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ART



M.C. ESCHER

WORKING WITH REPETITION AND VARIATION



COVER: M. C. Escher (1898-1972).
Gravitation, 1952. Lithograph, hand colored, 11 3/4" x 11 3/4" © 2000 Cordon Art, Baarn, the Netherlands. All rights reserved

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REALITY I FANTA

A many-sided shape floats through space. Inside, brightly colored creatures squirm and wriggle, poking their arms and heads through the windows, trying to get out. What does the image on this month's cover mean, and who was the artist who was able to invent such a fantastic scene?

so they looked very real. He would then change at least one aspect—gravity, scale, perspective—to construct a fantastic realm that appeared to be straight out of a science-fiction novel. The space-twisting, mind-bending images created by this Dutch printmaker rank among the 20th century's most popular.

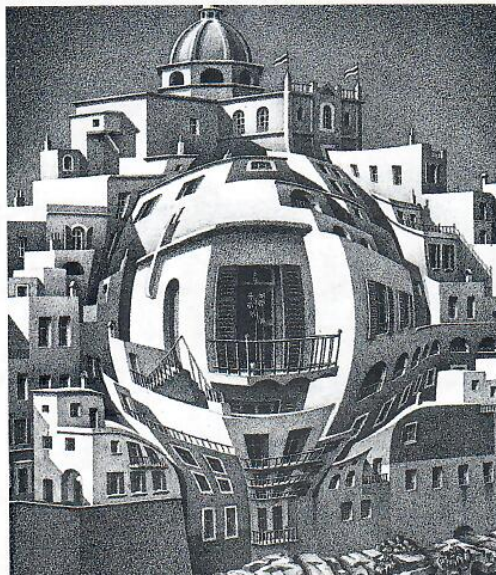
**"MY GOAL IS TO AWAKEN WONDER
IN THE MINDS OF MY VIEWERS."**

—M.C. ESCHER

Long before computer graphics, video simulation, and digital technology, an artist named Maurits Cornelis Escher was making his own fantastic world populated by nightmarish monsters. He would build his complex structures mathematically

M.C. Escher was born in a small Dutch town in 1898, the youngest son of a civil engineer. A poor student who had to repeat many classes, Escher hated school. He later said that only his art classes made it possible for him to survive. Even though

Escher failed his high school exams, his father wanted him to become an architect. Somehow he managed to get into architectural school. But a week of classes convinced



"In order to break up the flatness of this scene, I pushed the paper from behind to enlarge the central portion."

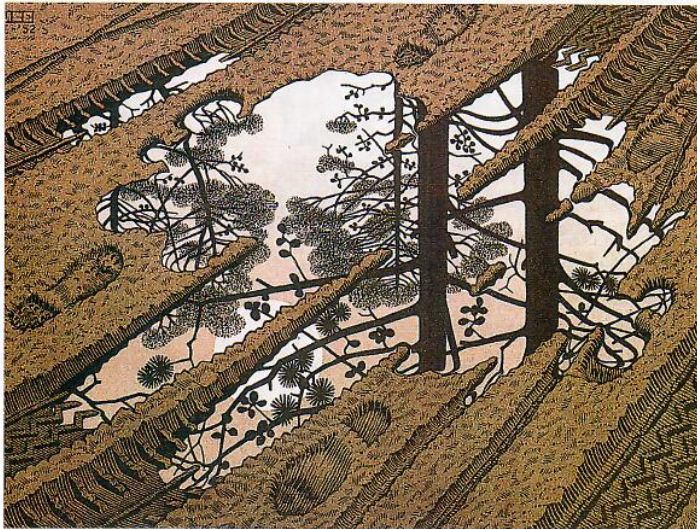
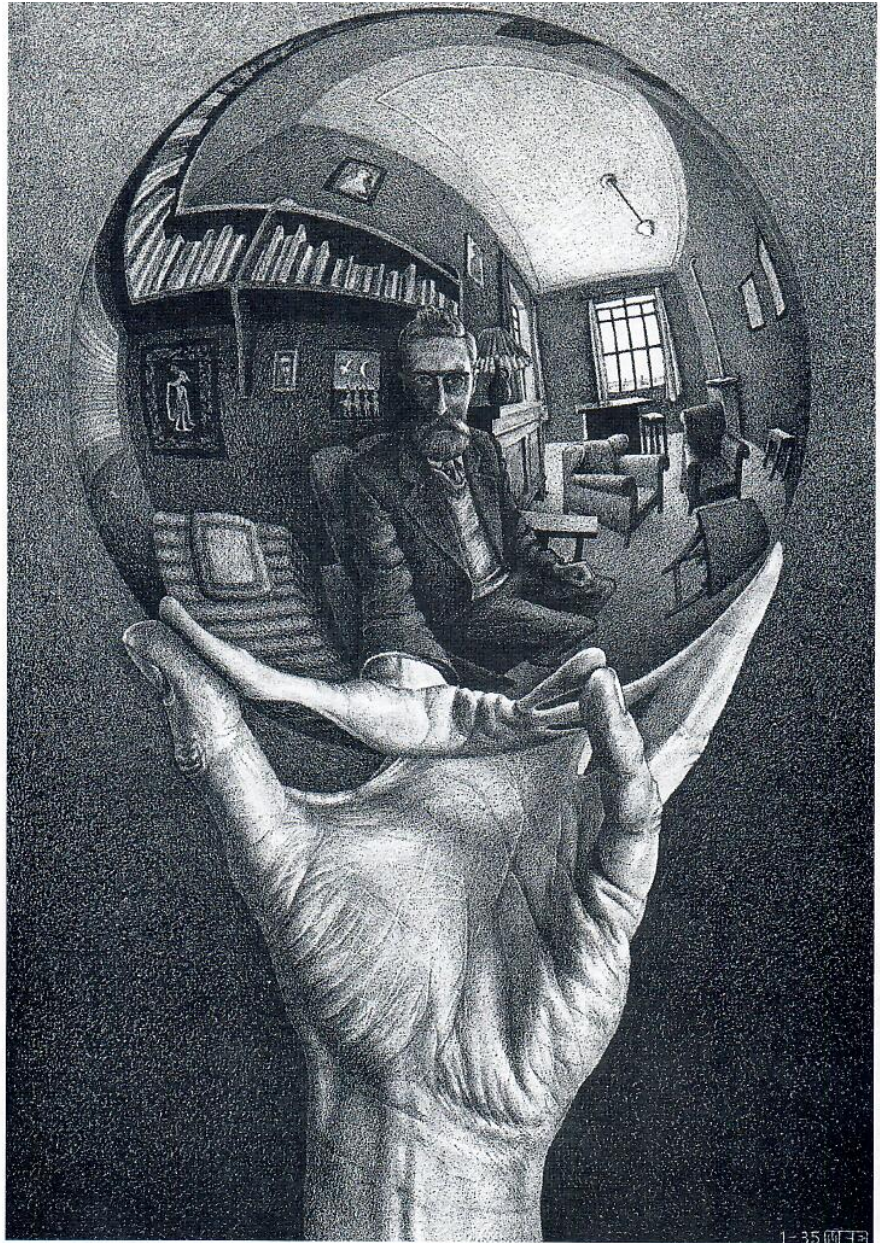
—M.C. Escher

M.C. Escher, *Balcony*, 1945. Lithograph 11 3/4" x 9 1/4". © 2000. Cordon Art, Baarn, the Netherlands. All rights reserved.

NTO SY

Escher's father to let his son switch to graphic art. After finishing school, the artist lived in Italy until 1935. During this time, he created images that would appear over and over in the fantastic prints for which he later became famous.

During the first 15 years of his career, Escher created images taken from the real world. But Escher's idea of reality was not like anyone else's. The subjects he chose were seen from **unusual angles**, as **extreme close-ups**, or in **eerie reflections**. In *Hand with Reflecting Globe* (above right), he depicted himself in a convex surface which distorts everything in it. An oversize hand reaches out to hold a mirror in which we expect to see our own reflection. Instead, we see Escher's. In *Puddle* (right), Escher suggests his fascination for different worlds that exist together. In a puddle that has formed in a country road, we see the reflected images of trees. In the earth around the water we can see "traces of two trucks, two bicycles, and two walkers going in opposite directions." In *Balcony* (left), the artist distorts a real scene. In this print, the architecture of an ordinary seacoast town seems to have expanded, as if part of it had been blown up like a balloon.



"In this globe reflection, I am the focus of my own world."
—M.C. Escher

M. C. Escher, *Hand with Reflecting Globe*, 1935. Lithograph, 12 1/2" x 8 1/2" © 2000 Cordon Art, Baarn, the Netherlands. All rights reserved.

"Several worlds can go on simultaneously, each unaware of the other."
—M.C. Escher

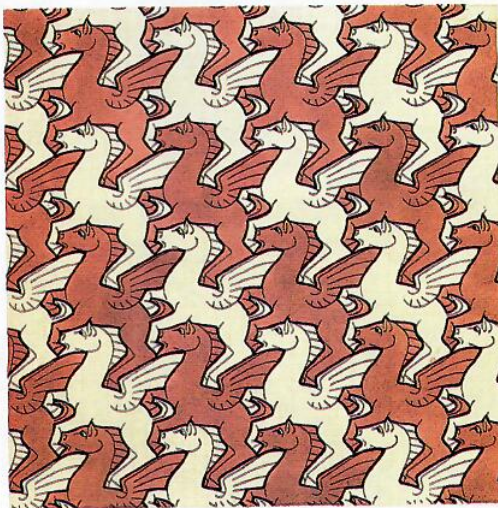
M. C. Escher, *Puddle*, 1952, woodcut from three blocks 9 1/2" x 12 1/2" © 2000 Cordon Art, Baarn, the Netherlands. All rights reserved.

ENDLESS IM

In 1936, Escher visited a place that would completely change his art. Although he had been there before, on this visit the tile designs he saw at the Alhambra—a 14th-century castle in Spain—solved an artistic problem he had been thinking about for some time. The artist wanted to find a way to visualize the concept of many different worlds existing in the same place at the same time. The multicolored ceramic tile used to dec-

orate the walls and floors fascinated him and gave him an idea for his own work. The Islamic artists who had built this structure repeated complex geometric shapes in colorful mathematical variations. But they used no humans, birds, or other animals in their designs. Escher admired these abstract patterns but expressed his sorrow that the artists' religion prevented them from depicting living creatures. He said, "It is the very recognizability of birds, fish, and reptiles that inspires me to call up the other universes I can see in my mind."

The strange and bizarre images shown here are called *tessellations* (tes-eh-LAY-shuns—from the Latin word meaning tile). These identical repeated shapes joined edge to edge with no spaces in between are based on geometric principles. Escher said, "I never got a passing grade in math, but I seem to latch on to mathematical solutions without knowing it." After seeing the Alhambra, Escher began to create from his own imagination rather than reality. He made hundreds of fantastic, **simplified, stylized** tessellating shapes in the form of



"To be dynamic, tessellations must have a clear direction for the flow of traffic."—M.C. Escher

Symmetry Work 105, 1959. Ink, pencil, watercolor. 8" x 8". Cordon Art. All rights reserved.



"A whole universe of reptiles spirals out in circles toward infinity."—M.C. Escher

Symmetry Work 25, 1939. Ink, pencil, watercolor. 9 5/8" x 9 5/8". Cordon Art. All rights reserved.

fish, birds, crabs, salamanders, insects, horses, humans, and other beasts.

The flying horse (above left) is an example of Escher's most basic type of tessellation. The shapes of the horses **interlock**. The legs of the white horses are joined perfectly with the heads and wings of the brown horses. The images progress on a **diagonal**, creating a steady, even **rhythm**. **Positive shapes** alternate with

**"I AM DRIVEN BY THE
IRRESISTIBLE PLEASURE
I FEEL IN REPEATING
THE SAME FIGURES
OVER AND OVER."
—M.C. ESCHER**

IMAGES

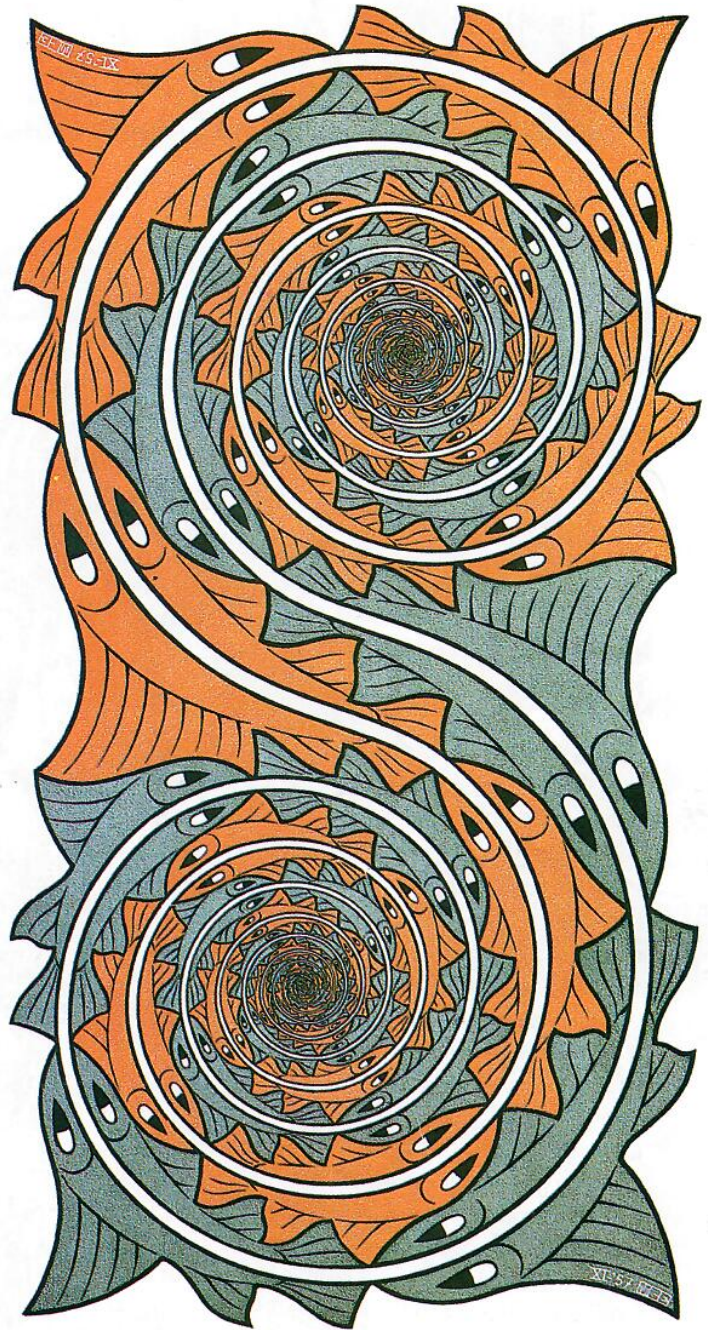
negative ones. The inside of one horse becomes the outside of another. The reptile design (near left) is more complex, involving three interlocking images that **rotate** as they are **repeated**. The design that features three different creatures (below) is based on **rotation symmetry**. The images **pivot** around the points where all three animals meet and **radiate** out like propellers.

In *Whirlpools* (right), Escher wanted to express the concept of infinity in a single print. A circle of red fish is repeatedly **enlarged** so it appears to emerge from one whirlpool. The fish are then **reduced in size** so they can disappear into the other whirlpool. There they turn into blue fish, and repeat the dizzying cycle over and over again.



“The frogs, bats, and fish in this work symbolize earth, sky, and water.”—M.C. Escher

Symmetry Work 85, 1952. Ink, pencil, watercolor, 12" x 9". Cordon Art. All rights reserved.



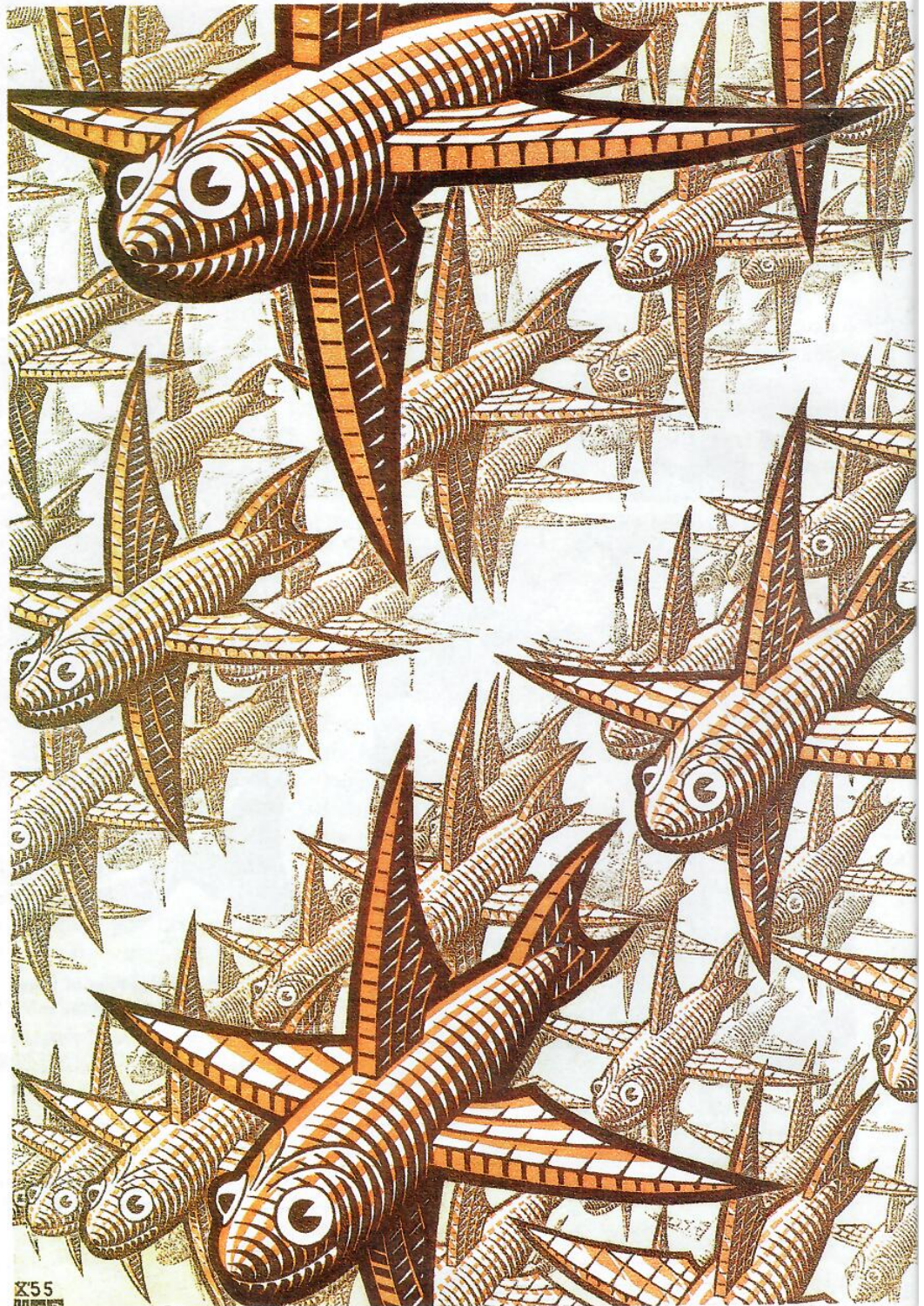
“Red and blue rows of fishes swim head to tail, moving in opposite directions.”—M.C. Escher

M. C. Escher, *Whirlpools*, 1957. Woodcut printed from two blocks, 17 3/4" x 9 1/4". © 2000 Cordon Art, Baarn, the Netherlands. All rights reserved.

IMPOSSIBILI

**"In my prints, I try to express that we live in a beautiful and orderly world, not in the formless chaos it sometimes seems to be."
—M.C. Escher**

Depth, 1955. Wood-engraving printed from three blocks. 12 1/2" x 9" © 2000 Cordon Art, Baarn, the Netherlands. All rights reserved.



THE WORLDS

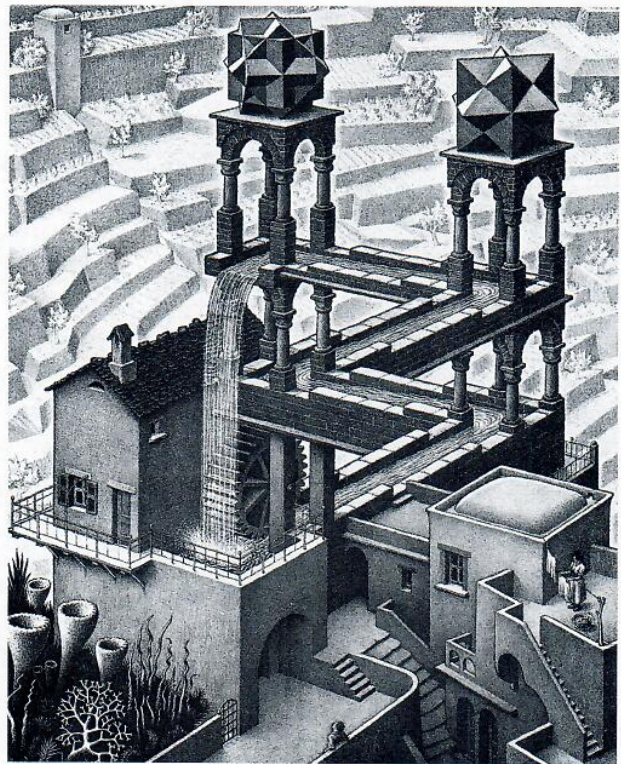
Escher spent much of the 1940s in his studio in Holland. While World War II raged outside, the artist was inside creating images depicting strange, imaginary mindscapes. After the war ended in 1945, Escher's works began to be displayed in science museums, but not art galleries. During the 1950s, his fame slowly began to spread. And the prints he made became more complex and fantastic. **Perspective** is a system for creating the illusion of depth on a flat surface and Escher distorted perspective to construct his impossible worlds. The artist created elaborate vistas with three or four **vanishing points** (the point on the eye-level line where receding lines appear to meet), scenes in which up is

**"TO PORTRAY SOMETHING
THAT DOES NOT EXIST,
ONE HAS TO PRESENT IT IN
A PERFECTLY ORDINARY,
EVERYDAY WAY."**

—M.C. ESCHER

down and left is right, and perspectives that curve in ways that are not physically possible.

Waterfall (top right) is one of Escher's impossible architectural structures that at first seem entirely believable. A stream of water flows along a channel to power a water wheel. The channel is supported by two towers that seem to be the same height—three stories. But how does all this work? How does the water defy gravity and get back up. Or is it really going down in the first place? The carefully drawn details—every stair, each brick, the woman hanging clothes below—make the scene very convincing. It is only when you try to figure out just how this arrangement actually functions that you realize it is impossible. Escher has created an optical illusion. The bottom half of the tower on the right functions as both second and third stories. The channel looks level, but



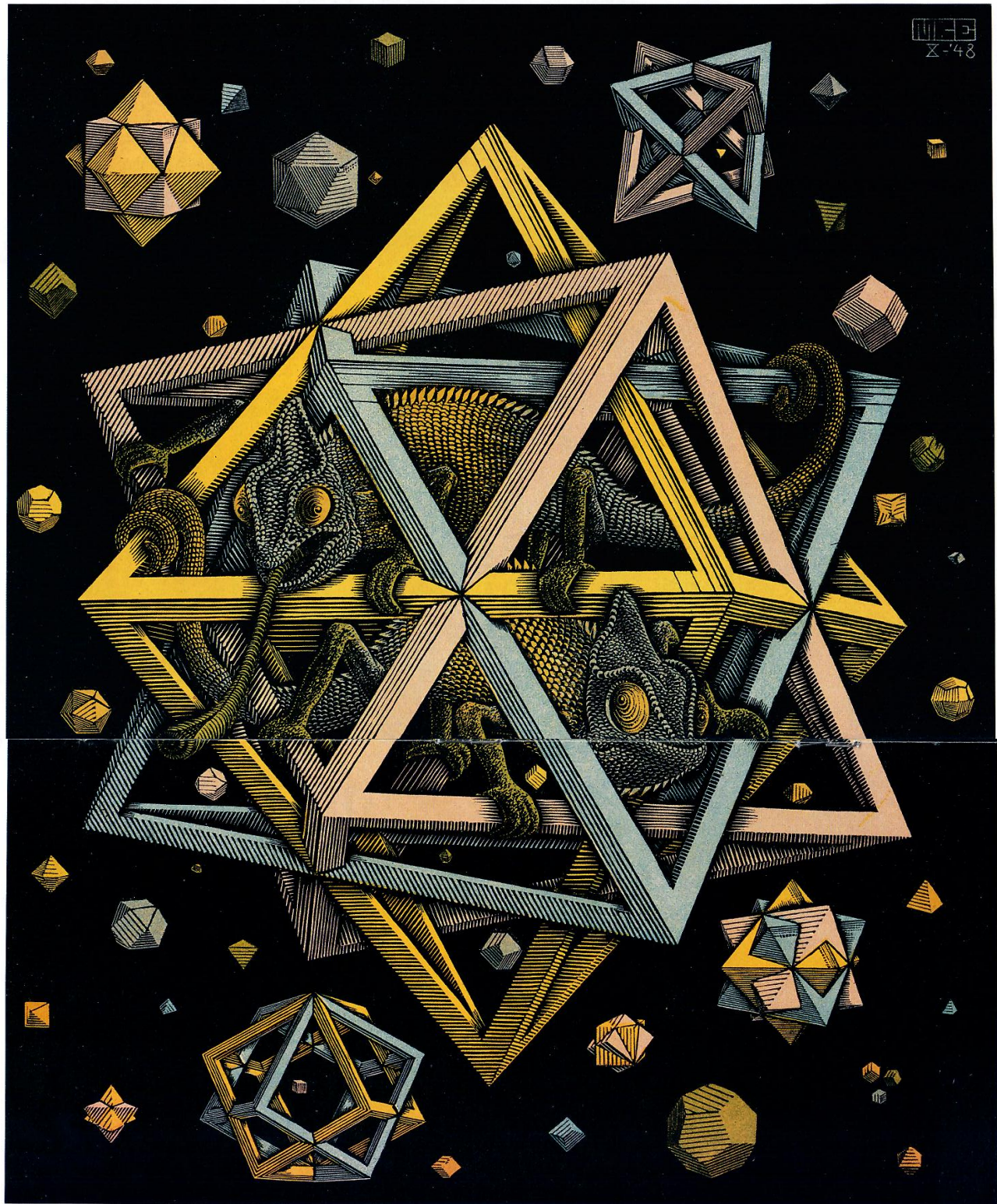
"What splendid buildings our architects could build if only they would be less obedient to gravity!"—M.C. Escher

Waterfall, 1961. Lithograph. 15" x 11 3/4" © 2000. Cordon Art, Baarn, the Netherlands. All rights reserved.

logic says that the water in it must be flowing up.

Depth (left) is a three-color print depicting a science-fiction-like world that could be located under water, in outer space, or even under a microscope. **Diagonal** formations of fish or rocket ship-like animals are gliding toward the viewer. A **rest area** off center creates a **focal point** and breaks up the even **rhythm** of the **regularly repeated** rows of creatures.

Toward the end of his life as his work became famous, Escher's life turned inward. He stayed in his studio, cutting himself off from most people. The artist died in 1972 at the age of 73. M.C. Escher was born more than 100 years ago. Yet his fantastic, obsessively detailed prints are so modern they could have been created using computer technology instead of traditional tools.



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X-48

M.C. Escher (1898-1972). Stars, 1948. Wood-engraving.
12 1/2" x 10 1/4" © 2000. Cordon Art, Baarn, the Netherlands.
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SCHOLASTIC
ART MASTERPIECE
OF THE MONTH #2

STARS

BY M.C. ESCHER

"In this universe, polyhedrons float like stars through the air. Inside the center shape live two chameleons. They add an element of life to this dead world. I chose them because their legs and tails are particularly adapted to grasp the framework as it whirls through space."—M.C. Escher

ART SPOTLIGHT

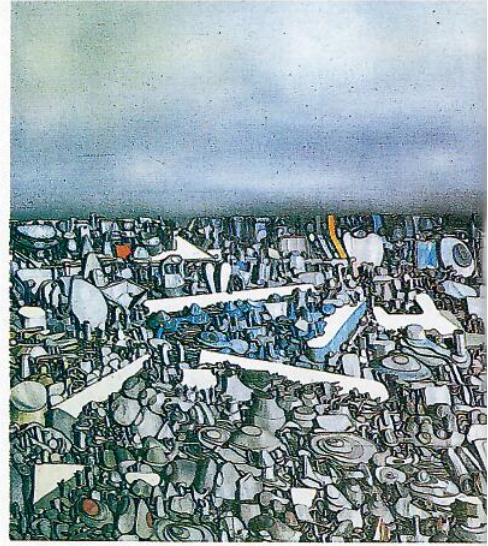
ANOTHER WORLD

Like M.C. Escher, twentieth-century French painter Yves Tanguy (Eve Tan-GEE) created worlds that look real, but are too impossible to actually exist. The landscape in *Multiplication of the Arcs* (right) is fantastic enough to be found only on another planet or solar system.

Tanguy grew up on a section of the French coast that is known for its unusual rock formations. He was one of the *Surrealists*, a group of artists working at the beginning of the 20th century who based their images on memories, feelings, and dreams. In works like this, Tanguy combined recollections, dreams, and fragments of everyday life to create a mysterious, somewhat sinister wasteland. The **horizon line** marks the dramatic contrast between the chaotic landscape and the empty sky above.

This work is based on the **repetition** and **variation** of similar, abstract, **organic** (rounded) shapes. **Modeling** the alienlike forms makes them look three-dimensional. Their **cast shadows** create the illusion of **deep space**. Tanguy, like Escher, uses repetition of similar shapes to create an almost hypnotic feeling as the viewer's eye keeps moving around the work.

Yves Tanguy (1900-1955). *Multiplication of the Arcs*, 1954. Oil on canvas, 40" x 60". The Museum of Modern Art, N.Y., N.Y.

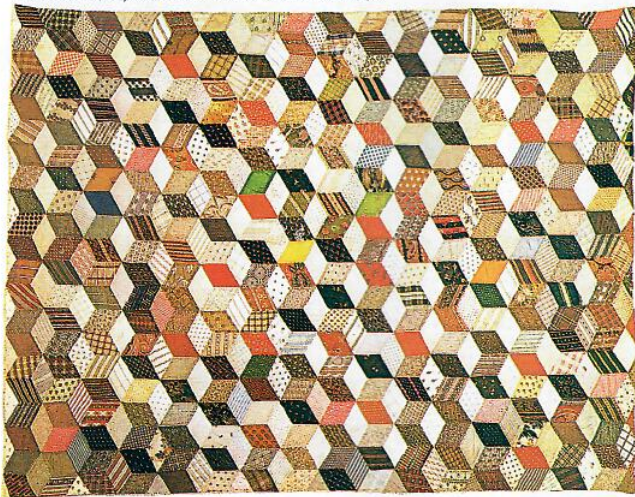


How is this world similar to the one created by M.C. Escher on page 6?

OVER AND OVER A

THREE ARTISTS WHO HAVE REPEATED THE SAME SHAPE
OVER AND OVER TO CREATE EXCITING, MYSTERIOUS WORKS

Patchwork Quilt, c. 1890. 87" x 66". Private Collection.

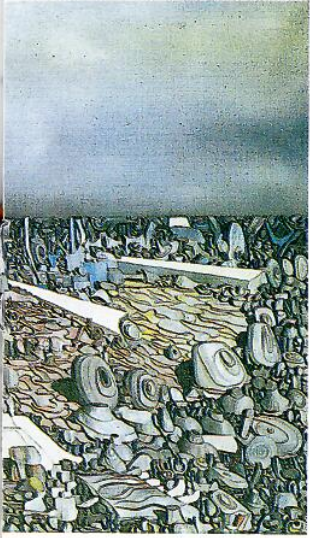


Can you identify the single geometric shape on which this entire work is based?

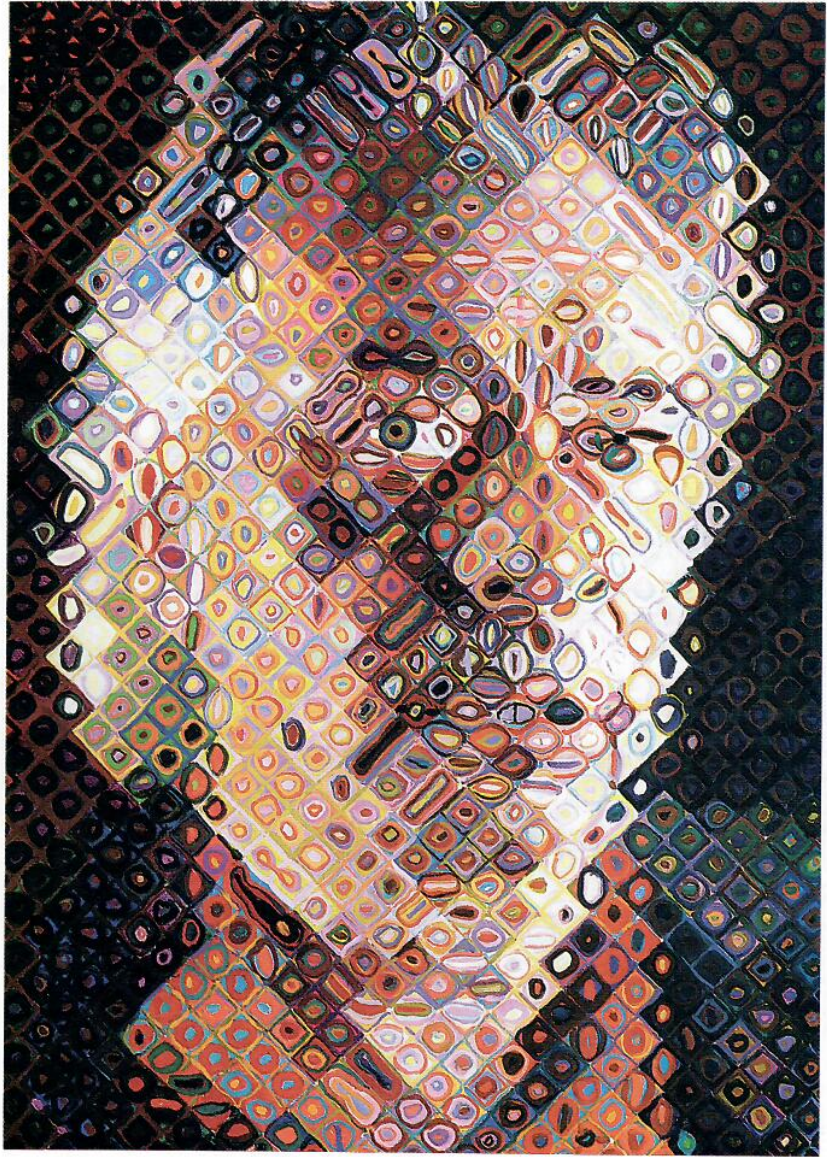
STEP-BY-STEP

Many items that we now regard as works of art were originally created for other purposes. This "patchwork" quilt (left) was made in the 19th century from leftover scraps of cloth. It's hard to imagine today, but at that time everything made of cloth had to be sewn by hand. This design was almost certainly created and put together by a woman or a group of women. The patterns were so complex that one quilt could take years to complete.

Certain designs—like this "stair steps" pattern—were very popular and were used over and over. But every quilt based on this design is different, depending on the kinds of fabrics that were available. The pattern used here creates a three-dimensional, optical illusion. When you stare at them, these blocks or stairs seem to pop out or recede. If you keep your eyes on them, they appear to change places. This sensation is based on the **repetition** of one shape—a diamond—placed edge to edge in different positions. Each **variation** of this shape is in a different fabric. The three-dimensional quality is created by varying the **value**, or lightness and darkness, of each diamond.



Chuck Close (b. 1940). *John II*, 1993. Oil on canvas, 72" x 60". Pace Wildenstein Gallery, N.Y., N.Y.



GAIN

ES OVER AND OF ART

BUILDING A HEAD

Chuck Close is a contemporary American painter who has spent the last 30 years painting nothing but enormous heads. And each of his heads, like *John II* (right) has been done by **repeating** thousands of shapes, each exactly the same size. The heads are so big that when the viewer stands close, the surface looks like a series of blobs. But, from a distance, a large face emerges.

The artist only does "portraits" of people he knows, usually friends and family. He begins by taking a frontal "mug shot" photo of his subject. He then uses a grid to enlarge the image to the size of his canvas, which can sometimes cover an entire wall. Within each of these squares, he creates a small, abstract painting. The size of each painting is the same, but each mark within is different from the one beside it. Close has said, "Some of these marks look like hot dogs, some look like doughnuts, some are

"I BUILD A PAINTING STEP-BY-STEP BY PUTTING LITTLE MARKS TOGETHER, ONE-BY-ONE."

—CHUCK CLOSE

almost square....My paintings are built more like someone would knit than the way someone traditionally paints." Each mark may work as a separate painting, but it is the way in which they all relate to each other that creates the illusion of a face.

ARTIST OF THE MONTH

IVAN GAJIC

DEFYING GRAVITY

The “impossible room” you see on the opposite page was constructed by 15-year-old Ivan Gajic. Currently a freshman at Cranston West High School in Cranston, R.I., Ivan is in an honors art program. Ivan loves creating art because it makes him feel comfortable and relaxed. So he spends most of his free time drawing. He says, “For me, drawing is a fantasy world. I get lost in it and have a lot of fun.”

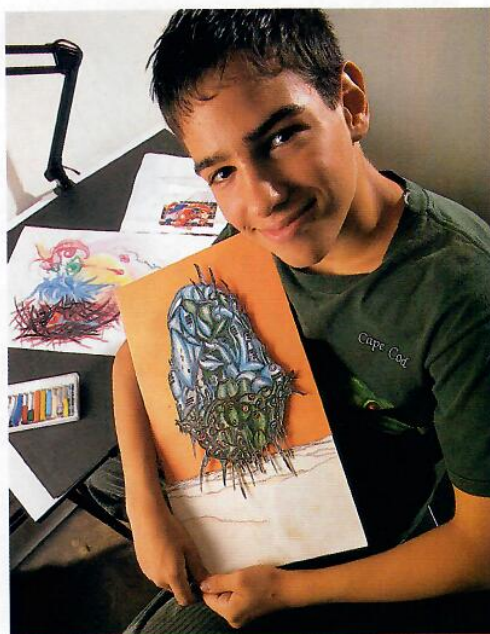
Ivan would like to pursue a career in art, although he says he’s not sure what he wants to focus on yet. “I think I’d like to do something different and creative,” he says, “like working in architecture, or maybe drawing comics or illustrations.”

Where are you from?

I’m from Belgrade, Yugoslavia. I started school here in the first grade and went through fourth grade. Then I went back to Yugoslavia for fifth and sixth grades. Recently, I came back and finished junior high school. I’m going to continue school here.

How did you first become involved with art?

My twin brother, Igor, is a very good artist. Before the age of 6, I didn’t even know I was able to draw. But I knew he could. Even then he was good, and I wanted to be like him. So I just started drawing and figured out how to do it.



“FOR ME, DRAWING IS A FANTASY WORLD. I GET LOST IN IT AND HAVE A LOT OF FUN.”

How did you come to create this award-winning piece?

It was originally a school assignment. Our teacher wanted us to draw an impossible room, one that defied the laws of physics—with tables on the ceiling, doors on the floor, stuff like that. The assignment was two-dimensional, but I decided to make my solution three-dimensional.

How did you come up with the idea for your drawing?

I knew I wanted to include a train, so I drew an engine coming out of the center of the picture. Then I drew a person painting on one of the walls. I wanted to make the picture look weird and unpredictable, so I combined the train and a painted landscape. After that, I added spilled paint on the floor and put a reflection in it. I also put in windows and people and a table on the ceiling.

Does this work have a title?

I called it *Green Light Express*. My teacher helped me out with the name, which I thought was perfect. It expressed the feeling of the way I wanted the picture to come out: full of dynamism.

How did you create your piece?

First I drew a room with a back wall, a floor, and a ceiling. But I drew the lines at an angle so it looks like you’re zooming in on the back wall. Then I drew the train coming out of the back wall. Next I drew a

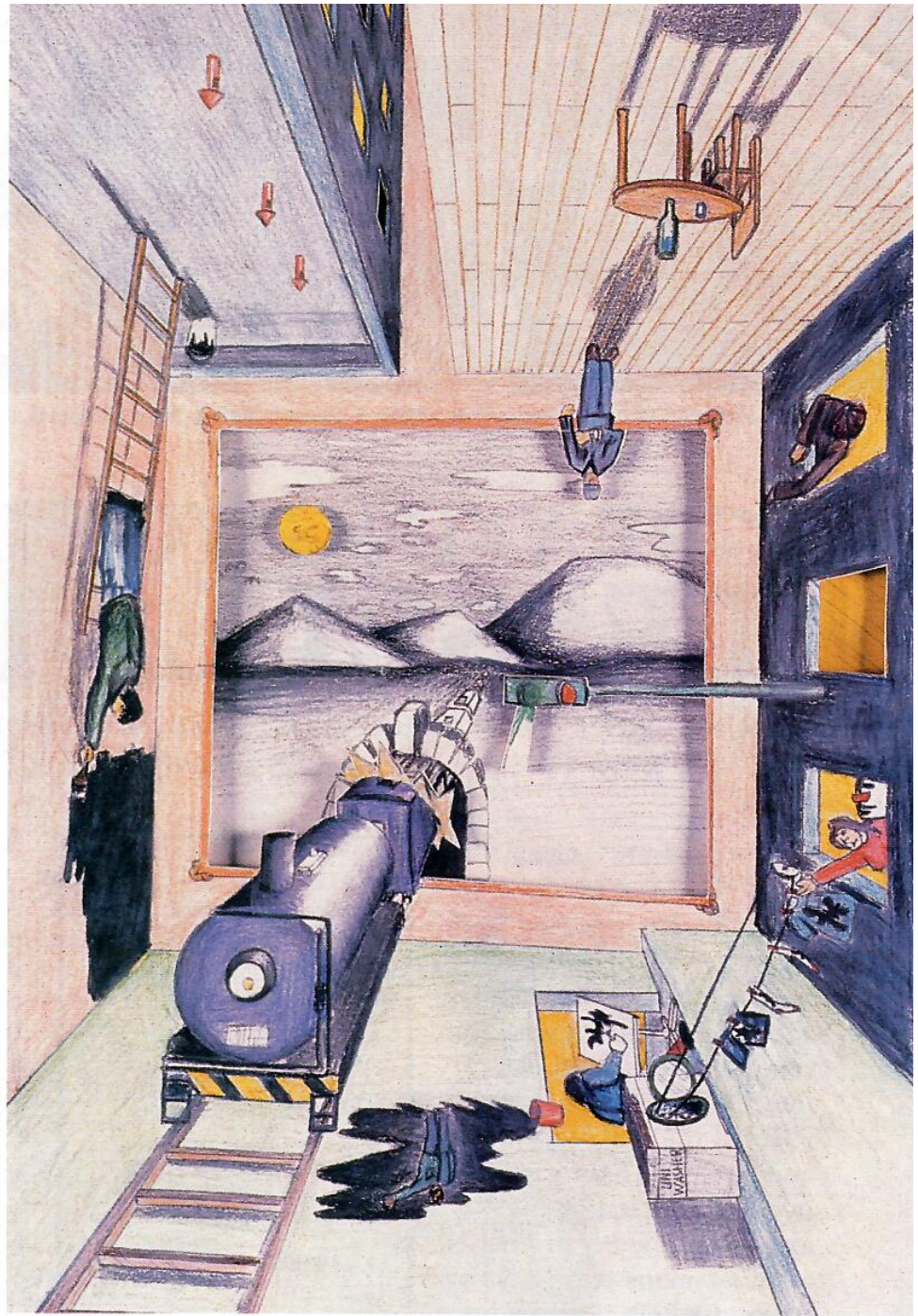
person on a ladder painting a wall, and I put a painted scene with a moon in the sky behind the train. A conductor is on the ceiling next to a table with an upside-down bottle. The bucket with spilled water beside the tracks provides a reflection of the conductor. On one side of the conductor is a building roof with windows. The opposing wall becomes the side of another building, to which I added three windows. The man in the top window stands on a floor that is on the same plane as the back wall. The ceiling of the woman hanging laundry is also on the same plane as the back wall. The other end of the clothesline is in a washing machine. And the painter next to the washing machine—that's me. I thought it would be fun to include myself in here.

What did you do to create a three-dimensional effect?

I tried to emphasize length, width, and depth by using lines, shading, and color. Most of the lines "zoom" in to the back wall. The shadows created by the moon give a sense of space. Finally, I used colored pencils to make everything look real. I used blue to tie the picture together and different shades of yellow for contrast and depth. I cut parts of the picture out, such as the moon and signal light. I put cardboard behind them so they would stick out, then glued them back in so they'd add to the three-dimensional effect.

Were you happy with your work when it was done?

Originally, I wanted to create some contrast to emphasize the wall with the woman hanging laundry. But now I wish I'd made the dark blue a little lighter. Otherwise, I was satisfied. I didn't want the picture to focus on people, but on the idea of the impossible room. So I drew the people small. I didn't want you to



be able to see their expressions. They're stylized and simple. I wanted the viewer to focus on the big picture.

Do you have tips for aspiring artists like yourself?

Have fun with your art. And if you really want to become an artist, make sure you make the time to create art. The more you draw the better you get. And don't be afraid to look at other art works for ideas. Doing that gets me to think about things I could do. Try to develop your own style. An artist should express his or her own feelings. Not someone else's.

Photo © 2000 David



Tessellations by: (left to right) Tyler J. Britt; Heather A. Moulton; Justin D. Boyles; Atalece M. Claussen; Adam J. Kistler; Anthony J. Wright .

CREATING YOUR OWN TESSELLATION

"I JUST CAN'T STOP CREATING THESE KINDS OF FORMS THAT SEEM TO REPEAT THEMSELVES SO ENDLESSLY." —M.C. ESCHER

The strange visual world of M. C. Escher was first born when he saw the tile patterns created to decorate an ancient castle in Spain. The repeating designs of flat, interlocking shapes, which covered the building's walls and floors without gaps or overlaps, fascinated the artist. And he began to create his famous tessellations, some of which you saw on pages 4-5.

In this workshop, you'll create a colorful tessellation of your own. Incorporating brightly colored fabrics will enhance the visual power of your design.

MATERIALS

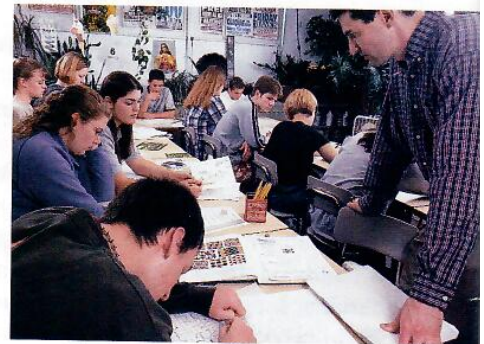
- No. 2 School pencil
- Vinyl eraser
- 1" or 1/2" grid paper
- Scrap white-sulfite drawing paper
- 9" x 12" tracing paper
- 18" x 24" oak-tag paper
- 12" ruler
- Sharp scissors
- Compass
- French curve
- Protractor
- Variety of fabric pieces
- Colored foil paper
- Elmer's Glue-All
- Masking tape
- Iron/ironing surface
- Copy machine that enlarges (optional)

STEP 1

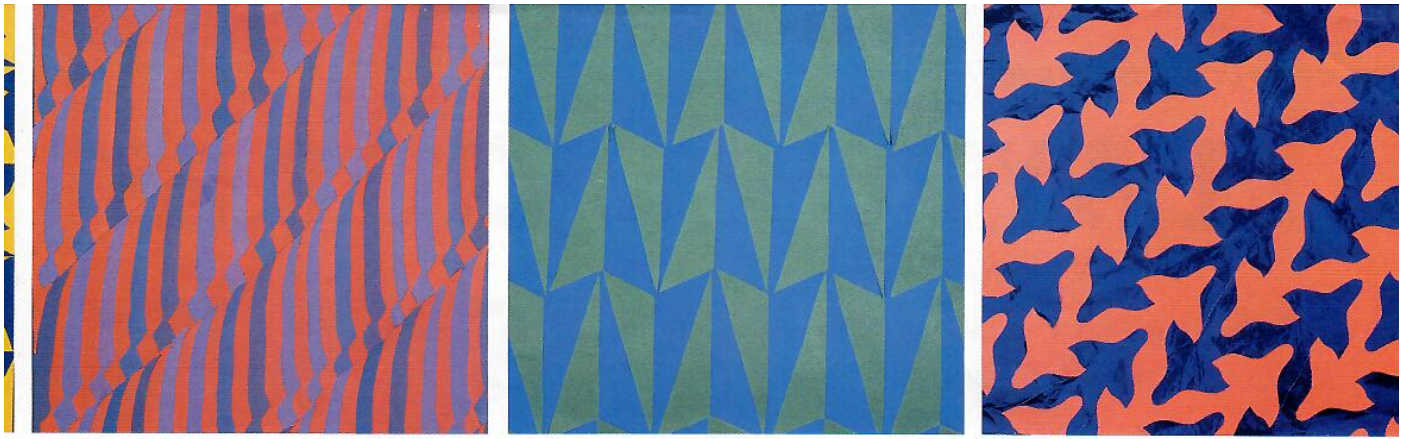
Two weeks before starting this project, begin bringing in brightly colored discarded, washed fabrics—shirts, ties, dresses, etc. Sort fabrics according to color and pattern. Cut in flat pieces, removing zippers, buttons, hems, and fold. Look again at Escher's tessellation designs on pages 4-5, noting the ways in which his figures **repeat** and **interlock**.

STEP 2

On grid paper, develop two **organic** and two **geometric** tessellations. Remember, only certain geometric



Prepared by Ned J. Nesti Jr. and Stuart P. Roddy, art instructors, Morrison (IL) Junior High School and Morrison High School. Assisted by Nicholas R. Bonneur and Amanda D. Olson, Northern Illinois University, DeKalb, IL. Photos by Larry Gregory.



STEP 3

When you have developed four visually pleasing units which tessellate, use tracing paper to create repeat patterns. You can use a copy machine to enlarge single units, but they must be measured and drawn with exact mathematical precision. Minor errors

become very obvious when enlarged. Pick the strongest tessellation composition and make an accurate template from oak-tag paper. Trace composition on fabric or paper. Use basic math to determine dimensions of composition. The amount of space the pattern occupies will be determined by size of unit and the number of times unit is repeated. Try to limit overall dimensions to 14" x 14".

Lightly draw composition dimensions, centered, on oak-tag paper. Divide paper into a grid based on unit size in order to accurately place textile pieces.

STEP 4

Go through fabric, velour paper, and colored foil to select possible material, keeping in mind **color, contrast, movement, focal**

points. Limit colors/patterns to unify composition. Place fabrics next to each other before cutting. Before tracing, iron fabric to flatten. Use a cool iron (permanent press) to avoid scorching/melting. Use pencil, white pencil, or thin ink marker to trace around unit template onto fabric. (Reverse template so lines will not be visible.) Cut fabric pieces with sharp scissors, placing pieces together to see if they fit edge to edge. Glue fabric, using pinpoint dots to prevent buckling.

SOME SOLUTIONS

Which of the artists who did the tessellations above have used **geometric shapes**, which **organic shapes**, which have combined both? Who has chosen to make a repeat pattern, using **squares**; who has used **parallelograms**? Which artist has taken a

shapes—squares, rectangles, equilateral triangles, hexagons, and diamonds—will tessellate. Organic forms are more difficult to work with. They must be **simplified** and **stylized** before you can tessellate them.

Decide which basic unit you will work with and begin to design **interlocking shapes** to fit within this unit. Another way to get shapes to interlock is to cut a smaller shape from one side of the basic unit. Then slide that smaller shape to the other side of the unit and attach it. That way you have a **positive shape** on the side of one unit that fits into the **negative space** on the other side of the next unit.

You can vary your designs by **rotation, reversal**, using **mirror images**, or **inversion**—turning repeated images upside down. Remember, every unit must be identical (same size and shape) and join edge to edge with no background space. Shapes should interlock, puzzlelike. Some patterns will suggest movement.



square, cut pieces from it, and attached the pieces to the adjoining square to create an interlocking, repeat pattern? Who has used **mirror images**; alternated **positive/negative shapes**; used the **inside** of one shape to form the **outside** of the next? Did any artists use **rotation symmetry** or **scale changes**?

PLAYFUL FIGURES

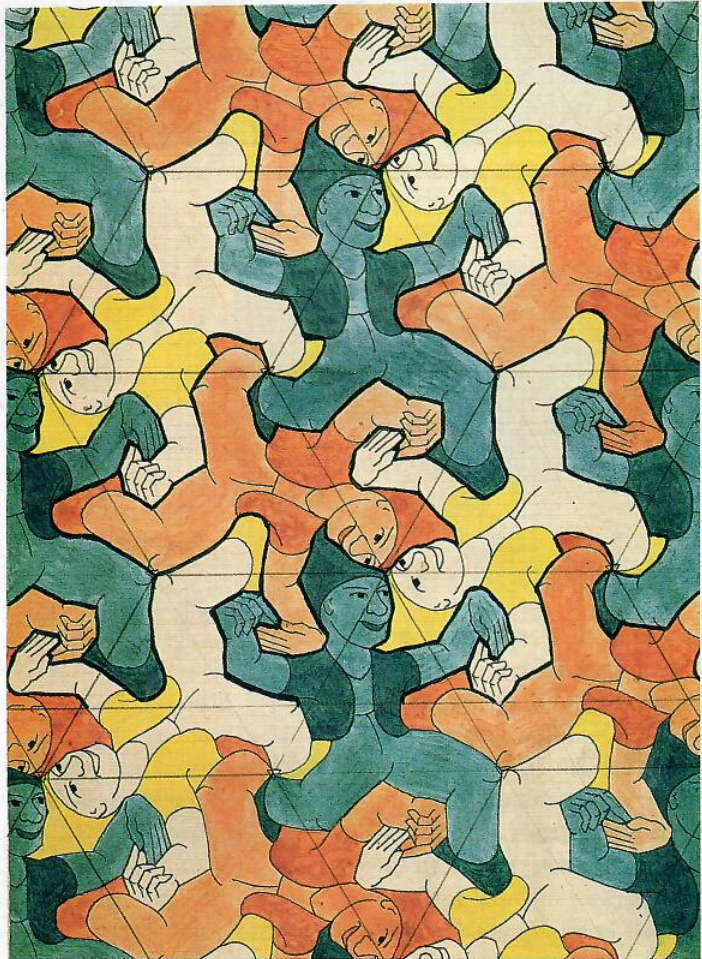
"I DON'T GROW UP. IN ME IS THE SMALL CHILD OF MY EARLY DAYS."

— M.C. ESCHER

At the end of his life, M. C. Escher was asked how he had been able to create the fantastic images for which he had become famous. The artist, referring to the work on the right, replied that many of his visions came from childhood memories.

This colorful design contains many of the techniques and concepts used by Escher to construct his unique repeat patterns. Can you identify them?

Some of the phrases below describe, apply to, or can be found somewhere in this work. Some phrases do not apply. Mark T if the phrase applies; F if it doesn't. (Hint: half the phrases are true, half of them are false.)



M.C. Escher, *Symmetry Work 21*, 1938. Watercolor. 13" x 9 1/2" © 2000 Cordon Art, All rights reserved.

- | | |
|---|---|
| 1. <input type="checkbox"/> T <input type="checkbox"/> F Hexagons | 17. <input type="checkbox"/> T <input type="checkbox"/> F Squares |
| 2. <input type="checkbox"/> T <input type="checkbox"/> F Identical shapes | 18. <input type="checkbox"/> T <input type="checkbox"/> F Diagonal movement |
| 3. <input type="checkbox"/> T <input type="checkbox"/> F Extreme close-ups | 19. <input type="checkbox"/> T <input type="checkbox"/> F Rectangles |
| 4. <input type="checkbox"/> T <input type="checkbox"/> F Eerie reflections | 20. <input type="checkbox"/> T <input type="checkbox"/> F Diamonds |
| 5. <input type="checkbox"/> T <input type="checkbox"/> F Equilateral triangles | 21. <input type="checkbox"/> T <input type="checkbox"/> F Vanishing points |
| 6. <input type="checkbox"/> T <input type="checkbox"/> F Flat shapes | 22. <input type="checkbox"/> T <input type="checkbox"/> F Gaps between shapes |
| 7. <input type="checkbox"/> T <input type="checkbox"/> F Interlocking shapes | 23. <input type="checkbox"/> T <input type="checkbox"/> F Simplified shapes |
| 8. <input type="checkbox"/> T <input type="checkbox"/> F Organic shapes | 24. <input type="checkbox"/> T <input type="checkbox"/> F Unusual angles |
| 9. <input type="checkbox"/> T <input type="checkbox"/> F Scale changes | 25. <input type="checkbox"/> T <input type="checkbox"/> F Positive/negative shapes |
| 10. <input type="checkbox"/> T <input type="checkbox"/> F Polyhedrons | 26. <input type="checkbox"/> T <input type="checkbox"/> F Geometric shapes |
| 11. <input type="checkbox"/> T <input type="checkbox"/> F Perspective | 27. <input type="checkbox"/> T <input type="checkbox"/> F Reversed shapes |
| 12. <input type="checkbox"/> T <input type="checkbox"/> F Mirror images | 28. <input type="checkbox"/> T <input type="checkbox"/> F Jigsaw puzzle-like shapes |
| 13. <input type="checkbox"/> T <input type="checkbox"/> F Parallelograms | 29. <input type="checkbox"/> T <input type="checkbox"/> F Overlapping shapes |
| 14. <input type="checkbox"/> T <input type="checkbox"/> F Inside edge is outside edge | 30. <input type="checkbox"/> T <input type="checkbox"/> F Rotation symmetry |
| 15. <input type="checkbox"/> T <input type="checkbox"/> F Trapezoids | 31. <input type="checkbox"/> T <input type="checkbox"/> F Tessellation |
| 16. <input type="checkbox"/> T <input type="checkbox"/> F Eye-level line | 32. <input type="checkbox"/> T <input type="checkbox"/> F Stylized shapes |