



## TECHNICAL COLLEGE OF THE LOWCOUNTRY

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ECD 133

Science and Math Concepts

### Course Description

This course includes an overview of pre-number and science concepts developmentally appropriate for young children.

Prerequisites: ECD 101, MAT 032, MAT 012, RDG 100.

### 3.0 Cr (3.0 lecture) Course Focus:

In this course, emphasis is placed on the planning, implementation, and evaluation developmentally appropriate activities utilizing a variety of methods and materials.

### Text and References:

Chaille, C., Davis, S. *Integrating Math and Science in Early Childhood Classrooms through Big Ideas*. Pearson Publishing, NYC, NY. 2016

ISBN: 978-0-13-714579-9

### Course Goals:

Upon completion of this course the student will be able to:

1. Utilize appropriate media, materials, techniques, and methods during development of science and math activities. (NAEYC 4b, 4 c, 5a, 5c)
2. Evaluate age appropriate science and math activities. (NAEYC 4b)
3. Integrate science and math activities into various areas of the preschool program. (NAEYC 1c)
4. Create and demonstrate science and math experiences that are important and relevant to preschool children. (NAEYC 4b, 4c, 5b, 5c)
5. Plan, implement, and evaluate age-appropriate science and math activities. (NAEYC 4c, 4d, 5c)
6. Identify the Science and Math South Carolina Early Learning Standards and/or South Carolina State Standards for lesson plans. (NAEYC 4b, 5c)

## Course Outcomes and Competencies:

**Intended Course Outcome #5:** Students will be able to use content knowledge to build meaningful curriculum.

**Course Competency 5b:** Students will be able to use the central concepts, inquiry tools, and structures of content areas or academic disciplines.

**Performance Measurement Instrument and Success criteria:** Students will successfully complete a math activity file.

## NAEYC Standards

### 1. PROMOTING CHILD DEVELOPMENT AND LEARNING

1a: Knowing and understanding young children's characteristics and needs, from birth through age 8. 1b:

Knowing and understanding the multiple influences on early development and learning

1c: Using developmental knowledge to create healthy, respectful, supportive, and challenging learning environments for young children

### 2. BUILDING FAMILY AND COMMUNITY RELATIONSHIPS

2a: Knowing about and understanding diverse family and community characteristics

2b: Supporting and engaging families and communities through respectful, reciprocal relationships 2c:

Involving families and communities in young children's development and learning

### 3. OBSERVING, DOCUMENTING, AND ASSESSING TO SUPPORT YOUNG CHILDREN AND FAMILIES

3a: Understanding the goals, benefits, and uses of assessment – including its use in development of appropriate goals, curriculum, and teaching strategies for young children

3b: Knowing about assessment partnerships with families and with professional colleagues to build effective learning environments

3c: Knowing about and using observation, documentation, and other appropriate assessment tools and approaches, including the use of technology in documentation, assessment and data collection.

3d: Understanding and practicing responsible assessment to promote positive outcomes for each child, including the use of assistive technology for children with disabilities.

### 4. USING DEVELOPMENTALLY EFFECTIVE APPROACHES

4a: Understanding positive relationships and supportive interactions as the foundation of their work with young children 4b: Knowing and understanding effective strategies and tools for early education, including appropriate uses of technology

4c: Using a broad repertoire of developmentally appropriate teaching /learning approaches 4d:

Reflecting on own practice to promote positive outcomes for each child

### 5. USING CONTENT KNOWLEDGE TO BUILD MEANINGFUL CURRICULUM

5a: Understanding content knowledge and resources in academic disciplines: language and literacy; the arts – music, creative movement, dance, drama, visual arts; mathematics; science, physical activity, physical education, health and safety; and social studies.

5b: Knowing and using the central concepts, inquiry tools, and structures of content areas or academic disciplines 5c:

Using own knowledge, appropriate early learning standards, and other resources to design, implement, and evaluate developmentally meaningful and challenging curriculum for each child.

### 6. BECOMING A PROFESSIONAL

6a: Identifying and involving oneself with the early childhood field

6b: Knowing about and upholding ethical standards and other early childhood professional guidelines

6c: Engaging in continuous, collaborative learning to inform practice; using technology effectively with young children, with peers, and as a professional resource.

6d: Integrating knowledgeable, reflective, and critical perspectives on early education

6e: Engaging in informed advocacy for young children and the early childhood profession

### 7. EARLY CHILDHOOD FIELD EXPERIENCES

7a. Opportunities to observe and practice in at least two of the three early childhood age groups (birth – age 3, 3-5, 5-8) 7b.

Opportunities to observe and practice in at least two of the three main types of early education settings (early school grades, child care centers and homes, Head Start programs)

## Student Contributions

For this course to run properly, the student is expected to be prepared for each class, including, but not limited to, reading assignments, class activities, weekly lab observations and class participation. Attendance is a great contributor to student success in this course.

## Course Evaluation

### Assignment Specifics: Grading

All assignments will be graded for accuracy. No late assignments will be accepted. All assignments are due via Blackboard and will only be graded using this method of submission. All assignments must be typed using Microsoft Office Word unless otherwise noted by the instructor.

Blackboard Discussion Questions	200
Math Activity File	200
Science Activity File	200
Math Resource Collection	200
Science Resource Collection	<u>200</u>

**Total= 1000**

### **\*Keep all work for ECD-243 Portfolio\***

900 - 1000	=	A
800 - 899	=	B
700 – 799	=	C
600 - 699	=	D
599 and Below	=	F

## Course Schedule

The class meets for 3 lecture/presentation hours per week.

### **ADA STATEMENT**

The Technical College of the Lowcountry provides access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation, contact the counselor for students with disabilities at (843) 525-8228 during the first ten business days of the academic term.

### **ACADEMIC MISCONDUCT**

There is no tolerance at TCL for academic dishonesty and misconduct. The College expects all students to conduct themselves with dignity and to maintain high standards of responsible citizenship. It is the student's responsibility to address any questions regarding what might constitute academic misconduct to the course instructor for further clarification.

The College adheres to the Student Code for the South Carolina Technical College System. Copies of the Student Code and Grievance Procedure are provided in the *TCL Student Handbook*, the Division Office, and the Learning Resources Center.

### **ATTENDANCE**

The College's statement of policy indicates that students must attend ninety percent of total class hours or they will be in violation of the attendance policy.

- Students not physically attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.
- Students taking an online/internet class must sign in **and** communicate with the instructor within the first ten calendar days from the start of the semester to indicate attendance in the class. Students

not attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.

- Reinstatement requires the signature of the division dean.
- In the event it becomes necessary for a student to withdraw from the course **OR if a student stops attending class, it is the student's responsibility to initiate and complete the necessary paperwork.** Withdrawing from class may have consequences associated with financial aid and time to completion.
- When a student exceeds the allowed absences, the student is in violation of the attendance policy. The instructor **MUST** withdraw the student with a grade of "W", "WP", or "WF" depending on the date the student exceeded the allowed absences and the student's progress up to the last date of attendance  
*or*
- under extenuating circumstances and at the discretion of the faculty member teaching the class, allow the student to continue in the class and make-up the work. This exception must be documented at the time the allowed absences are exceeded.
- Absences are counted from the first day of class. There are no "excused" absences. All absences are counted, regardless of the reason for the absence.
  - A student must take the final exam or be excused from the final exam in order to earn a non-withdrawal grade.
  - A copy of TCL's **STATEMENT OF POLICY NUMBER: 3-1-307 CLASS ATTENDANCE (WITHDRAWAL)** is on file in the Division Office and in the Learning Resources Center.

#### **HAZARDOUS WEATHER**

In case weather conditions are so severe that operation of the College may clearly pose a hardship on students and staff traveling to the College, notification of closing will be made through the following radio and television stations: WYKZ 98.7, WGCO 98.3, WGZO 103.1, WFXH 106.1, WWVW 106.9, WLOW 107.9, WGZR 104.9, WFXH 1130 AM, WLVA 101.1, WSOK 1230 AM, WAEV 97.3, WTOC TV, WTGS TV, WJWJ TV, and WSAV TV. Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. [www.tcl.edu/textalert.asp](http://www.tcl.edu/textalert.asp)

#### **EMERGENCY TEXT MESSAGE ALERT**

Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. Participants receive immediate notification of emergency events and weather cancellations via text messaging on their cell phones. Participants can also opt in to receive non-emergency news and announcements. Go to [www.tcl.edu](http://www.tcl.edu). On the homepage, click on "emergency TextAlert at TCL" and fill out the form or go to [www.tcl.edu/textalert.asp](http://www.tcl.edu/textalert.asp)

#### **GRADING METHODOLOGY**

The final grade must be 70 or more (a grade "C" or better) in order to pass the course and progress to the next course. Students absent from an examination or presentation will receive a "0" grade for the examination unless other arrangements are made with the individual instructor prior to the examination or presentation day or on the examination or presentation day before the test/presentation is scheduled to be given.

The student is responsible for notifying the instructor for the reason of the absence. It is also the responsibility of the student to contact the appropriate instructor to arrange to make up the examination. Arrangements may be completed by telephone.

If the instructor is not available, a message should be left on the instructor's voice mail AND with another member of the faculty or administrative assistant. The make-up exam will be scheduled and the instructor will decide the method of examination. Messages sent by other students are unacceptable.

## ONLINE ATTENDANCE PROCEDURE

For all online courses, students must complete an assignment designated by the instructor during the first week of classes. The instructor will drop the student from the course if the initial assignment is not completed.

Instructors will withdraw students from the class when 90% attendance is not maintained. Attendance in an online course is defined by regular course access and by timely completion of assignments as required by the instructor. Each student will be expected to access the web class at least once a week and complete 90% of assignments on time. Additional access is encouraged and may be necessary for successful completion of classes.

Failure to log in and complete assignments will result in the student being withdrawn from the course. The instructor will assign a grade of “W,” “WP,” or “WF” based upon the student’s academic standing as the last date of attendance, which is the last login. Students are responsible for any financial matters associated with an administrative withdrawal. If a student fails to email the instructor (using the my.tcl.edu email account) requesting to be dropped from the course and has not submitted the initial assignment required during the first week of class, the instructor will assign a “Never Attended” code in the student information system no later than ten calendar days after the first day of the class. Students who are dropped as a result of never attending the course are still responsible for all fees associated with the course.

### Syllabus Safety Addendum

#### Purpose

The purpose of this safety addendum is to provide each student with safety guidelines during an incident, emergency, or disaster at TCL. In addition, it provides students guidelines for lockdown procedures, evacuation procedures, and active shooter.

#### Definition

**An incident** is any event, potential or actual, that may impact normal operations but has no immediate health or life threatening consideration or serious effect on the overall functional capacity of the College. An event of this nature should be reported to the Office of the Vice President for Administrative Services. Also notify the off-site campus administrator if applicable.

**An emergency** is any incident, potential or actual, which may endanger life or health or which affects an entire building or buildings, and will disrupt the overall operations of the College. Outside emergency services will probably be required, as well as major efforts from campus support services. Major policy considerations and decisions will usually be required from the college administration during times of crises. An emergency should be reported immediately by directly using **911** if life or health/injury considerations exist and then to the Office of the President or Vice President for Administrative Services as quickly as possible. Also notify the off-site campus administrator if applicable.

**A disaster** is any event or occurrence that has taken place and has seriously impaired or halted the operations of the College. In some cases, mass personnel casualties and severe property damage may be sustained. A coordinated effort of all campus-wide resources is required to effectively control the situation. Outside emergency services will be essential. In all cases of disaster, an Emergency Control Center will be activated, and the appropriate support and operational plans will be executed. The disaster should be immediately reported, first by calling **911** and then to the Office of the President or Vice President for Administrative Services. Also notify the off-site campus administrator if applicable.

#### Types of Emergencies

- Hurricane
- Tornado
- Fire
- Biochemical or Radiation Spill

- Explosion/Bomb
- Downed Aircraft (crash which directly impacts campus operations)
- Utility Failures
- Violent or criminal behavior
- Psychological Crisis

## Procedures

### **Active Shooter**

Run/hide/fight (<http://www.fbi.gov/about-us/cirg/active-shooter-and-mass-casualty-incidents/run-hide-fight-video> )

### **Building Evacuation**

1. Building evacuations occur when an alarm sounds and/or upon notification by Security or the Emergency Director.
2. When the building evacuation alarm is activated during an emergency, individuals should exit according to the building evacuation plan and alert others to do the same.
3. Once outside, individuals should proceed to a clear area that is at least 500 feet away from the affected building. Streets, fire lanes, hydrant areas and walkways should be kept clear for emergency vehicles and personnel.
4. Individuals should not return to an evacuated building unless told to do so by Security or the Emergency Director.
5. Individuals should assist persons with disabilities in exiting the building. Elevators are reserved for disabled persons

### **Campus Evacuation**

1. A uniformed Security Guard, the Emergency Director, or an Emergency Resource Team member will announce evacuation of all or part of the campus grounds.
2. All persons (students and staff) are to immediately vacate the campus, or in the case of a partial evacuation relocate to another part of the campus grounds as directed.

### **Lockdown**

1. Clear the halls
2. Report to the nearest classroom/office
3. Assist those needing special assistance
4. Ensure classroom/office doors are closed and locked
5. Turn off lights
6. Stay away from doors and windows (out of the line of sight)
7. BE QUIET and follow instructor's directions
8. Silence cell phones
9. Wait for the "All Clear" before leaving

Revised: 5/6/19