombauarchiv Köln, Matz und Schenk
 © 2008 Gerhard Richter

Further information and related links

Colour

The term **Colour Field** painting was originally used to describe work which was characterised by large areas of a more or less flat single colour during the 1950's. Around 1960, a more abstract form of Colour Field painting emerged. It differed from **Abstract Expressionism** in that these artists removed both the emotional or spiritual content of the earlier movement, and the gestural processes associated with it. Artists to investigate include:

- **Ellsworth Kelly** is an American painter and sculptor associated with Colour Field painting and minimalism. He creates work often employing bright colors investigate simplicity of form. Please see Serpentine Gallery Teachers' Notes.
- **Frank Stella** is an American painter and printmaker. He is a significant figure in minimalism and abstraction in painting.
- **Agnes Martin's** paintings have an emphasis on line, grids and fields of subtle colour. Her work has a spiritual dimension and she is referred to as an abstract expressionist.

Abstraction

The idea that art can be like music – arrangements and patterns of sound, led to artists to make artworks created by patterns of form, colour and line. This idea is linked to the Greek philosopher Plato's concept that the highest form of beauty is not found in the forms of the real world but in geometry. Artists to investigate include:

- **Piet Mondrian** was a Dutch painter and a pioneer of Abstract Art. His paintings investigated non-representational form and consisted of grids of vertical and horizontal black lines the three primary colours.
- **Sol LeWitt** was an American artist linked to various movements including Conceptual art and Minimalism. He created geometric sculptures, paintings and drawings exploring repetition, line and form.
- **Bridget Riley** is British painter who employs colour and geometric patterns to produce sensations of movement and colour through optical effects.
- **Dan Flavin** was an American minimalist artist who created sculptural objects and installations from manufactured fluorescent and coloured light fixtures.
- **Jim Lambie** is a contemporary visual artist whose practice includes colourful, sculptural installations made from everyday modern materials and using brightly coloured tape arranged into patterns around the floor of the gallery or architectural space.

Chance

Many artists have employed chance as a strategy and the random arrangements of elements and systems to create artwork. Artists to investigate include:

- **John Cage** was an American composer a pioneer of music composed using processes of chance and experimentation. Cage was one of the leading figures of the post-war avant- garde.
- **André Breton** was a French writer, poet, artist and surrealist theorist, and is best known as the main founder of surrealism. Central to his work is the concept of Automatism which is same as free association. This was the method used by Freud to explore the unconscious mind of his patients. In automatic drawing, the hand is allowed to move randomly across the paper, applying chance and accident create artwork free from rational control.
- **Damien Hirst** is a British artist, who has used chance and colour to create "spin paintings," made on a spinning circular surface, and "spot paintings," which are rows of randomly-coloured circles.

Gerhard Richter Publications and website:

Benjamin H. D. Buchloh, Peter Gidal and Birgit Pelzer.

Gerhard Richter 4900 Colours

Published by Serpentine Gallery / Hatje Cantz 2008

ISBN 978-1-905190-23-2

Robert Storr and Gerhard Richter

Gerhard Richter: Forty Years of Painting

Published by The Museum of Modern Art, New York, 2002

ISBN 978-1891024375

Stephan Diederichs, Birgit Pelzer, Barbara Schock-Werner, Hubertus Butin and
Gerhard Richter

Gerhard Richter: Zufall

Published by Walther König, 2008

ISBN 978-3865602985

www.gerhard-richter.com

Planning a Visit to the Serpentine Gallery

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Transport



The nearest tube stations are South Kensington (1.25 km walk), Knightsbridge (1.25 km walk) or Lancaster Gate (1 km walk)

Bus routes 9, 10, 52, 452, 94 and 148 stop near the Gallery

Group Visit Guidelines

To make your visit as enjoyable as possible, please read the following:

Before your Visit:

- Adult supervision of students under 16 is required at all times, including in the shop. An adult student ratio of 1:5 for under 5's, 1:10 for 5 - 11 year olds, 1:15 for 11 - 16 year olds and 1:20 for 16 - 18 year olds is required.
- We recommend a preliminary planning visit, as for some exhibitions there may be works that you consider unsuitable for your group.

During your Visit:

- Teachers/group leaders and accompanying adults are responsible for their group's behaviour whilst at the Serpentine Gallery.
- Please make sure your group is aware of the following Gallery guidelines:
 - No running
 - No touching
 - No leaning against walls or plinths
 - No shouting
 - No photography
- Many contemporary artworks are fragile and damage easily. Please make sure that your group understands that this is why they are not allowed to touch the art.
- Lecturing: If your group is larger than 30 please split them into smaller groups in the exhibition space and do not lecture in rooms where talks are already in progress.
- Drawing: If you would like to do some drawing please check with the gallery what materials you will be able to use in the exhibition

Education and Family Events

Education is at the core of the Serpentine Gallery's activities. Through practical, artist led workshops and discussion, talks, events and projects the Education Programme offers a diverse range of innovative ways to engage with modern and contemporary art and architecture for all ages.

Please refer to the Serpentine Gallery Bulletin or www.serpentinegallery.org for information on events and activities taking place as part of the Education Programme during the Gerhard Richter, 4900 Colours: *Version II* exhibition.