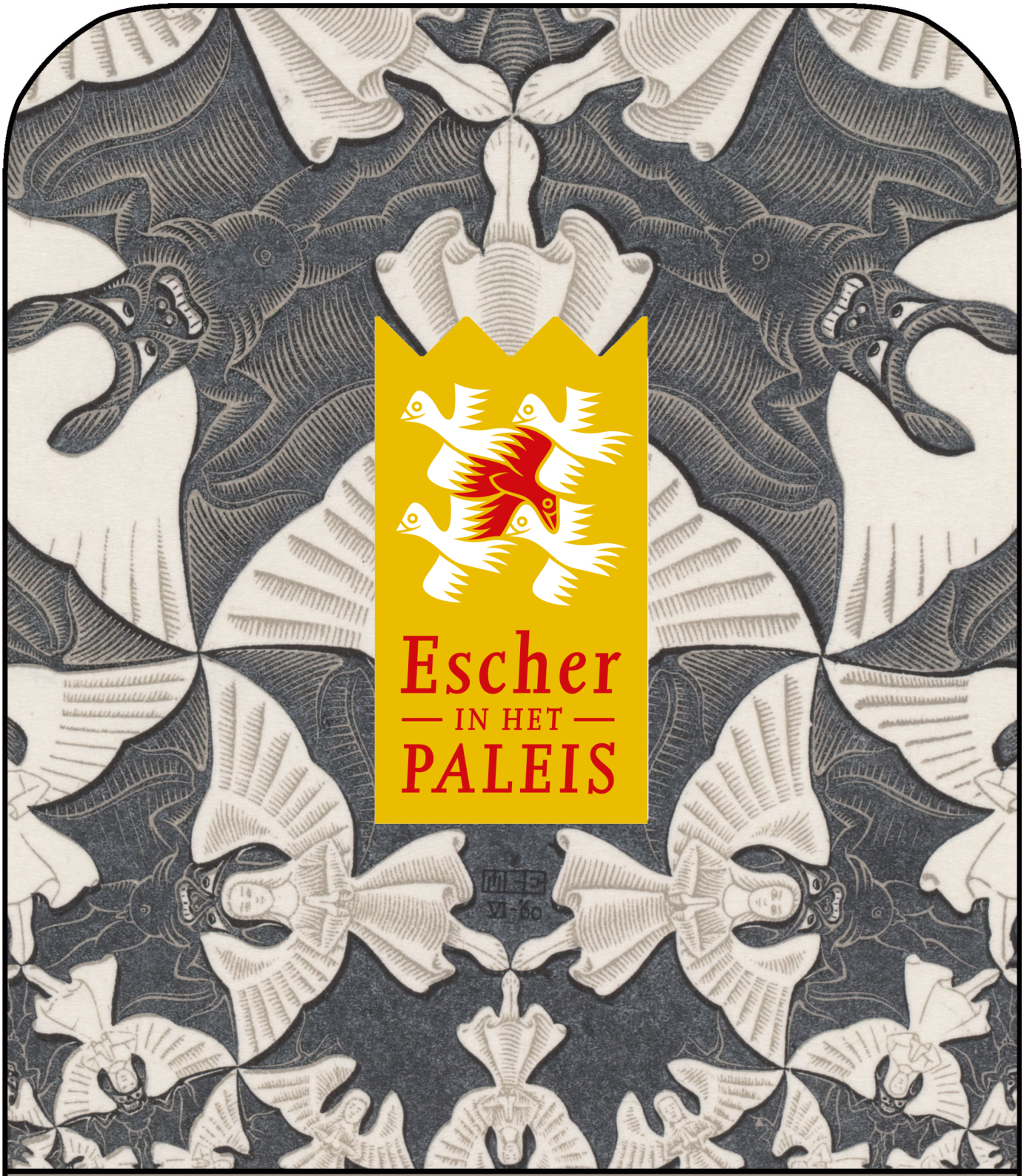

M.C. Escher, Circle Limit IV (Heaven and Hell), woodcut, 1960 (detail)

The infinite world of M.C. Escher

Teachers' handbook • Secondary schools

Dear teacher,

It’s not long now until your visit to Escher in The Palace for the museum lesson *The infinite world of M.C. Escher*.

This lesson is intended for all year groups in secondary schools. This handbook contains the museum lesson description, core objectives, lesson objectives and practical information. You will also find some tips enabling you to put together your own lesson in preparation for your visit to the museum.

We look forward to welcoming you!

Enjoy!

Escher in The Palace

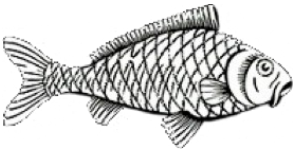

Photo: Gerrit Schreurs

Lange Voorhout 74 - 2514 EH Den Haag
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Encounter with art

Amazement is a key aspect of M.C. Escher's work and of this museum lesson too. Escher was a master at making things seem right yet always prove to be rather different on closer inspection. The museum teaching staff will teach pupils how to 'explore' an artwork. How? By learning to pay close attention to detail and to be amazed. Just like Escher. We'll then get them to connect by encouraging them to discuss the work as a group. What do you see? What does it represent? What does it evoke in you? How did he create it? The lesson will broaden the pupils' perspective on art and thus on the world around them.

Museum lesson description

Escher is one of the world's most famous artist. In his work, he plays with perspective, space, mathematics and reality. Nothing is what it seems in his remarkable prints. His linoleum cuts, woodcuts, wood engravings, lithographs and drawings are on display at Escher in The Palace, the former winter palace of Queen Emma, the Queen Mother on Lange Voorhout. With in excess of one hundred and twenty prints, the most famous works and a selection of ever-changing art and tessellations from the oeuvre of Maurits Cornelis Escher (1898-1972) are always on display here.

The museum lesson entails the pupils viewing the exhibition with a member of the museum's teaching staff. They will look at and discuss famous prints such as *Reptiles*, *Drawing Hands*, *Waterfall* and *Ascending and Descending*. They will discover how Escher produced his prints and how he saw the world around him. Afterwards the pupils will set to work on creating their own tessellation in the studio.

Topics covered during the museum lesson include: art, printmaking, geometric figures, perspective, two-dimensionality and three-dimensionality, optical illusions, tessellation, metamorphosis and infinity.

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T: 070-4277730 E: info@escherinhetpaleis.nl

For the teacher

Lesson objectives

- The pupils get to know (or rediscover) the work of M.C. Escher and the former palace of Queen Emma
- The pupils learn that artists help us to see our everyday world afresh
- The pupils learn about printmaking
- The pupils learn about the use of perspective, composition, space and reflection in the work of M.C. Escher
- The pupils learn what optical illusions, tessellations and metamorphoses are
- The pupils learn the difference between two-dimensionality and three-dimensionality and how to verbalise this
- The pupils learn how to draw their own tessellation on paper
- The pupils learn to reflect on their own working process
- The pupils learn that free, associative, creative thinking can lead to new solutions

Core objectives

The lesson ties in with the field of 'Art and culture' and the core objectives of the SLO

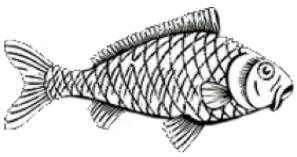
48 producing art

50 learning to look at art

51 reporting experiences

52 reflecting on artistic work

The lesson ties in with the subjects art, CKV (culture and art studies) and maths.



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Practical information

We kindly request that you discuss the museum's house rules with your supervisors and pupils prior to visiting the museum. In that regard, we expect your school's teaching staff and supervisors to play an active role in ensuring compliance with the house rules.

House rules

- The artworks are to be looked at and should not be touched unless otherwise indicated.
- The palace is a listed building, so please refrain from leaning against walls and windows.
- Eating and drinking is not permitted in the museum beyond the museum café.
- Please be considerate towards other museum visitors, i.e. do not talk too loud and walk calmly.
- In the museum, you may take photos without flash. Use of a stand/tripod or selfie stick is not permitted.

M.C. Escher, Path of Life I, woodcut, 1958

- Umbrellas and bags larger than A4 size are not permitted in the rooms. These can be stored in our free lockers during the visit. A lockable roll container will be available for the pupils' bags.

General Information

- The museum opens to regular visitors at 11:00. School groups are also welcome prior to opening time.
- 1 supervisor from the school is required for every 18 pupils. Classes over 18 pupils will be divided into two groups and allocated to 2 museum teaching staff.
- It is important that you arrive on time. In most cases, we have another class after your class, which means there is very little leeway in terms of time.
- Coats can be stored in the cloakroom. Bags can go in a lockable roll container. The museum teaching staff member will assist you with this.
- The museum lesson will be held in the permanent exhibition on the ground floor and first floor.
- Escher in The Palace is located at Lange Voorhout 74, The Hague.
  Your class will be welcomed by a member of the museum's teaching staff at the entrance. If your session is before opening time, then the member of the museum's teaching staff will open the door for you just before the lesson is due to commence. Unfortunately, we cannot let school groups in well before the lesson commences. Our apologies for any inconvenience this may cause.
- If you have any questions or would like to arrange a bespoke programme, please feel free to get in touch with our Head of Education, Monique Veldhoven: mveldhoven@escherinhetpaleis.nl

Lesson suggestions

For the teacher

The tips below will enable you to put together a lesson of your own as preparation for or a recap of your visit to the museum.

Children's book on M.C. Escher

Escher: Tovenaar op papier, Bruno Ernst
An accessible art book in which the wonderful world of M.C. Escher is unravelled and explained.

ISBN90 400 9281 8

M.C. Escher, Self portrait, lithograph, 1929

Website

The 'Escher Today' section features background stories and anecdotes on the life and work of M.C. Escher.

www.escherinhetpaleis.nl

Visual handbook

A visual handbook is available, containing photos and concise texts that will give pupils a good idea of what the museum looks like and what a museum lesson is.

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For the pupil

Keen to learn all about M.C. Escher?
Watch this video from Kunstmuseum Den Haag: video

How do you make a lithograph? Artist Sarai de Haan gives a concise explanation on behalf of the Van Gogh Museum: video
Artist Hanna de Haan shows how you can create a lithograph at home: video

How do you make a woodcut? Artist Sarai de Haan gives a concise explanation on behalf of the Van Gogh Museum: video

To do: discover the Metamorphosis Machine

What actually is a metamorphosis? Find out in this short video and create one of your own!

https://escher.ntr.nl/nl/mmm

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To read: about the printmaker M.C. Escher

Maurits Cornelis Escher (family and friends called him Mauk) was born in Leeuwarden in 1898. At the age of 5, he moved to Arnhem with his parents and two older brothers. From a young age, he loved drawing. .

Maurits Cornelis Escher at 13

Escher's love of art ran in the family. His parents took him on trips to museums, churches and concerts. He also had music lessons and read many books. At school, he had drawing lessons and practised a variety of drawing methods. But apart from that, he didn't really enjoy school.

When Escher reached 21, his father wanted him to study architecture at the School of Architecture and Decorative Arts in Haarlem. But it didn't quite pan out that way.

One of the teachers was a famous artist: Samuel Jessurun de Mesquita. Escher showed him his drawings and a linoleum cut.

De Mesquita thought they were so good that he advised him to join his class for drawing lessons. Escher's parents eventually relented and his graphic art training could begin. Escher travelled extensively, especially to Spain, France and Italy. He also lived in Italy, Switzerland and Belgium for several years.

Escher is now famous, but that wasn't always the case. Before the age of fifty, he sold only occasional prints . Fortunately, his parents supported him financially, allowing him to keep working. He subsequently achieved real fame and sold an awful lot of artworks.

Escher passed away in 1972 in Hilversum at the age of 73.

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Regular division drawing with birds and fishes, pencil on paper, 1938

To read: inspiration

Nature was a source of inspiration to Escher. He loved birds, reptiles and insects even as a child. He never lost that love, and animals frequently feature in his work too. Escher went for walks in the woods, taking a magnifying glass with him to learn how to draw the insects as accurately as possible. It enabled him to look at an anthill in detail, for instance.

On a trip to Spain, Escher was inspired by the tiled floors and walls of the Alhambra, a mediaeval palace and fortress in the city of Granada. The tiles are bursting with colours and shapes that are continuously repeated. He made some extremely precise drawings of some of the tile patterns. Escher also used repetitions in his artworks, though these differ considerably from the Alhambra's tile patterns. He worked with recognisable shapes, such as fish, birds, reptiles or people.

Bone egg spoon, used by M.C. Escher

To read: graphic art and technique

Escher produced prints rather than paintings. He wasn't a painter but a printmaker. He would start by making drawings of his ideas. If these were to his satisfaction, he would transfer the drawing onto, for example, a wooden plank. He used a plank of an apple or pear tree, because with a little practice you can easily cut this wood and the grain is scarcely visible on the prints.

Escher looked at what should become black and white in his print. He used special chisels, called gouges, to cut out everything that needed to be white from the wood. He then used a roller to apply ink to the plank and pressed it onto a sheet of paper. Because all the pieces he cut away were so deep, no ink ended up on them. Only the wood that hadn't been cut away had ink on it and ended up in the print. This technique is called the woodcut technique. Most artists who create woodcuts use a press for the printing process. Escher took a different approach. His process involved rubbing the convex side of an egg spoon on the reverse side of the paper. This enabled him to produce the print exactly the way he wanted.

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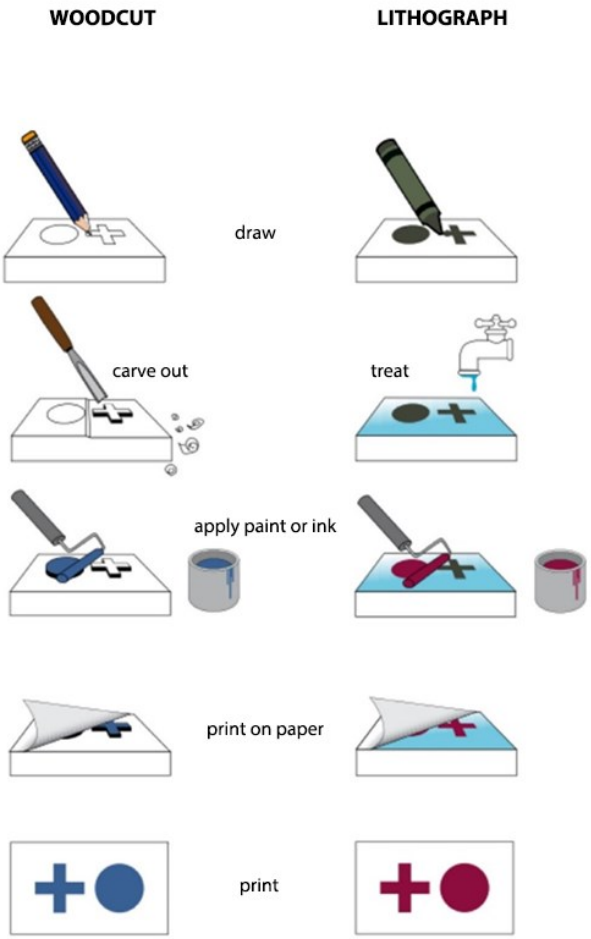
For the pupil

To read: on the technique underlying Escher's prints

Linoleum cuts and woodcuts

These graphic art techniques are also referred to as relief printing. In the case of linoleum cuts and woodcuts, ink is applied to the raised parts of the wooden plank or linoleum sheet. Only the parts that are in relief (i.e. that project from the surface) get printed — hence the name. Cutting or gouging is necessary to create the parts that won't end up with any ink on them. The artist has to bear in mind when creating the design that the print on paper will be a mirror image of the design.

The process of creating a woodcut and a lithograph is shown here alongside the text.



Lithography

This graphic art technique is also known as stone printing and is a form of planography. Nothing is removed from the stone, which remains flat. The process of making lithographs involves an artist drawing on a stone with a pen containing special greasy ink or with **lithographic chalk**. Next, the stone is moistened. The parts without lines absorb the moisture, making them **ink-repellent**.

The parts with lines drawn onto them are **water-repellent**. After a few chemical treatments that ensure the drawing adheres to the stone properly, ink is rolled onto the stone. The ink adheres only to the lines drawn. Then a sheet of paper is placed on the stone under a press. It takes a lot of time and experience to get good at printing lithographs. That is why Escher didn't do it himself, instead having his lithographs printed at a special printing firm.

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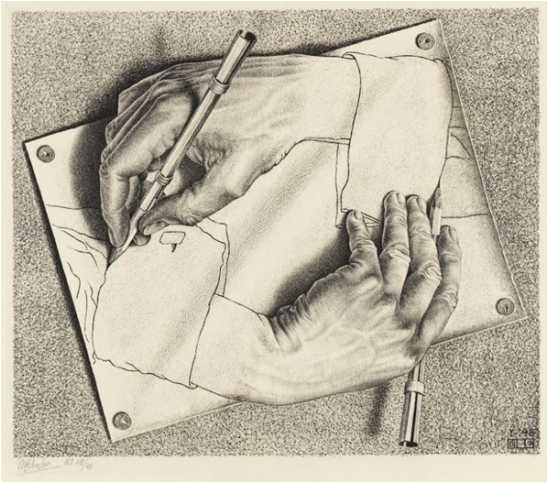
For the pupil



M.C. Escher, Drawing Hands, lithograph, 1948

Drawing is an illusion. As a matter of fact, it tricks the eye. You're looking at lines on a flat piece of paper, yet the drawing appears to have depth. You see a landscape, a room, a sphere, etc. The image seems very real, but it's flat. This is called an optical illusion. Amazement is actually what Escher was aiming at with his prints. He wanted to leave you feeling amazed about things you see and things that you might see.

We see many things very differently than they really are.

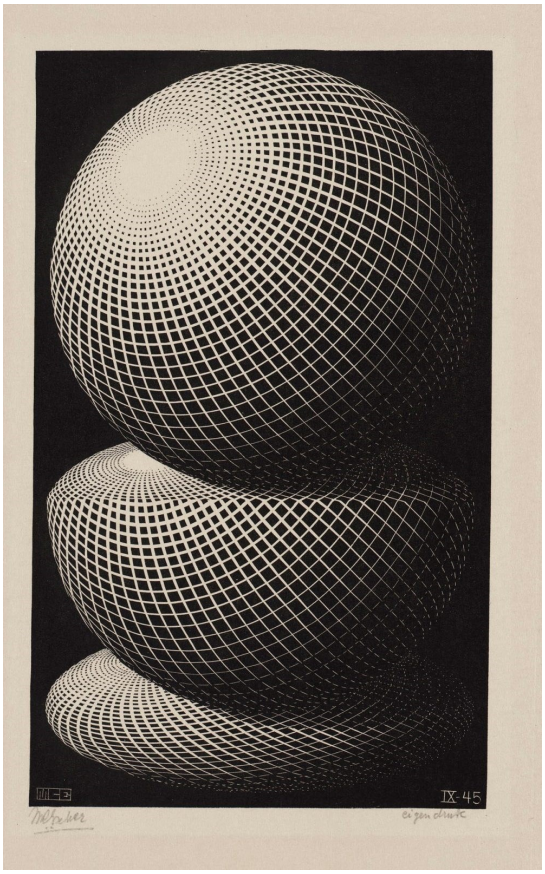
For example, if you're looking down from a high-rise flat at cars below on the road, you'll be aware that they're real cars, even though what you're seeing is effectively tiny toy cars.

There's a lot of 'mental gymnastics' going on for our brains to come up with the right interpretation. We usually don't pay close attention because we reckon that we've got everything figured out. That we already know what we see.

Escher was extremely good at looking at things and was keen to show us that the things around us, the things we see, can be quite wonderful. Take a look: what's strange about the print *Drawing Hands*?

Looking at his prints gives you an idea of how he saw the world.

One example familiar to everyone is the spoon in a glass of water. If you look at the spoon from the side of the glass, it actually looks quite strange. And yet you know that it's a perfectly normal spoon that only looks different because of the curved glass.



M.C. Escher, Three Spheres I, wood engraving, 1945

Can you think of an example yourself of something that's different to how it looks (or looks different to how it is)? Something that you've seen with your own eyes.

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For the pupil

To read: what is the real world?

Escher produced several prints that make it hard for us to figure out what's real. It seems like it couldn't possibly be real and yet it *is* possible, as the print next to the text shows. No matter how you try, you can't make head nor tail of it. Sometimes the figures in Escher's wonderful world walk up a staircase, only to run into a wall that's the floor of 'another world'. On closer inspection, they all turn out to be different worlds that Escher has combined. And so he gives us the illusion of a world that couldn't exist in reality.

Look first at the print *Relativity* and then at the photo alongside the text and you'll see that they show the same building. This photo was taken in what was Escher's secondary school in Arnhem. He was so bored there that he let his imagination run wild while looking at the staircases in the building. In his imagination, the stairs all went in different directions.

M.C. Escher, Relativitity, woodcut, 1953

Photo: Gerrit Schreurs

To do: test your knowledge!

Prior to or after your visit to the museum you can pair up with a classmate and test what you've learned using your own Escher quiz.

1. Both make up some questions on M.C. Escher.

2. Write the questions on the front side of a Post-it note or blank piece of card.

3. Draw a simple Escher-style shape (sphere, square, star, bird, fish, etc.)

4. On the back of the cards write the answer and draw another simple Escher-style shape.

5. The Post-its can be stuck on a table or a wall.

6. Your quiz is ready! Who is the biggest art expert?

This is an old-school and offline solution. You can also team up with your teacher and use a quiz program like Kahoot online.

Possible quiz questions include:

- Who was M. C. Escher?
- Is Escher from the Netherlands?
- What kind of animals commonly feature in Escher's work?
- What fascinated Escher? Mention 2 topics.
- What is a tessellation?
- What kind of work does a printmaker do?
- Are a painting and a woodcut the same thing?
- Do you think Escher did everything by hand or did he use a computer?
- What is it about Escher's work that appeals to you (or puts you off it)?
- Would you say Escher is an artist or more of a mathematician? Why?
- What is the link between Escher and infinity?

Add some questions of your own ….

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