Leonardo da Vinci, Renaissance Man

Content objectives - Students are expected to:

- Recognize Leonardo´s paintings and sketches among the work of the other artists

- Identify areas of Leonardo work and give examples of his work (painter, inventor). Explain how Leonardo connected these two areas in his work.

- Explain why he is considered to be genius.

- Identify three interesting points for each of these five areas: Leonardo´s perspective, Leonardo inventor, Mona Lisa, Last Supper and from sketches to painting

Language objective - Students are expected to:

- Name 4 Leonardo´s paintings in English and write them

- Master key words: (sketch, drawing, renaissance, middle age, craft, lifelike, observation, light and shade, portrait, feature, expression, mural painting, crucifixion,Holy Trinity, restoration, draftsman)

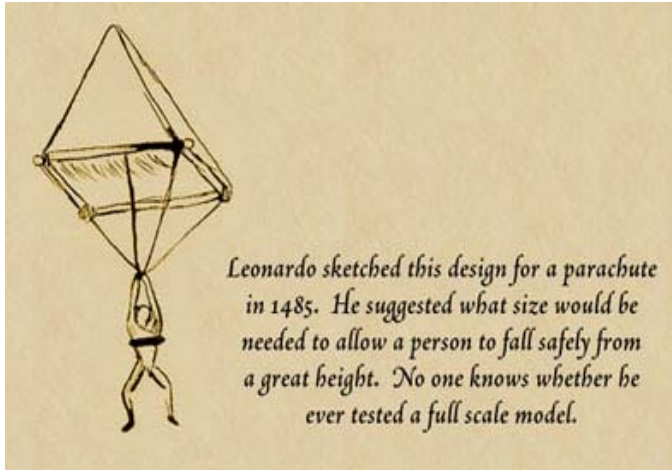| Timing	Activities	Classroom organisation
1 min.	Short introduction – teacher, teacher says basic information how students will work in these 2 lessons of history of art (in groups, text...)and that students and teacher will use English and Czech	
1 min. 2 min.	Topic – Can you tell the name of the famous person in the picture? Can you tell me the name of the author of this picture? *Know,want to know,* have learned – students say what they know about Leonardo and what they want to know about him **material – Power Point presentation** **Material - handouts for all students (page 7,8,9)**	Whole class
3 min.	Students find pictures by Leonardo. Teacher asks – how many pictures by Leonardo did you find? After while teacher say the number of the pictures they can find in the presentation (9) and students have possibility to see them all one more time. **material – PP presentation**	Individually
1 min 2 min. 15 min. 1 min. 20 min. 1 min. 15 min. 6 min.	Teacher presents 5 topics : Leonardo´s perspective, Leonardo inventor, Mona Lisa, The last supper, from sketches to paintings Teacher gives instruction how to work with the text **(PP presentation)** Each group read their text and answer the questions . Teacher gives instruction how to make a poster. Students make poster. Students put posters on the table. Each group find answers for next 4 areas. Each group discuss and fill the answers. Each group reads their answers. **handouts for each group (page 2,3,4,5 or 6)** **poster for each group (size A2)**	groups of 3 members Individually Group Group Group
2 min.	Students look again at the presentation from the beginning and compare their answers with the information which they got during the lesson and correct them if it is necessary.	Whole class
5 min.	**Know,want to know,have learned**	Hole class
homework	Create one of the Leonardo picture. Teacher explain hot to draw a picture. Teacher Czech if students understand all words.	Individually

LEONARDO INVENTOR

Leonardo's fascination with machines probably began during his *boyhood*. Some of his earliest sketches clearly show how machine worked. As an apprentice in the studio of the artist Verrocchio, Leonardo saw and used a variety of machines. By studying them he gained practical knowledge about their design and structure.

Many ancient machines were used every day. For example, water wheels turned *millstones* and Archimedes' screws lifted water. Leonardo wanted to write the first systematic explanations of how machines work and how the elements of machines can be combined.

His talents as a illustrator allowed him to draw his mechanical ideas with clarity. Five hundred years after they were put on paper, many of his sketches can easily be used as blueprints to create perfect working models.

LEONARDO DESCRIBES AND SKETCHES IDEAS FOR MANY INVENTIONS HUNDERED YEARS AHEAD OF THEIR TIME

Leonardo sketched this design for a parachute in 1485. He suggested what size would be needed to allow a person to fall safely from a great height. No one knows whether he ever tested a full scale model.

Here is a modern *parachute* used in the sport of skydiving. The first reported successful parachute jump was made from the top of a tower in France in 1783.

C
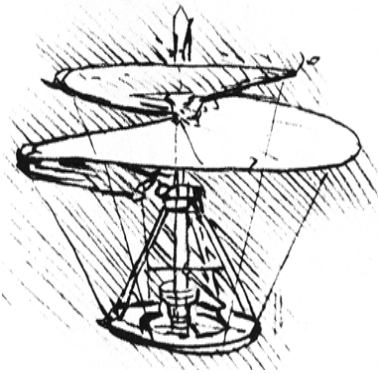
a) water lift
b) elevator
c) messenger
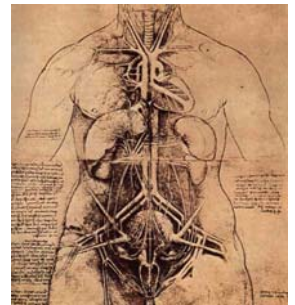d) water slide
e) fan
f) umbrella
g) helicopter
h) tepee

This invention consists of a water wheel, two archimedes *screws* and two towers. As the water wheel turns,the screws turn, pushing the water up to the highest tower. The tall tower acts as a resevoir for gravity fed water pipes.

This is a detail of the mechanism that drives it. Two men would run on the lower level, which would rotate. The rotation would force the upper "fans" to rotate as well, lifting it off the ground.
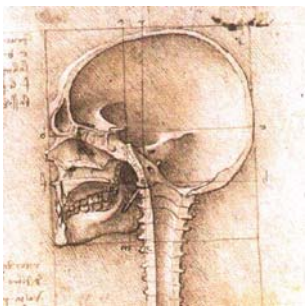
ANATOMY

As Leonardo became successful as an artist, he was given *permission* to dissect human corpses at the hospital Santa Maria Nuova in Florence. Later he dissected in Milan and in Rome. In 30 years, Leonardo dissected 30 male and female corpses of different ages. Together with Marcantonio, he prepared to publish a theoretical work on anatomy and made more than 200 drawings. However, his book was published only in 1680 (161 years after his death) under the heading Treatise on painting.

LEONARDO´S PERSPECTIVE

Perspective

Linear perspective is a mathematical system for creating the illusion of space and distance on a flat surface. The system originated in Florence, Italy in the early 1400s.

Middle age x Renaissance
During the Renaissance

European artists began to study the model of nature more closely and to paint with the goal of greater realism. They learned to create lifelike people and animals, and they became skilled at creating the illusion of depth and distance on flat walls and canvases by using the techniques of linear perspective.

Middle Age

During the Middle Ages, European artists painted in a way that emphasized religious images and symbolism rather than realism. Even the most talented painters of the Middle Ages paid little *attention* to making humans and animals look lifelike.

Renaissance   x   Middle Age

<<<**Annunciation**

Leonardo da Vinci trained as a painter during the Renaissance and became a true master of the craft. He had amazing powers of observation and he constantly tried to explain what he saw, and described many experiments to test his ideas. He wrote down and sketched so many of his observations in his notebooks and he examine how our world works and how we see it.

Aerial perspective

Leonardo was fascinated by the atmosphere and by its effects on the colours and *distinctness* of *distant objects.* Though other artists had already begun to create some of these effects in their work, Leonardo was the first to make careful measurements and suggest rules for applying them realistically in painting. He called the subject aerial perspective.

In morning light Leonardo observed that distant objects such as mountains look bluer and less distinct than nearby mountains. The nearest ones are true colour.

<<< **Virgin of the rocks** (1483-1486, or earlier)

This painting is a perfect example of Leonardo's "sfumato" technique

Leonardo applied his understanding of aerial perspective to create the sense of mountains a great distance away.

The horizon line runs across the canvas at the eye level of the viewer. The horizon line is where the sky appears to meet the ground.

The vanishing point should be located near the centre of the horizon line. The vanishing point is where all parallel lines that run *towards* the horizon line appear to come together like train tracks in the distance

Above is a painting of the **Annunciation**, a painting Leonardo completed when he was only 21 years old. See if you can find the horizon line, orthogonal lines, and vanishing point in the Annunciation.
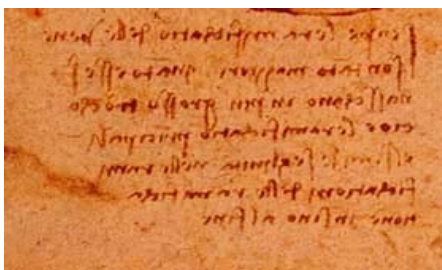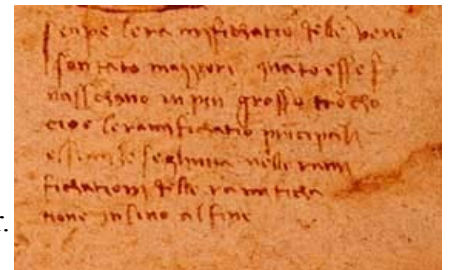
Here is a *sample* of Leonardo's writing as it
<<< appears in his drawings.

This is how it would look *reversed* by a mirror.
>>>

MONA LISA

Leonardo played with light and shade effects by making the contours hazy ("sfumato"). Aerial perspective, moving from brown to blue, creates, through the *density* of the air, an abstract landscape made up of earth and water. There aremany interpetation of this picture, even going as far as to say that she was a man. It is probably a portrait, begun in Florence between 1503 and 1507, of <<< **Monna Lisa** Gherardini del Giocondo. Her smile could be a symbol of her name, "gioconda" also meaning "*cheerful.*"
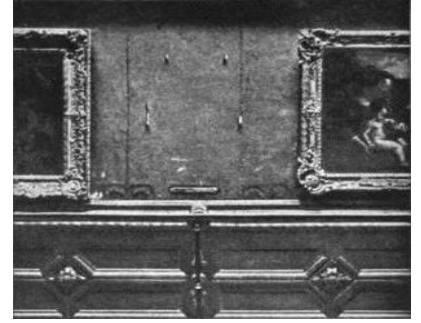
While this is one of the period's largest portraits, painted on a single, very thin (12 mm) poplar board. Her pose and cloth and the absence of *eyelashes* and *eyebrow*s are in keeping with the elegance of her station.

Stolen Mona Lisa

On August 21, 1911, Leonardo da Vinci's Mona Lisa, one of the most famous paintings in the world, was stolen right off the wall of the Louvre. It was such an *inconceivable* crime, that the Mona Lisa wasn't even noticed missing until the following day.

At the time, the painting was believed to be lost forever. The thief was finally caught after 2 years when he tried to sell it to the directors of the Uffizi Gallery in Florence; it was exhibited all over Italy and returned to the Louvre in 1913.

Smile

In the painting of Mona Lisa, Leonardo used the means of his 'sfumato' with the *utmost deliberation*. Everyone who has ever tried to draw or *scribble* a face knows that the expression of the picture rests mainly in two features: the corners of the mouth, and the corners of the eyes. Now it is precisely these parts which Leonardo has left *deliberately indistinct*, by letting them merge into a soft shadow. That is why we are never quite certain in what mood Mona Lisa is really looking at us. Her expression always seems just to elude us.

Scientists analysed the portrait of the Mona Lisa, a woman with famously mixed emotions, hoping to unlock her smile. They applied emotion recognition software that measures a person's mood by examining features such as the curve of the lips and the crinkles around the eyes.
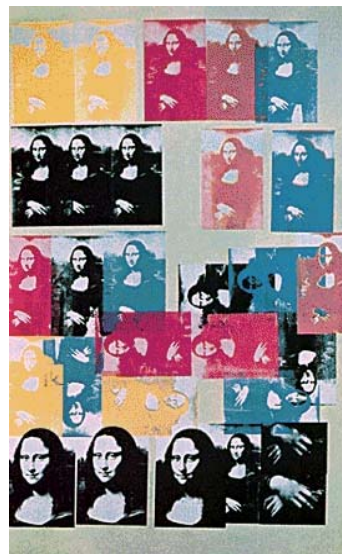
The findings? Mona Lisa was 83 percent happy, 9 percent disgusted, 6 percent fearful, and 2 percent angry, according to the British weekly "New Scientist."Still, scientists will probably never know what made her feel the way she did.

1) Mona Lisa L.H.O.O.Q,M. Duchamp,1919
2) The laugh, Sapeck ,1883
3) Mona Lisa, serigraph,Warhol, 1963
4) Self portrait as Mona Lisa, Dali, 1954

The LAST SUPPER

<<< The Last Supper is a 15th century mural painting in Milan created by Leonardo da Vinci for his patron Duke Ludovico Sforza. It represents the scene of The Last Supper from the final days of Jesus when Jesus announces that one of his Twelve Apostles would betray him.

The painting was made using experimental pigments directly on the dry plaster wall and it has not stood the test of time well. Even before it was finished there were problems with the paint *flaking* from the wall and Leonardo had to repair it. Over the years it has *crumble*d, been vandalized bombed and restored. Today we are probably looking at very little of the original.

Who is who
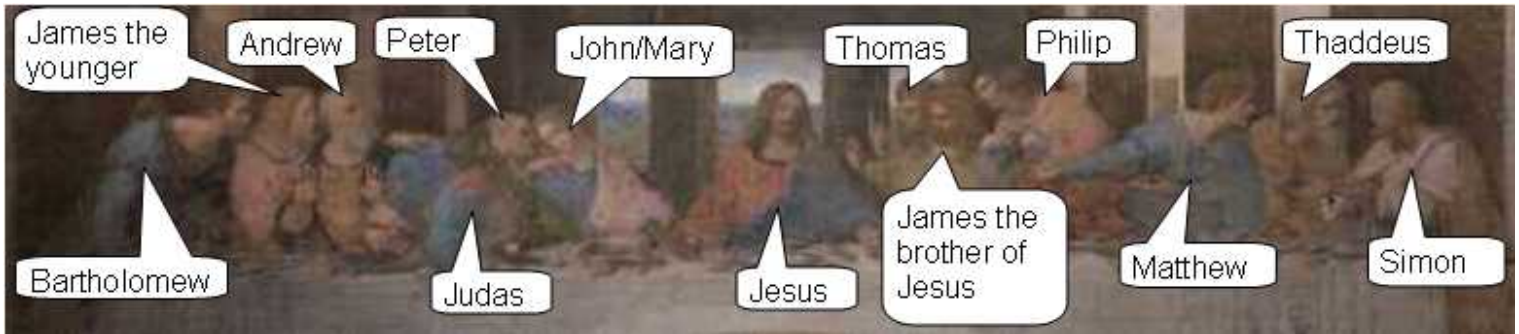
John or Mary Magdalene?

In the fictional book 'The Da Vinci Code', Daniel Brown has his character Teabing suggest that the figure seated to Jesus' right is not the *disciple* John but is *instead* Mary Magdalene. The theory, suggested several times in the past, is that Jesus married Mary and after the crucifixion she had a child by him. But is that enough evidence for the figure being Mary? We need to consider the following: It was 'normal' at the time for a young man, and John was the youngest of the disciples, to be portrayed as effeminate. Not only Leonardo did this. Examine John/Mary's eyebrows. In the time of Leonardo it was the fashion for women to shave them off. Try looking for eyebrows on the Mona Lisa.

Number 3

The painting contains several references to the number 3, which represents the Christian belief in the Holy Trinity. The Apostles are seated in groupings of three; there are three windows behind Jesus; and the shape of Jesus' figure resembles a triangle. There may have been other references that have since been lost as the painting deteriorated.

Damage and restoration

As early as 1517 the painting was starting to flake. By 1556—less than sixty years after it was finished — Leonardo's biographer Giorgio Vasari described the painting as already "ruined" and the figures were *unrecognizable*. In 1652 a doorway was cut through the painting. During World War II, on August 15, 1943, the *refectory* was struck by a bomb. This big restoration took 21 years from 1978 to 1999 and the painting was put back on display, although intending visitors are required to book ahead and can only stay for 15 minutes.

Last supper in art history

Duccio, Last Supper,1308-11 Tintoretto, Last Supper, 1594   The sacrament of the Last Supper, Dali, 1955

FROM SKETCHES TO PAINTINGS

Leonardo left fewer than 30 paintings, and these aren't even all finished. There are no pieces of sculpture that can definitely be attributed to Leonardo, even though art historians know he learned sculpture when an art apprentice in Verrocchio's studio. But he left hundreds of drawings, sketches, and pages of notes.

Paintings

Leonardo would first create a detailed underpainting in a neutral grey or brown, then apply his colours in *transparent glazes* on top. Some of the underpainting would show through the layers, subtly helping to create form. On his palette were muted, earthy browns, greens, and blues within a narrow tonal range. This helped give a sense of unity to the elements in the painting. No intense colours or contrasts for him, so no bright red for Mona's lips nor blue for her eyes."*You should make your portrait at the hour of the fall of the evening when it is cloudy or misty, for the light then is perfect.*"
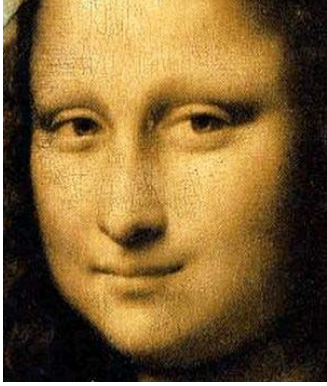
Sfumato (sfoo-mah-toe) ~ Italian for "smoky." A oil painting technique in which the artist coats the objects in a picture with layers of very thin paint to soften edges and blur shadows. This creates a dreamlike effect of atmospheric mist or haze. Leonardo was the most skilled practitioner of sfumato in the Renaissance. This technique can be seen in his paintings:

<<< **The Mona Lisa** and **The Virgin of the Rocks** >>>

Detail of the face of Mona Lisa showing the use of sfumato, particularly in the shading around the eyes. Leonardo da Vinci described sfumato as "without lines or borders, in the manner of smoke or beyond the focus plane

Early works begin with the Baptism of Christ painted in conjunction with Verrocchio.
Annunciation, 1472–1475,Oil on panel,98 × 217 cm
Adoration of the Magi,1481,Underpainting on panel, unfinished
Virgin of the Rocks,1483–1486,Oil on panel, 199 × 122 cm
<<< **Lady with an Ermine**, 1485, Oil on wood panel, 54 × 39 cm
St. John the Baptist, 1513–1516, Oil on walnut wood, 69 × 57

Draftsman

Leonardo was not a prolific painter, but he was a most prolific draftsman, keeping journals full of small sketches and detailed drawings recording all manner of things that took his *attention*. As well as the journals there exist many studies for paintings, some of which can be identified as preparatory to particular works such as The Adoration of the Magi, The Virgin of the Rocks and The Last Supper.
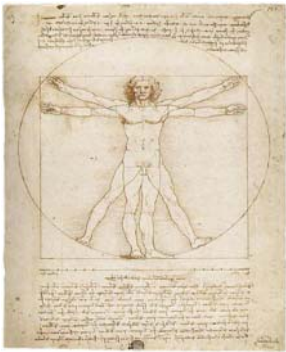

Among his famous drawings are the <<<**Vitruvian Man**, a study of the proportions of the human body, the Head of an Angel or The Virgin of the Rocks in the Louvre.
Other drawings of interest include numerous studies generally referred to as "**caricatures**" >>> because, although *exaggerated,* they appear to be based upon observation of live models. Vasari relates that if Leonardo saw a person with an interesting face he would follow them around all day observing them.

Leonardo's artistic work was recorded in notebooks comprising some 13,000 pages of notes and drawings. These notes were made and maintained daily throughout Leonardo's life and travels, as he made continual observations of the world around him. There are compositions for paintings, studies of details and drapery, studies of faces and emotions, of animals, babies, dissections, plant studies, rock formations, whirl pools, war machines, helicopters and architecture.
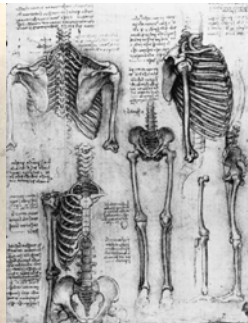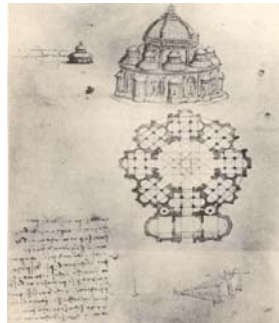
LEONARDO DA VINCI

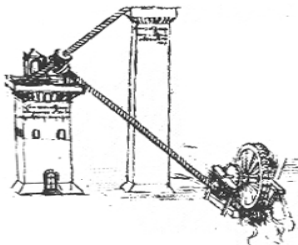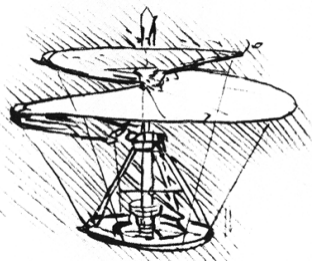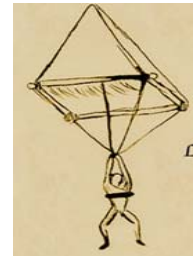| KNOW	WANT TO KNOW	HAVE LEARNED

Write the numbers of the pictures which you think Leonardo painted or drew.

LEONARDO INVENTOR

How did he get the information about the machines?

Was it an advantage or disadvantage for his career of an inventor to be a painter?

When did he sketch the design of the *parachute* and when was the first parachute made?

This invention consists of a water wheel, two archimedes screws and two towers. As the water wheel turns,the screws turn, pushing the water up to the highest tower. The tall tower acts as a resevoir for gravity fed water pipes.

This is a detail of the mechanism that drives it. Two men would run on the lower level, which would rotate. The rotation would force the upper "fans" to rotate as well, lifting it off the ground.

Choose the right names of the machines:a) water lift b) elevator c)messenger d) water slide e) fan f) umbrella
g) helicopter h) tepee

How many dissections did he complete? How many anatomic sketches did he draw?

-
-
-

LEONARDO PERSPECTIVE

When and where was the system of linear perspective developed in paintings?

How do the paintings of Middle age and Renaissance painters from the point of linear perspective differ?

What is the name of this picture? Can you find here the horizon line and the vanishing point?

Where did Leonardo use aerial perspective? In which part of the picture can you see it?

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-

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<u>MONA LISA</u>

How long did Leonardo paint Mona Lisa?

When and from which museum was Mona Lisa stolen?

Who are the authors of these two pictures?

I

In which parts of Mona Lisa face did Leonardo use sfumato?

Why is Mona Lisa so famous?

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THE LAST SUPPER

Where can you see The Last Supper these days?

What is the the topic of the picture? Who are people in the picture?

Can you name 3 of them?

Was the painting made technically correctly?

In which style were these to pictures painted?
Romance
Gothic
Renaissance
Baroque
Classicism

-

-

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FROM SKETCHES TO PANTINGS

Did Leonardo do more paintings or sketches?

Do you prefer his paintings or sketches?

Write two names of Leonardo´s paintings you like.

What were the topics of Leonardo´s sketches?

-

-

-

POSTER

Make a poster and use the information you have filled in your handout above. **The poster should present the essential and interesting information about the topic to your classmates.**

You can use the information and all the materials you have.
Write, draw, sketch, stick the pictures...on your poster.
LEONARDO PERSPECTIVE,LEONARD INVENTOR,MONA LISA,LAST SUPPER,FROM SKETCHES TO PAINTINGS

The Baptism of Christ

is a painting finished around 1475 by the Italian Renaissance painter Andrea del Verrocchio and Leonardo da Vinci.
Became a renaissance painter and create this picture with the help of the words written instead of the parts of the picture.
After you see an original picture - try to guess which parts of the picture Leonardo painted.
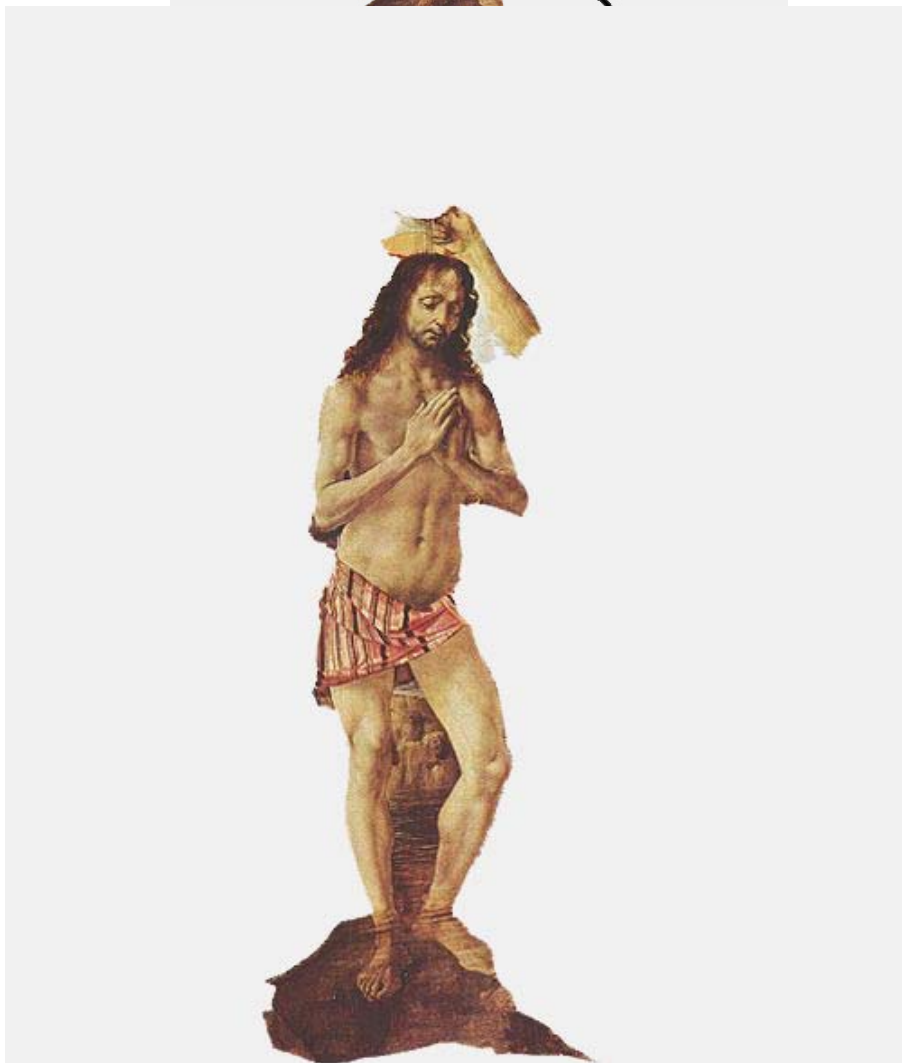
Key words

sketch, drawing, renaissance, middle age, craft, lifelike, observation, light and shade, portrait, feature, expression, mural painting, crucifixion, Holy Trinity, restoration, draftsman

Key words for each area	Passive knowledge

LEONARDO INVENTOR

sketch – skica	advantage – výhoda
apprentice – učeň	disadvantage - nevýhoda
explanations – vysvětlení	boyhood – dětství
talent – talent,vlohy	millstones – mlýnské kameny
illustrator – ilustrátor	parachute – padák
dissect – pitvat	screw – šroub
dissection – pitva **drawing** – kresba	permission – svolení, povolení

LEONARDO´S PERSPECTIVE

illusion of space – iluze prostoru	distinctness – zřetelnost
distance, distant – vzdálenost,vzdálený	distant objects – vzdálené předměty
measurements -měření	towards – směrem k
lifelike – živý,realistický	sample – ukázka
depth – hloubka	reversed – obrácený
middle age – středověk	attention – pozornost
renaissance – renesance	
craft - řemeslo	
observation -pozorování	
distinctness - zřetelnost	
vanishing point – úběžný bod	

MONA LISA

light and shade – světlo a stín	density – hustota
hazy contours – nejasné obrysy	suggestion – názor
abstract landscape – abstraktní krajina	cheerful – veselý
portrait – portrét	eyelash, eyebrow – řasa, obočí
to be lost forever – navždy ztracena	inconceivable – nepředstavitelný
be exhibited – být vystaveno	utmost deliberation – maximální promyšlení
feature – rys,znak	scribble – naškrábat
expression – výraz	deliberately – úmyslně
corner – roh	indistinct - nezřetelný
mood -nálada	

THE LAST SUPPER

mural painting -nástěnná malba	flaking – odprýskávání
betray – zradit	crumble – drobit se
crucifixion – ukřižování	disciple – učeň, žák
effeminate – zženštilý	instead – namísto toho
reference – zmínka,odkaz	unrecognizable – nerozeznatelný
Holy Trinity – svatá trojice	refectory - refektář
restoration - obnova	

FROM SKETCHES TO PAINTINGS

sculpture – socha	transparent glaze – transparentní glaze
underpainting – podmalba	attention – pozornost
earthy brown – zemitá hnědá	exaggerate - přehánět
tonal range – tónový rozsah	
intense coloure -intenzivní barvy	
contrasts – kontrasty	
draftsman – kreslíř, návrhář	