Synapse Technologies, Inc.
Columbus: Discovery and Beyond
(VERSION 5)

Article Name: Leonardo and the Science of Structures

Article #:

Chapter Name &#: 8 -- The Renaissance

SubChapter Name & #: 4 -- Renaissance Creators

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Editor: Bob Abel

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Sources:
- Leonardo Da Vinci. An anthology of articles by various authors. (Reynal and Company).
- The Unknown Leonardo, edited by Ladislao Reti (Harry N. Abrams, New York).
- The Notebooks of Leonardo Da Vinci, arranged by Edward MacCurdy (George Braziller, New York).
- Leonardo Da Vinci -- book prepared by Martin Kemp & Jane Roberts, who presented an exhibition.
- The Inventions of Leonardo Da Vinci, Charles Gibbs Smith (Charles Scribner's Sons, New York).
- The Encyclopedia Britannica.

V/T/G/A/An: Slide show.

About: Why sticks and stones might break your bones, but names will never hurt you.

Notes: Script calls for two voices: female voice-over and a Leonardo character.

File = LEON23.DOC

Estimated running time: 1:15

Video/Graphics/Anim.	Audio/Text
IMAGES: See pages 261 - 274 of LEONARDO DA VINCI (REYNAL AND COMPANY) - BIG BOOK. See pages 210-215 in THE UNKNOWN LEONARDO.	**Narrator Voice-Over:** Before the time of Leonardo, there was a great lack of information regarding the exact strength of materials used in construction. The ancients knew that it was much easier to break a stick over their knee if you grasped it at the ends rather than in the middle, near the knee. But they were baffled why a short, thin pole would bend less than a much longer, heavier pole. That kind of ignorance would never do for a man like Leonardo, a man obsessed to discover all of nature's little secrets. So, insatiable researcher that he was, in the course of designing and constructing his various buildings and machines, Leonardo conducted experiments in order to get a clearer understanding of the amount of stresses and strains different materials could endure under heavy loads. **Voice of Leonardo:** "If two columns separately can each support 100 pounds, they will support 300 pounds if you join them together."

Narrator Voice-Over:
Leonardo's investigations into the strength of materials preceded Galileo's by about a hundred years and justify considering him the true pioneer of the science of structures.