THE NEW JERSEY
ITALIAN HERITAGE COMMISSION

Understanding Stream-of-Consciousness

Leonardo da Vinci's Principle of *Curiosità*

Grades 9-12

Subjects*:* Language Arts

Categories: History and Society / Arts and Sciences

Standards:

Please read the New Jersey Student Learning Standards on page 7 before conducting the lesson. They will help you give explicit instructions to your students and help you create rubrics most appropriate for your class.

Objectives:

Students will be able to:

1. enhance their writing skills through the use of vocabulary, and through stream-of-consciousness.
2. discuss what they know and incorporate this knowledge into their writing.
3. analyze the concept of *Curiosità* on the life and work of da Vinci and apply it to their own lives.

Abstract:

Strengthen independent learning, stimulate higher order thinking, improve writing skills through the introduction and analysis of a world-famous painting by the quintessential Renaissance man.

Key Terms:

Curiosità	*Italian*	Curiosity
Inter alia	*Latin*	Among other things
Uomo Universale	*Italian*	Universal Man

Background:

The *Uomo Universale* was the ideal of the time: a "Universal Man," or "Renaissance man." The *Uomo Universale* is someone who knows everything, can do everything, and can be everything. No one embodies this ideal better than Leonardo da Vinci, his insatiable curiosity and his thirst for knowledge. Leonardo da Vinci was a multitalented savant. He was an artist; yet furthermore, he was also an inventor, a researcher, a scientist, an architect, and an engineer.

Leonardo da Vinci based his accomplishments on seven guiding principles. Each principle represents a different theme. One of Leonardo's seven principles is: *Curiosità* -- An insatiably curious approach to life and an unrelenting quest for continuous learning.

Procedures:

Curiosità, which is that inner desire to learn, is the basic principle of da Vincian practice. Students will see how a strong focus can develop the desire to learn?

I. Students will complete a self-assessment checklist. This will tell them how they are already using *Curiosità*, and where there is room for improvement.

a. Self-Assessment: *Curiosità.* Check where applicable.

❑ I take adequate time for introspection.
❑ I am a voracious reader.
❑ I calculate numbers in my mind, instead of using paper or (especially) a calculator.
❑ I always look to learn something new.
❑ When I am faced with a crucial decision, I actively seek out a variety of advice.
❑ I am considered open-minded and curious by others.
❑ When I see a new word or phrase, I look it up and record it.
❑ I know a lot about other traditions, and look to learn more.
❑ I know or I am learning other languages.
❑ I love learning.

b. Students will rate themselves on *Curiosità* from 1-10:

c. Once the student self assessment in completed, introduce them to the concept of Stream-of-Consciousness writing, which is a style of writing that utilizes a writer's facts and ideas, without worry about mistakes or even grammar.

1. This is a very useful pre-writing tool.
2. When practiced, it even develops into its own writing style.
   a. James Joyce, for example, wrote entire novels using the stream-of-consciousness technique (*Ulysses,* *Finnegan's Wake*, *inter alia*).
3. Students will see that the secret to effective stream-of-consciousness writing is to keep the pen moving.
   a. Students cannot lift it away from the paper or stop to correct the spelling and grammar; just write continuously.
4. Stream-of-consciousness writing yields a lot of nonsense and redundancy, but keeping the pen on the paper and moving it continuously will open a window through which intuitive intelligence will shine.

II. Ask students who do they know best embodies the principle of *Curiosità*?

a. Instruct students to write freely for two minutes about that person and why that person embodies the principle.
b. Then, ask students to discuss their writing with the class.

III. Give each student a copy of da Vinci's Mona Lisa from:

https://www.leonardodavinci.net/the-mona-lisa.jsp#prettyPhoto, put up a poster, or use the overhead.

a. Remind students of the five senses: taste, touch, smell, hearing, and sight.
b. Each student will use the stream-of-consciousness technique to wr ite for five minutes, without stopping and without lifting the pen from the paper, using the *Mona Lisa* and the five senses as a guide.
    1. Guided question - Where is she? What time of day is it? How old is she? How do you know? What is she thinking or feeling? Why did she pose for the painting?

Assessment:

Picture Prompt Essay: Create a story based on the *Mona Lisa*. Use stream-of-consciousness writing as a prewriting technique. Then, have students expand the initial reaction to the painting into an essay. Students should draw on their knowledge of da Vinci's time period, as well as their own observations, imagination, and experiences to speculate on the painting. Students will be given a copy of the *New Jersey Registered Holistic Writing Rubric* for scoring. They will then trade papers and decide how closely their colleagues fit these new rubrics.

Extensions:

Have students find another artist or sculptor from the Renaissance Period and decide briefly (in a paragraph or two) why he, like da Vinci, is a Renaissance man.

Using technology (Internet, video, etc.), find an example of a modern (50 years-old or less) Renaissance man. Have students explain why they believe their choice fits the criteria.

Sources:

Gelb, Michael J. *The How to Think Like Leonardo da Vinci Workbook.* New York: Dell Publishing, 1999.

Supplemental Information

Leonardo da Vinci

Above all the giants of the Italian Renaissance, Leonardo da Vinci embodies the Renaissance ideal more than any one man. As a multitalented savant, he had an insatiable curiosity and voracious thirst for knowledge. Recognized by most experts to be one of the greatest artists to ever live, Leonardo was also a proficient inventor, researcher, scientist, architect, and engineer.

Young Leonardo received his initial education in his father's house, through the usual contemporary trivium curricula of grammar, logic, and rhetoric. In 1466 at the age of fourteen, he became an apprentice, learning painting and sculpture from Verrocchio, while also acquiring technical and mechanical skills.

Leonardo entered the painters' guild in Florence in 1472; nonetheless, he still continued to work as an apprentice for five more years. Beginning in 1477 da Vinci worked for himself as a visual artist; furthermore, he also began to sketch pumps, military weapons and other machines.

In 1480 Ludovico Sforza became regent to his young nephew, the Duke of Milan. Ludovico worked to make his court in Milan the finest in all of Europe. In 1482 Leonardo da Vinci entered Ludovico's service as a court painter and engineer. By 1494 Ludovico became the Duke of Milan. Around 1496 at Leonardo's suggestion, the Duke invited the highly renowned mathematician, Luca Pacioli, a friar in the Franciscan Order, to Milan to teach mathematics. Leonardo da Vinci, at that time, had developed an enthusiastic interest in mathematics and was very interested in Pacioli's work.

While primarily working for Ludovico as a painter, Leonardo also labored as a hydraulic and mechanical engineer. In Milan he executed six paintings for the Duke, including the *Madonna of the Rocks*. Moreover, he also advised city planners and the military on architecture, fortifications, and military matters. At this point of his life, Leonardo further developed his diverse skills through his exploration of geometry, so much so, that he often neglected his painting. He studied Euclid and Pacioli's *Suma* and began his own geometry research, sometimes giving mechanical solutions. Da Vinci presented several methods of squaring the circle, using mechanical methods. He read Leon Battista Alberti's books on architecture and Piero della Francesca's *On Perspective in Painting.* He also illustrated Pacioli's *Divina proportione,* and he continued to collaborate with the geometric genius. In addition, da Vinci wrote his own book, *Trattato della pittura,* on the elementary theory of mechanics which appeared in Milan around 1498.

During the prior year in 1497, da Vinci had painted his *Last Supper*, which has become one of the most widely appreciated masterpieces in the world. Critics immediately esteemed the unique genius behind the painting, and the painting's prestige has never diminished. Despite the many changes in artistic judgment, creative styles, and the physical deterioration of the painting itself, the sublime spiritual content and the power of invention mark this painting as an extraordinary masterpiece that has never been

questioned nor doubted.

The excellence of da Vinci's work lies not only in the artistic merits of the painting, but also in Leonardo's dramatic mastery. The *Last Supper* is an ideal pictorial representation of one of the most important events in the Christian doctrine of salvation - the institution of the Eucharist. His artistic representation of the event has the public acceptance and the authority that has lasted for centuries. When people describe the Last Supper, most people envision Leonardo's creation. No other picture has left such a visual imprint on people's minds and in their imaginations.

In 1498, Louis XII became king of France. As a descendant of the first Duke of Milan, the French monarch claimed the Duchy for himself. Venice supported Louis claim against Ludovico, and in 1499 the French armies entered the city. Leonardo and his close friend Luca Pacioli fled their home together in December, three months after French occupation. They stopped first at Mantua as the guests of Marchioness Isabella d'Este, and then in March 1500 they continued to Venice. From Venice they returned to Florence, where Leonardo and Pacioli shared a house.

The University of Pisa had moved to Florence in 1494, due to a revolt. Once in Florence, Pacioli was appointed to teach geometry at the University in 1500. He remained teaching there until 1506. Leonardo, although spending ten months away working for Cesare Borgia, likewise remained in Florence until 1506. Even though he was under constant pressure to paint, mathematical studies kept him away from his artistic endeavors much of the time. He also pursued anatomical studies in the hospital of Santa Maria Nuova. During those ten months with Cesare Borgia, Leonardo was employed as a senior military architect and general engineer. He studied swamp reclamation and met with Niccolo Machiavelli

While Florence was at war with Pisa, Leonardo advised city military planners on a project to divert the River Arno behind Pisa to help with the siege of that city. He then produced plans for a canal to allow Florence access to the sea. The canal was never built nor was the River Arno diverted.

In 1506 Leonardo returned to Milan for a second period. Again, his scientific work took precedence over his painting. He was involved in hydrodynamics, anatomy, mechanics, mathematics and optics. In 1513 the French left Milan and Leonardo moved again, this time to Rome, where he seems to have led a lonely life, again more devoted to mathematical studies and technical experiments, than to painting. After three years of dissatisfaction, Leonardo accepted an invitation from King Francis I to enter his service in France.

The French King gave Leonardo the title of first painter, architect, and mechanic of the King but seems to have left da Vinci to do as he pleased. This means that Leonardo executed no new paintings, except only to finish off some works he had with him, *St. John the Baptist* (1513), the *Mona Lisa* (1503) and the *Virgin and Child with St Anne* (1510-11). Leonardo spent most of his time arranging and editing his scientific studies.

In 1490 in *Codex Atlanticus,* Leonardo had written about the possibility of constructing a telescope. He writes of "... making glasses to see the Moon enlarged." In a later work,

from 1513, *Codex Arundul,* Leonardo wrote:

> ... in order to observe the nature of the planets, open the roof and bring the image of a single planet onto the base of a concave mirror. The image of the planet reflected by the base will show the surface of the planet much magnified.

He understood the fact that the Moon shone with reflected light from the Sun, and he thought of the Moon as being similar to the Earth with seas and areas of solid ground.

Leonardo da Vinci stands in history as one of the most brilliant minds to have ever lived. His creative mind, resourcefulness, and originally inspired many artists and scientists for centuries to come. More than any of his contemporaries, Leonardo best exemplifies the appellation, Renaissance man.

Sources:

Louis Gillet, transcribed by Listya Sari Diyah. "Leonardo da Vinci." New Advent, Catholic Encyclopedia. http://www.newadvent.org/cathen/15440a.htm

Paul H. Linehan, transcribed by Christine J. Murray, "Lucas Pacioli." New Advent, Catholic Encyclopedia. http://www.newadvent.org/cathen/11383b.htm

J. J. O'Connor and E. F. Robertson. "Luca Pacioli" The MacTutor History of Mathematics Archive, St Andrews University, Scotland. http://www-gap.dcs.st-and.ac.uk/~history/Mathematicians/Pacioli.html

J. J. O'Connor and E. F. Robertson. "Leonardo da Vinci." The MacTutor History of Mathematics Archive, St Andrews University, Scotland. http://turnbull.dcs.st-and.ac.uk/history/Mathematicians/Leonardo.html

"Renaissance Man" Leonardo da Vinci: Scientist, Inventor, Artist. http://www.mos.org/leonardo/artist.html

Standards

New Jersey Student Learning Standards
Social Studies

6.2.12.D.2.a Determine the factors that led to the Renaissance, the significance of the location of the Italian city-states as the center of the Renaissance, and the impact on the arts.

Visual and Performing Arts

1.2.12.A.1 Determine how dance, music, theatre, and visual art have influenced world cultures throughout history.

1.2.12.A.2 Justify the impact of innovations in the arts (e.g., the availability of music online) on societal norms and habits of mind in various historical eras.

English Language Arts

W.9-10.2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

W.9-10.2a. Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

W.9-10.2b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.

W.9-10.2c. Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.

W.9-10.2d. Use precise language and domain-specific vocabulary to manage the complexity of the topic.

W.9-10.2e. Establish and maintain a style and tone appropriate to the audience and purpose (e.g. formal and objective for academic writing) while attending to the norms and conventions of the discipline in which they are writing.

W.9-10.2f. Provide a concluding paragraph or section that supports the argument presented (e.g., articulating implications or the significance of the topic).

W.9-10.3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

W.9-10.3a. Engage and orient the reader by setting out a problem, situation, or observation, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.

W.9-10.3b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.

W.9-10.3c. Use a variety of techniques to sequence events so that they build on one another to create a coherent, complete and comprehensive piece.

W.9-10.3d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.

W.9-10.3e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.

W.9-10.5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, trying a new approach, or consulting a style manual (such as MLA or APA Style), focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards1–3 up to and including grades 9–10).

W.11-12.2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis
of content.

W.11-12.2a . Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding
comprehension.

W.11-12.2b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information an d examples appropriate to the audience's knowledge of the topic.

W.11-12.2c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.

W.11-12.2d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.

W.11-12.2e. Establish and maintain a style and tone appropriate to the audience and purpose (e.g. formal and objective for academic writing) while attending to the norms and conventions of the discipline in which they are writing.

W.11-12.1f. Provide a concluding paragraph or section that supports the argument presented (e.g., articulating implications or the significance of the topic).

W.11-12.5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, trying a new approach, or consulting a style manual (such as MLA or APA Style), focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 11-12.)