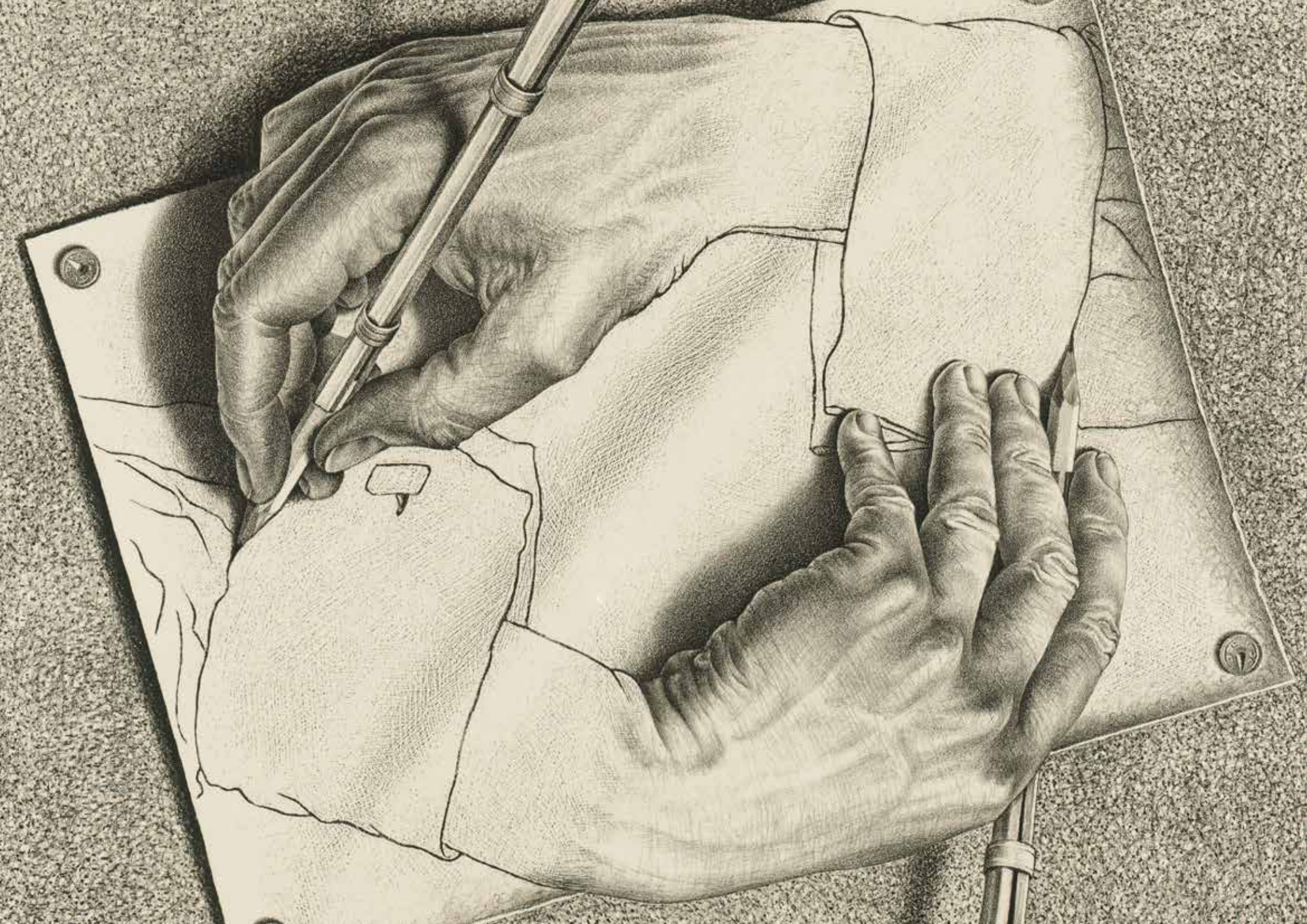
ESCHER X NENDO

BETWEEN TWO WORLDS

2 DEC 2018 – 7 APR 2019

TEACHER RESOURCE

ONLY IN MELBOURNE
AT NATIONAL GALLERY OF VICTORIA



TEACHER NOTES

Introduce students to *Escher X nendo | Between Two Worlds* by sharing and discussing the following information with your students.

(previous and opposite)
M. C. Escher
Drawing hands January 1948
lithograph
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

NGV LEARNING SUPPORTERS

The NGV gratefully acknowledges the Packer Family Foundation for their support of the NGV kids exhibitions and learning programs.

The NGV warmly thanks Krystyna Campbell-Pretty and the Campbell-Pretty Family for their support of the NGV Schools Access Program

ESCHER X NENDO

BETWEEN TWO WORLDS
2 DEC 2018 – 7 APR 2019

INTRODUCTION TO THE EXHIBITION

Escher X nendo | Between Two Worlds features the work of Dutch artist M. C. Escher in dialogue with the work of acclaimed Japanese design studio nendo. This exhibition is drawn from the world's largest collection of M.C. Escher's work in the Gemeentemuseum in The Hague, and covers the full span of the artist's career, from 1916 through to his final work produced in 1969.

WHO WAS M.C. ESCHER?

M.C. Escher (1898–1972) was a Dutch artist, famous for creating enigmatic and surprising images that play with illusion and perception, explore mathematical concepts and reveal new ways of looking.

Over his career Escher designed tapestries and murals and produced numerous illustrations and drawings, but he was predominantly a graphic artist, specialising in printmaking. A graphic artist is one who makes work to be produced in multiples, rather than one-off works.

WHAT IS NENDO?

Nendo is a Japanese design studio founded by designer Oki Sato in 2005. Nendo is known for precise, intelligent and often humorous designs for environments and objects. Nendo was invited to create an exhibition environment to display, interpret and enhance the experience of M.C. Escher's work at the NGV.

M.C. ESCHER – A BIOGRAPHY

EARLY LIFE

Maurits Cornelis Escher was born in 1898, in Leeuwarden in the northern part of the Netherlands, to George Arnold Escher, and his second wife Sara Gleichman. Maurits – called Mauk by his family and close friends – was the youngest of five brothers, including two sons from his father's previous marriage. He was particularly close to his father, a civil engineer, who had retired by the time Maurits was ten years old.

In 1903, the family moved to Arnhem, where Escher attended primary and secondary school. He wasn't very happy or successful at school and failed his final secondary school exams in 1918. He enjoyed his art classes however, and was encouraged by his art teacher, who taught him how to make linocut prints. His first print – a profile portrait of his father (below) – dates from 1916.

Escher's parents steered him toward a career in architecture and in September 1919 he enrolled at the School of Architecture and Decorative Arts in Haarlem. Within a few weeks, encouraged by the school's teacher of graphic arts, Samuel Jessurun de Mesquita, and with the agreement of his parents, Escher switched from architecture to the graphic arts course.

Under de Mesquita's mentorship, Escher began to experiment with making woodcuts and lithographs.

M. C. Escher
Self-portrait November 1929
lithograph
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

M. C. Escher
Escher's father, G. A. Escher 1916
linocut, printed in purple ink
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

ITALY

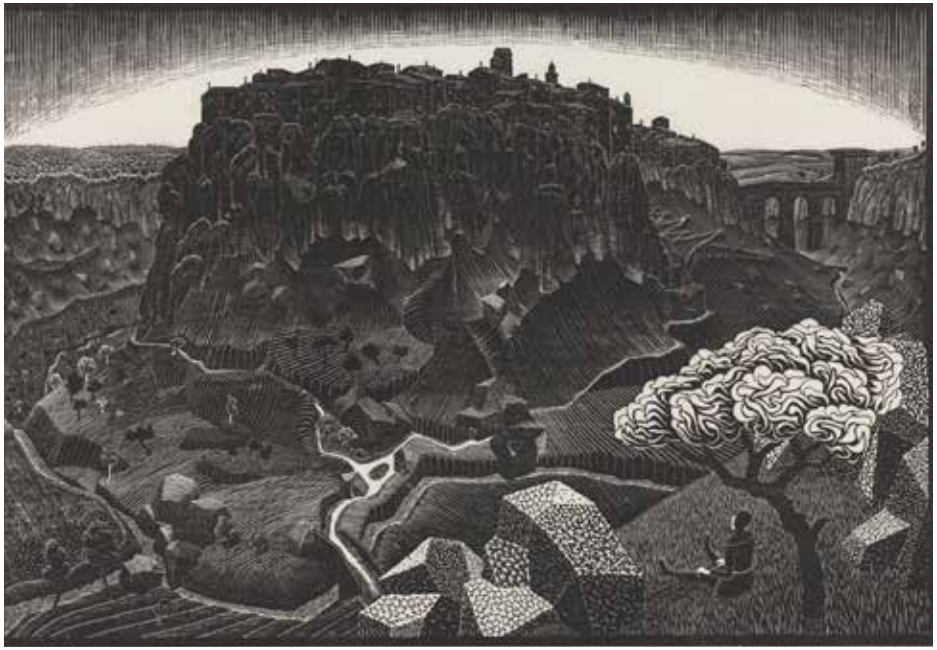
After completing his studies in 1922, Escher travelled to Spain and Italy with friends. Enchanted with the Italian countryside and townscapes, Escher returned to Italy in November 1922 and made it his home for the next thirteen years.

In 1923 Escher met Jetta Umiker, the youngest daughter of a Swiss industrialist. They married in 1924 and settled in Rome. They had three sons: George, born in 1926, Arthur, in 1928 and later Jan, in 1938.

While living in Italy Escher took regular journeys through the Italian countryside, often in the company of artist friends and sometimes with Jetta, sketching, taking photographs and gathering inspiration for his prints. He would set out each spring and travel for weeks, favouring unspoiled places in remote areas like Calabria, Sicily and Corsica. In the winter months he made prints inspired by his drawings: predominantly landscape views of southern Italy's mountainous areas and picturesque hill-towns. The interest in unusual perspectives, intriguing viewpoints and close detail that would become a feature of his later work was evident in his early landscapes.

Escher and his family left Italy in 1935, concerned by the rise of fascism and the growing political turmoil. They moved briefly to Switzerland, then to Ukkel, a small town near Brussels in Belgium, in 1937. In 1939, Escher's father passed away and his mother died the following year.

When the German forces occupied Belgium, the family moved once more in 1941, to Baarn, a small village in the Netherlands, where Escher was able to work without interference throughout the war.



M. C. Escher
Vitorchiano nel Cimino February 1925
woodcut
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

REGULAR DIVISION OF THE PLANE

The move from Italy marked a dramatic change in Escher's art. In the spring of 1936, Escher and Jetta visited the Alhambra (a fourteenth century Moorish palace) in Granada and La Mezquita (the mosque) in Córdoba, Spain. They were struck by the wealth and beauty of the decorative tile patterns and designs that covered many surfaces of the buildings. He and Jetta spent three days copying the designs - fascinated by the repeated patterns of interlocking shapes known as tessellations. The rich variety of abstract tile patterns sparked in Escher a passion to pursue the development of his own complex systems of tessellation. He began to study the geometric rules behind tessellation patterns – intuitively at first, and then with the aid of several academic articles recommended by his brother, Berend, a professor of geology, who had noted the parallels between Escher's research and crystallography (the science of determining the atomic and molecular structure of crystals). One article by Hungarian mathematician György (George) Pólya, was of particular interest to Escher. It described how designs in a plane which have regularly repeating motifs can be classified into seventeen different plane symmetry groups. Pólya's illustrations of each of the symmetry groups showed Escher the rules and systems by which regular shapes could be repeated on the flat plane to infinity. Escher copied the illustrations, noted the text and even wrote to Pólya.[1]

Whereas the mathematicians and crystallographers sought to analyse and classify existing structures, Escher sought ways to create repeating patterns. He went on to investigate the artistic possibilities of these ideas and by the early 1940s had devised his own layman's theory, which he called 'the regular division of the plane'.

Escher described the regular division of the plane as the richest source of inspiration he had ever encountered. Over three decades from 1936 he produced over 130 tessellation drawings.

M. C. Escher
Regular division of the plane no. 37 (Beetle) July 1941
pencil, watercolour and coloured ink on graph paper
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

EXHI051676.tif

METAMORPHOSIS AND BEYOND

At the end of the 1930s Escher began a series of works that explored the idea of metamorphosis – a change from one form to another. The 'Metamorphosis' series utilised regular divisions of the plane and transitions between two and three dimensional space.

In the 1940's Escher produced some of his most famous images including *Reptiles*, 1943, *Drawing Hands*, 1948 and *Up and Down*, 1947, utilising perspective, illusion and cycles of infinity. In January 1944, Escher's teacher and mentor Samuel Jessurun de Mesquita was taken away by German forces, never to be seen again. This event touched Escher deeply.

Initially Escher's work – with its complex depictions of pattern and space – found greater favour with mathematicians and scientists than traditional art audiences, but in 1951 articles on Escher's work appeared in American magazine *The Studio* followed by articles in *Time* and *Life* magazines, boosting his international recognition. In 1954 a major exhibition of Escher's work was held at the Stedelijk Museum in Amsterdam in conjunction with the International Congress of Mathematics, and in the same year another was held at the Whyte Gallery in Washington, D.C. in America. He was awarded a Knighthood of the Order of Oranje Nassau in 1955 and demand for his work became so great that he could not keep up with orders, despite raising his prices.

Despite bouts of poor health, Escher continued to deliver lectures until 1964 and to make work until 1969. The first retrospective exhibition of his work was held in the Gemeentemuseum den Haag in 1968, in his seventieth year. In 1968 Jetta moved back to Switzerland and Escher moved to Rosa Spier House, a retirement home for artists. Escher died in 1972, aged 73.

M. C. Escher
Reptiles March 1943
lithograph
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

EXHIBITION THEMES AND IDEAS

EARLY IDEAS AND INSPIRATION

Escher's early workspace in Arnhem contained reproductions of works by artists Hans Memling, Hans Holbein the Younger, Rembrandt, Albrecht Dürer and Jan van Eyck as well as Japanese prints and objects, collected by his father. Escher's interest in the depiction of impossible worlds, reflections, trompe l'oeil and visual puzzles found precedence in the work of these artists, and he revisited these themes throughout his life.

Use these themes and ideas as a starting point for student discussion and activities.

STUDENT TASK:

- Research the work of the artists listed and try to find works that correspond thematically, visually or technically with those of Escher. Make a visual presentation of your findings, comparing the similarities and parallels that you discover.

THE OBSERVED WORLD

On his trips through the Italian countryside, Escher would fill sketchbooks with drawings of the scenery, plants and creatures that he observed. These would later form the basis of printed works. The prints reveal Escher's close examination of the details of nature as well as his technical virtuosity and extraordinary craftsmanship. The compositions often include adaptions, enhancements and dramatic perspectives that show a constructed or heightened, rather than an accurate depiction of reality.

DISCUSSION POINTS:

- The image left below is titled *Castrovalva*, after a town in the Abruzzi region of Italy. What adjectives might be used to describe each part of the landscape?
- The landscape appears dramatic, majestic, dynamic. How does Escher create this sense of drama, majesty and movement?
- What unusual or interesting details do you notice in Escher's image?
- Compare the image of Castrovalva on the left with the one of Atrani on the right. What qualities do they have in common? How do they differ?

STUDENT TASK:

- Search for some images of Castrovalva on the internet. Is Escher's depiction a realistic one? Which parts of the image may have been distorted or emphasised? How has Escher utilised tonal qualities to create contrast and movement? How has he combined different views?
- Extreme or unusual perspectives create interesting compositions. Capture – with a camera or by drawing – an image of your school or home environment using an exaggerated perspective. Include some unexpected detail in the image to create interest, contrast and depth.

M. C. Escher
Castrovalva, Abruzzi February 1930
lithograph
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

M. C. Escher
Street in Scanno, Abruzzi January 1930
lithograph
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

REGULAR DIVISION OF THE PLANE

Within a few years of starting his investigations into tessellations and geometry, Escher's art had transformed almost completely. Some sixty of the 154 prints made by Escher after 1937 are based on the regular division of the plane. Unlike the strictly abstract patterns of the Moorish tiles which had so inspired him, Escher created recognisable figures – insects, birds, fish, angels and other creatures – that he systematically rotated on axes, mirrored or translated sideways to create repeating patterns.

DISCUSSION POINTS:

- Look at the tessellations pictured. How has the motif been moved and repeated to create each pattern? In one, the image is rotated around a fixed point. In another, the image has been reflected and shifted.
- What is the effect of using figures of animals and people rather than just abstract shapes?
- What is the purpose and effect of colour in the tessellations pictured?

STUDENT TASK:

- Look for instructions on how to make a tessellation – there are many ways. Create your own tessellation and film the steps to create your own time lapse or instructional video to teach someone else.
- Find out more about tessellation and the mathematical concepts Escher used in the Escher and Mathematics powerpoint resource.

M. C. Escher
Regular division of the plane no. 3 (Weightlifter) October 1936
pencil, pen and ink and watercolour on graph paper
Escher Collection, Gemeentemuseum Den Haag,
The Hague, the Netherlands

M. C. Escher
Regular division of the plane no. 33 (Lizard) December 1940
pencil, pen and ink and watercolour on graph paper
Escher Collection, Gemeentemuseum Den Haag,
The Hague, the Netherlands

M. C. Escher
Regular division of the plane no. 56 (Lizard) November 1942
pen and black and gold ink, coloured pencil and poster paint
Escher Collection, Gemeentemuseum Den Haag,
The Hague, the Netherlands

METAMORPHOSIS

Metamorphosis – a change from one state to another – was another idea that captivated Escher. From 1937 Escher began a series of prints exploring the possibilities suggested by such transformations, inspired in part by a thought association game he had played as a child, in which he challenged himself to connect two arbitrary ideas with a logical series of steps.[2]

One of the earliest of these was *Metamorphosis I*, 1937, which begins on the left with the realistic depiction of Atrani, a village on the Amalfi Coast of Italy, transitions to abstract cubic forms that then flatten into tessellating shapes from which a little figure emerges on the right. The image changes from a realistic landscape to geometric forms and pattern, to a single figure; from a representation of three dimensions to two. *Metamorphosis II*, 1939–1940, which developed from *Metamorphosis I*,was a four metre long woodblock print printed from sixteen blocks that began and finished with the word 'metamorphose', included ten transformations and like *Metamorphosis I* also incorporated the village of Atrani.

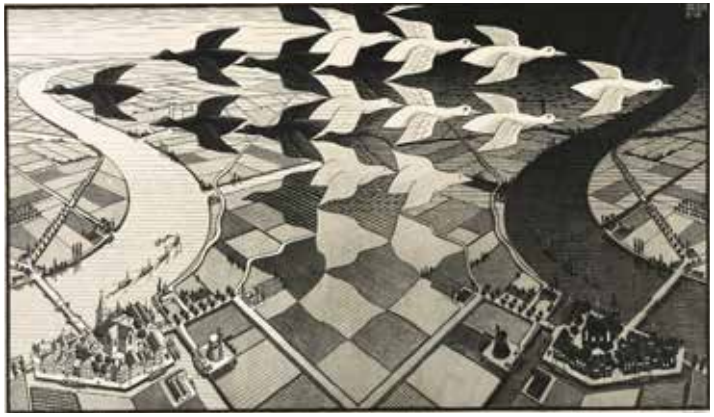
Day and Night, 1938 was Escher's most popular print – he printed over 650 copies. *Day and Night* includes many transformations and dualities (opposites, contrasts or counterparts).

DISCUSSION POINTS:

- Look closely at *Day and Night*, 1938. What transformations or dualities are evident? From black to white, night to day, figure (object) to ground and from flat fields to living birds are some you might notice.
- What other ideas or associations does this image raise for you?

STUDENT TASK:

- Play Escher's metamorphosis game. Select two random objects. In small groups find steps to link them together and then compare the different paths each group has taken.
- Metamorphosis can be seen as an allegory for different kinds of development and change that might not always be visible. Many 'heroes' journeys' are an example of metamorphosis through experience, in which a new character emerges after a series of trials. Many transformations in stories such as the gothic novel Dr Jekyll and Mr Hyde by Robert Louis Stevenson, are about the opposites that can exist inside one person. Create an image, an animation or a plot outline for a short story that shows progressive evolution, metamorphosis or transformation, or duality.



M. C. Escher
Metamorphosis I May 1937
woodcut on two sheets
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

M. C. Escher
Day and night February 1938
woodcut, printed in grey and black inks
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

REFLECTION

Escher produced numerous images that utilised reflective surfaces to reveal different perspectives. *Hand with reflecting sphere*, 1935, depicts a hand holding a polished sphere in which Escher himself is reflected, with his room behind him. The image is a portrait of Escher on a number of levels: the artist's hand represents his own dexterity and creativity, his reflected image shows his intensity and focus, and his living space reveals his personal domain – the world of the artist behind the image.

Puddle, 1952 depicts the reflections in a puddle on a muddy road. The footprints and tyre tracks of vehicles and bicycles in the dark mud indicate the hurried comings and goings of passing traffic, while reflected in the puddle, the full moon behind silhouetted trees shows the sublime stillness and clarity of nature.

DISCUSSION POINTS:

- Look at *Puddle*, 1952. What are some of the contrasts evident in this work? What perspectives can you see? What similes or metaphors can you think of for this work?

STUDENT TASK:

- Collect some objects that have reflective surfaces – spoons, tea pots, vessels with water, mirrors for example – and draw them as accurately as you can including the things reflected in them. You might like to start with a photograph and work from that.

M. C. Escher
Hand with reflecting sphere
(Self-portrait in spherical mirror) January 1935
lithograph
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

M. C. Escher
Puddle February 1952
colour woodcut
EscherCollection, Gemeentemuseum Den Haag, The Hague, the Netherlands

PERSPECTIVE, IMPOSSIBLE STRUCTURES AND INFINITY

It is a pleasure to deliberately mix together objects of two and three dimensions, surface and spatial relationships, and to make fun of gravity. Are you quite sure a floor can't also be a ceiling? Are you certain you are going upwards when you ascend a staircase?[3]

M.C.Escher, 1965

Escher's interest in space and perspectival illusion led to the creation of some of his most celebrated images. These show distortions of perspective and impossible constructions that challenge the viewer's preconceptions about order in space and such fundamental perceptions as above and below, up and down, and inside and outside.

In *Convex and Concave*, 1955 different views and perspectives are combined with such precision that the scene appears at first to make perfect sense. It is only when we look more closely that we realise that this is not a normal world view. Our own viewpoint shifts many times as we contemplate the image – sometimes we are looking down, sometimes up… the floor becomes the ceiling, and up is down. The image appears to have symmetry but the corresponding scene on each side has the opposite viewpoint – above or below. Escher utilises optical illusion, tricks of perspective and visual effects. Escher wrote that he had spent a whole month pondering how to make the print 'simple enough', so that it had a 'proper and effortless connection with reality.'[4]

M. C. Escher
Convex and concave March 1955
lithograph
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

DISCUSSION POINTS:

- Identify where you would be standing to view each part of the image – above or below.
- How does Escher use symmetry and contrast?
- What is the significance of the title of the work?
- Escher did many preparatory drawings and sketches prior to making his print designs. What sketches or views might Escher have needed to create this image?
- The influence of Escher's images of impossible buildings can be seen in films and games. Can you think of any movies or games that might be inspired by Escher?
- Some examples might include the Jim Henson movie, *Labyrinth*, 1986, or the Hogwarts moving stairs in the Harry Potter films. What links or parallels can you find?

STUDENT TASK:

- Do a series of drawings of the same space from different views. Make your own mixed perspective image that melds multiple viewpoints.
- Write a short description for the movie/scene that your image might be part of.

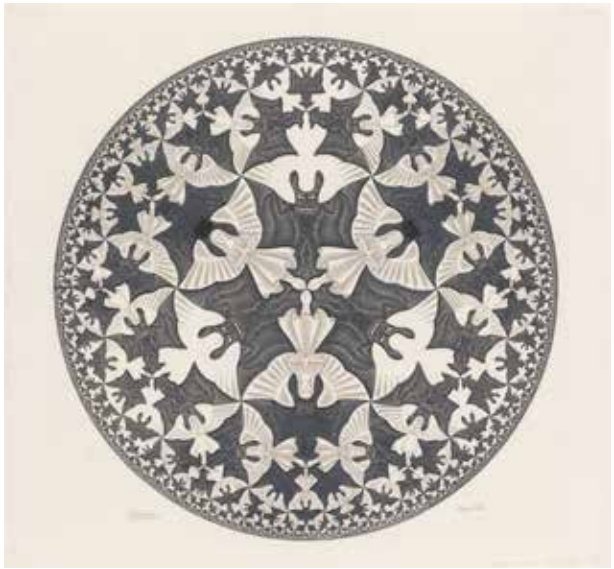
PERSPECTIVE, IMPOSSIBLE STRUCTURES AND INFINITY

> *We find it impossible to imagine that somewhere beyond the furthest stars of the night sky there should come an end to space… our powers of imagination are incapable of encompassing the notion of 'nothing'… And yet it can happen, so it seems, that someone… feels one fine day ripening in him a definite and conscious desire to approach infinity through his art, as accurately and closely as he can.*[5]
>
> M.C.Escher, 1965

Escher explored numerous ways to represent the idea of infinity or endlessness, incorporating his work on division of the plane. In 1954 he met mathematician Donald Coxeter at the International Congress of Mathematicians in Amsterdam. Coxeter introduced Escher to hyperbolic geometry – the geometry of curved surfaces – and the Poincaré model, a way to represent curved surfaces within a flat disc. This inspired a new series, called the *Circle Limit* series. *Circle limit IV* (*Heaven and hell*),1960 depicts angels and demons repeating endlessly to the outer limits of the circle.

DISCUSSION POINTS:

- How successful has Escher been in capturing the idea of infinity?
- How does the inclusion of angels and demons add to the meaning of the work?



M. C. Escher
Circle limit IV (Heaven and hell) July 1960
woodcut, printed in ochre and black inks
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

PERSPECTIVE, IMPOSSIBLE STRUCTURES AND INFINITY

A Möbius strip is a loop with only one surface and one edge. (You can make one by taking a strip of paper, twisting it and then taping the ends of the strip together.) In *Möbius strip* (*Red Ants*), 1963 the ants march endlessly around their möbius lattice, which forms a lemniscate – the mathematical symbol for infinity, like a figure 8. Escher made a model of an ant from plasticine and wire to copy for this image.

Möbius strip (Red Ants) might be also seen as a visual metaphor for the ideas of existentialism. Existentialism is a philosophical movement of the 19th and 20th centuries that became more significant after the second world war due to the writing of Jean Paul Sartre, Albert Camus and Simone de Beauvoir. Escher was interested in the philosophy of existentialism and made reference to it in discussing his work. Existentialism proposes that life is essentially absurd, without predetermined meaning or purpose and that the challenge for each individual is to take responsibility for their own choices and actions and to live 'authentically' aligned with their own personal truth.

In this image the ants appear to march on unaware of the absurdity of their situation.

M. C. Escher
Möbius strip II (Red ants) February 1963
colour woodcut
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

DISCUSSION POINTS:

- Why might Escher have chosen ants to march around his lattice? In what ways does this image challenge our perceptions?

STUDENT TASK:

- Make your own Möbius strip and model some figures that can travel around it. Draw an image of your creation.
- Write a description of the ideas behind your work.

ART AS A WAY OF KNOWING

> *To tell you the truth, I find the concept of 'art' a bit of a dilemma. What one person calls 'art' is often not 'art' for another. 'Beautiful' and 'ugly' are old fashioned concepts.*[6]
>
> M.C.Escher, 1965

Escher was reluctant to call himself an artist, and for a long time his work was ignored by critics, who were not sure that his work came under the heading of art either.[7] As science has progressively expanded our understanding of the universe, Escher might be seen in a different light: perhaps as a visionary artist, who illustrated complex ideas well ahead of his time.

Escher pursued his interests in symmetry, infinity and illusion with the persistence and rigour of a scientific researcher. His vast body of sketches exploring regular divisions of the plane reveal systematic exploration of complex symmetries. He learned from mathematicians and scientists in his pursuit of his interests and they in turn were inspired by his work.

Escher recognised the limits of our human experience saying that 'our entire nature is so closely linked to the concept of three dimensionality that it is just as impossible to imagine two dimensions as it is four.'[8] His compositions utilise our reading of depth and dimension and remind us that our understanding of the world is based on our limited perception.

Escher's images – with their distorted perspectives, paradoxes and possibilities – ask fundamental questions about the nature of reality and the limits of our human logic. They illustrate complex ideas and make us contemplate order, structure and our place and purpose in the universe.

M. C. Escher
Bond of union April 1956
lithograph
Escher Collection, Gemeentemuseum Den Haag, The Hague, the Netherlands

DISCUSSION POINTS:

- Is Escher's art 'good art', in your opinion? What reasons do you have for your answer?
- How does Escher's art relate to the concepts of 'beauty' and 'truth'?
- What types of knowledge might Escher's art contain?
- How does it relate to other spheres of knowledge such as science and mathematics?
- How might Escher's art extend our knowledge or understanding?
- To what extent are Escher's images a reflection of reality?
- How and why might Escher's work be viewed differently today than from the time in which it was made?
- Find examples of duality and paradox in Escher's work and describe how they are evident.
- What other questions or ideas does his art raise?

STUDENT TASK:

- Choose a work from the exhibition that you believe conveys 'knowledge' or 'truth'. Explain what kind of knowledge it conveys and give reasons for your choice.
- Find other artists or images that convey ideas about the nature of reality and perception. Describe why you have chosen them and what they communicate. Analyse and describe the decisions the artist has made to best convey their ideas. Research the artist and their interests and document what you find. Compare how have similar ideas been conveyed in other fields or mediums i.e. scientific diagrams, music.
- Write a review of the exhibition, choosing five key works to illustrate your review.

M. C. Escher
Snakes July 1969
colour woodcut
Escher Collection, Gemeentemuseum Den Haag,
The Hague, the Netherlands

NOTES:

1 Doris Schattschneider, *M.C. Escher Visions of Symmetry,* Thames and Hudson, London, 2004, p. 30.
2 Doris Schattschneider, *M.C. Escher Visions of Symmetry,*, Thames and Hudson, London, 2004, p. 255. 'I played a similar game when I was ten years old, at night in bed before falling asleep: the association of thoughts. As my starting point and finishing points I took two completely arbitrary concepts, and these I had to relate in a logical way… It only gets difficult when one wants to convey such a stream of thought in an image.'
3 From a speech by M.C.Escher,1965. Quoted in M.C. Escher, *Escher on Escher: Exploring the Infinite*, Harry N. Abrahams, Inc., NY, 1989 p. 21.
4 Bruno Ernst, *The Magic Mirror of M.C. Escher*, Taschen, Koln, 2007, p.86.
5 Bruno Ernst, *The Magic Mirror of M.C. Escher*, Taschen, Koln, 2007, p.106.
6 M.C. Escher, *Escher on Escher: Exploring the Infinite*, Harry N. Abrahams, Inc., NY, 1989, p. 22.
7 Bruno Ernst, *The Magic Mirror of M.C. Escher*, Taschen, Koln, 2007, p. 20.
8 M.C. Escher, *Escher on Escher: Exploring the Infinite*, Harry N. Abrahams, Inc., NY, 1989, p. 115.