

**Kaskaskia College Course Syllabus
CHCA 210**

I. COURSE LOCATION

X ON CAMPUS CCC

II. COURSE IDENTIFICATION

PREFIX: CHCA NUMBER: 210 NAME: Science and Math for Young Children

3	LECTURE HOURS	CHCA 0550	CURRICULUM & NO.
0	LABORATORY HOURS	1.2/200202	PCS-CIPS NUMBER
3	CREDIT HOURS	N	VARIABLE (Y/N)
0	CLINICAL HOURS	N	REPEATABLE (Y/N)
0	SOE HOURS	0	TIMES

III. DIVISION TO WHICH COURSE IS ASSIGNED

X BACCALAUREATE/TRANSFER
CAREER EDUCATION
CONTINUING COMMUNITY EDUCATION
ASE/ABE
OTHER

IV. CATALOG DESCRIPTION OF COURSE

Introduction of the theory and practice related to the curricular areas of science and math for young children. Emphasis will be placed on the development and evaluation of developmentally appropriate activities and instructional materials.

V. PREREQUISITES FOR THE COURSE

CHCA 111

VI. METHODS OF INSTRUCTION

X	DISCUSSION		SEMINAR
	LABORATORY		TELE-LECTURE (FILM-TV)
	CORRESPONDENCE		LABORATORY-DISCUSSION
	TELECOURSE	X	LECTURE
	RADIO		LECTURE-LABORATORY
	INDEPENDENT		OTHER (IDENTIFY):
	CO-OP		

VII. OBJECTIVES OF THE COURSE

- A. Demonstrate an understanding of cognitive characteristics of young children.
- B. Demonstrate open-ended process questions to facilitate the child's problem solving abilities.
- C. Recognize the mathematical and scientific development of the young child, and plan corresponding experiences.
- D. Plan and recognize opportunities for science and mathematics experiences during "free choice" activity time in an early childhood environment.
- E. Plan developmentally appropriate learning experiences and prepare instructional materials for young children in math and science for individual, small and large groups.
- F. Discuss the use and misuse of computers and computer software for the young child.
- G. Integrate math and science concepts in all areas of the curriculum.
- H. Write appropriate math and science learning objectives within the curriculum.

VIII. A. REQUIRED TEXTBOOK(S)

TITLE: Science Experiments for Early Childhood Years
AUTHOR: Jean Harlan
COPYRIGHT DATE: 2000 EDITION: 7th
PUBLISHING COMPANY: Merrill (New Prentice Hall)
ISBN#: 0-13-099957-1

TITLE: Experiences in Math F/Young Children
AUTHOR: Charlesworth
COPYRIGHT DATE: 2000 EDITION: 4th
PUBLISHING COMPANY: DELMAR (ITP)
ISBN#: 0-7668-0233-7

TITLE:
AUTHOR(S):
COPYRIGHT DATE: EDITION:
PUBLISHING COMPANY:

B. REQUIRED WORKBOOK (S)

TITLE: Mudpies to Magnets: A Preschool Science Curriculum
AUTHOR(S): Williams, Rockwell, and Sherwood
COPYRIGHT DATE: 1987 EDITION: First
PUBLISHING COMPANY: Gryphon House, Inc.
ISBN#: 0-87659-112-8

IX. SUPPLEMENTARY INSTRUCTIONAL MATERIALS IDENTIFY GENERAL SOURCES:

Number in Preschool and Kindergarten: Educational Implications of Piaget's theory, by Constance Kamii,
National Association for the Education of Young Children

IF EXTENSIVE COLLATERAL READINGS ARE REQUIRED FROM SPECIFIC BOOKS,
PROVIDE INFORMATION.

X. METHODS OF EVALUATION OF STUDENTS ENROLLED IN THE COURSE

Portfolio of activities/experience, test.

XI. COURSE OUTLINE

- A. A Cognitive/Affective View of Science Learning
 - 1. Science Participants: Children, Teachers, and Families
 - 2. Guiding Discovery Science
- B. Concepts, Experiences, and Integrating Activities
 - 1. Plant Life
 - 2. Animal Life
 - 3. The Human Body: Care and Nourishment
 - 4. What is Air?
 - 5. What is Water?
 - 6. Weather and Seasons
 - 7. Rocks and Minerals
- C. Foundations for Learning and Teaching Mathematics
 - 1. Basic Facts About the Ways of Learning
 - 2. Mathematical Structures
- D. Planning for Instruction
 - 1. Mathematical Perspective
 - 2. Developmental Learning Perspective

PREPARED BY: Tina Suarez

REVIEW/REVISION DATE: 2004

REVIEWED BY:

CHCA 210
Science and Math for Young Children
Learning Outcomes

- I. Each student will demonstrate an understanding of cognitive characteristics in young children in both math and science**
 - A. Each student will complete the review questions at the end of each Chapter as part of their knowledge of math and science concepts.**
 - B. Each student will take and pass an exam over the review questions in Order to gain cognitive skills for teaching math and science to young Children.**

- II. Each student will gain the knowledge of appropriate learning objectives.**
 - A. Each student will write developmentally appropriate lesson plans for both science and math curriculum.**
 - B. Each student will teach their completed lesson plans to obtain appropriate teaching strategies and skills.**

- III. Each student will gain knowledge on the use of software as part of the planning process.**
 - A. Each student will be required to investigate educational catalogs where to find appropriate software.**
 - B. Each student will demonstrate in class the appropriate use of the software that they have found.**
 - C. Each student will plan a daily curriculum around the in class use of the software.**

- IV. Each student will complete an observation in a child care center on the appropriate teaching methods is science and math.**
 - A. Each student will observe in a child care center during both math and science curriculum times.**
 - B. Each student will complete a narrative on the knowledge that they have gain through their observation.**

- V. Each student will complete an educational learning kit as his or her mid-term exam.**
 - A. In the learning kit the student will provide lesson plans and completed projects going with their kits.**
 - B. Each student will demonstrate both their knowledge about and the effectiveness of their kit by teaching all lesson plans in class.**

- VI. Each student will complete and pass a final exam consisting of the following topics:**
- A. Cognitive characteristics in young children.**
 - B. Problem solving strategies in young children.**
 - C. Recognize the appropriate math and science teaching techniques.**
 - D. Planning math and science activities that are developmentally appropriate for the age of children that they are working with.
(Early Childhood – Ages birth to 8).**