GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
GRADUATE SCHOOL OF EDUCATION
Elementary Education Program

EDCI 552 001: Math Methods for the Elementary Classroom
3 Credits, Spring 2015
4:30-7:10 p.m./Mondays Thompson Hall L013

PROFESSOR:

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COURSE DESCRIPTION:

A. Prerequisites/Corequisites

Admission to the elementary education licensure program

B. University Catalog Course Description

Introduces methods for teaching all children topics in arithmetic, geometry, algebra, probability, and statistics in elementary grades. Focuses on using manipulatives and technologies to explore mathematics and solve problems.

C. Expanded Course Description

In this course we will begin an inquiry into mathematics teaching and learning that will guide you in your first teaching job and give you the tools that will enable you to continue to inquire and learn as part of your work as a teacher. Class sessions will be interactive and will include a variety of hands-on experiences with concrete and virtual manipulatives appropriate for elementary school mathematics. We will explore the teaching of mathematics, investigating both *what* to teach and *how* to teach it. We will explore what it means to do mathematics and what it means to understand mathematics through individual, small group, and large group mathematical problem solving. We will investigate ways to represent understandings of mathematical concepts, communicate reasoning about mathematical ideas, and construct mathematical arguments. We will investigate and read about ways children might represent mathematical concepts, looking at ways to help children build connections and see relationships among mathematical ideas. We will explore characteristics of a classroom environment conducive to mathematical learning by reading and discussing the importance of mathematical tasks, mathematical tools, the roles of teachers and students, and the assessment of

mathematical understanding.

LEARNER OUTCOMES or OBJECTIVES:
This course is designed to enable students to:

A. Know what constitute the essential topics in mathematics of the modern early and intermediate grades school program.
B. Identify and use selected manipulatives and technology such as linking cubes, attribute blocks, geoboards, base-10 blocks, fraction circles, tangrams, calculators, and computers to teach appropriate mathematics content topics in the early and middle grades.
C. Identify and use various instructional strategies and techniques (cooperative and peer group learning, activity centers, laboratories and workshops, teacher-directed presentations, etc.) to teach mathematical content topics appropriate for the early and intermediate grades to all children, including those from non-mainstreamed populations.
D. Identify and use alternative methods for assessing students' work in mathematics in the early and intermediate grades.
E. Solve problems in the mathematical content areas of logic, number theory, geometry, algebra, probability, and statistics appropriate for adaptation to the early and intermediate grades.
F. Know and explain the learning progression in relation to the standards-based mathematics curriculum, the key elements of the National Council of Teachers of Mathematics Principles and Standards for School Mathematics, and the key elements of the Virginia Standards of Learning for Mathematics.

Additionally, this course supports the CEHD Core Values of collaboration, ethical leadership, research-based practice, social justice, and innovation. Statements of these goals are at http://cehd.gmu.edu/values/.

PROFESSIONAL STANDARDS:
Interstate Teacher Assessment and Support Consortium (InTASC) & Association for Childhood Education International Elementary Education Standards (ACEI):

Course Student Outcomes (above)	**INTASC Standard (2011)**	**ACEI**
A Essential math	#4	1.0
B Planning and Teaching using manipulatives	#7	3.1
C Instructional Strategies	#8	1.0, 2.3, 3.1, 3.3, 3.4
D Assessing	#6	4.0
E Problem Solving	#5	2.3

F Learner Development and understanding of Learning Progression	#2/#1	1.0

INTASC Standard (2011)
Standard #4: Content Knowledge The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to assure mastery of the content.
Standard #7: Planning for Instruction The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.
Standard #8: Instructional Strategies The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.
Standard #6: Assessment The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.
Standard #5: Application of Content The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.
Standard #1: Learner Development. The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences. Standard #2: Learning Differences The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.

Association for Childhood Education International Elementary Education Standards 2007
1.0 Development, Learning, and Motivation--Candidates know, understand, and use the major concepts, principles, theories, and research related to development of children and young adolescents to construct learning opportunities that support individual students' development, acquisition of knowledge, and motivation.
2.3 Mathematics—Candidates know, understand, and use the major concepts and procedures that define number and operations, algebra, geometry, measurement, and data analysis and probability. In doing so they consistently engage problem solving, reasoning and proof, communication, connections, and representation;
3.1 Integrating and applying knowledge for instruction—Candidates plan and implement

instruction based on knowledge of students, learning theory, connections across the curriculum, curricular goals, and community;
3.5 Communication to foster collaboration—Candidates use their knowledge and understanding of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the elementary classroom.
4.0 Assessment for instruction—Candidates know, understand, and use formal and informal assessment strategies to plan, evaluate and strengthen instruction that will promote continuous intellectual, social, emotional, and physical development of each elementary student.

Course & PBA	INTASC	ACEI
552 Math Student Assessment Interview	#4 Content Knowledge #1 & #2 Learner Development & Differences #6 Assessment	1.0 Development 2.3 Math 3.1 Planning Instruction 3.5 Communication 4.0 Assessment

REQUIRED TEXTS:

Van De Walle, J., Karp, K. S., & Bay-Williams, J. M. (2012). *Elementary and Middle School Mathematics: Teaching Developmentally.* (8th edition) New York: Allyn & Bacon.

COURSE ASSIGNMENTS AND EXAMINATIONS

1. **Assignment Descriptions:**
   - **A. Problem of the Day: Participation, Critique, & Presentation (20%)**
     Addresses Learner Outcomes: A, B, C, D, E, F
     Rich, meaningful, problems will be assigned for each class session. Students are expected to complete these problems during class and incorporate their thinking about strategies used to solve the problems in class discussions. Work on problem sets will be shared in class and on occasion may be collected and evaluated.
     a. **Participation:** Each class sessions will consist of working on a rich problem and using the following: the five practices for promoting productive mathematics discussions, differentiation, the NCTM Process Standards and multiple representations. Students are expected to analyze and reflect on solution strategies and come to class prepared to participate in the discussion.
     b. **Critique:** Students will be responsible for reflecting and providing feedback on the problem of the day, in relation to one of the following areas: the five practices for promoting productive mathematics discussions, differentiation, the NCTM Process

Standards and multiple representations.

c. **Presentation:** Students will work in groups to present one Problem of the Day in class. The instructor will provide resources for identifying the problem. Students will need to think about and incorporate the following areas as they present their Problem of the Day: the five practices for promoting productive mathematics discussions, differentiation, the NCTM Process Standards and multiple representations. Dates for the Problem of the Day presentations are:

February: 9, 16, 23
March: 2, 16

Groups are expected to 1) design a Power Point slide and e-mail it to the instructor the Sunday before class; 2) solve the mathematics problem before presenting; 3) anticipate student responses; and 4) bring 5 copies of anticipated responses to class the day of the presentation.

B. Student Assessment Interview: Course Performance Based Assessment (30%)

Addresses Learner Outcomes: A, B, C, D, F

In order to plan effective instruction, you will need to know how to assess children's knowledge of mathematical concepts. One way to assess children's thinking is a diagnostic assessment. This assignment has two parts: (1) Design a plan for the assessment, assessing a specific mathematics topic using concrete, pictorial and abstract representations, (2) Conduct the assessment with a child and write a report describing the outcome of the assessment. Based upon feedback from the instructor on your plan, you may make modifications to the final plan and report.

C. Problem-based Lesson Plan Summaries (30%)

Addresses Learner Outcomes: A, B, C, D, E, F

You are required to plan, teach, and complete a formal summary for each mathematics lesson. Each lesson will place an emphasis on five practices that promote productive discussions: Anticipating, Monitoring, Selecting, Sequencing, and Connecting.

a. **Lesson Plan #1 (15%):** The first lesson will be based on a Problem of the Day taught by a small group and presented twice: to their classmates and a small group of elementary students in their field placement (4-6 students)
    i. **Group Lesson Plan (5%):** The Group Lesson Plan should be written in the GMU Lesson Plan Format and follow the guidelines set forth by the grading rubric posted on Blackboard. Documents that should be included are: the

lesson plan, reflection, anticipated student responses and student work samples.

ii. **Individual Lesson Plan (10%)** The Individual Lesson Plan should be written in the GMU Lesson Plan Format and follow the guidelines set forth by the grading rubric posted on Blackboard. In the lesson plan for this assignment, modifications should be highlighted in a different color. Documents that should be included are: the lesson plan, reflection, anticipated student responses and student work samples.

b. **Lesson Plan #2 (15%):** The second lesson will include the entire class in your field placement. This lesson must be done in a Problem of the Day format. **The second lesson must be video taped.** Each student should submit a formal observation feedback form from a CF, SF, UF or instructor. Lesson Plan #2 should be written in the GMU Lesson Plan Format and follow the guidelines set forth by the grading rubric posted on Blackboard. Documents that should be included are: the lesson plan, reflection, anticipated student responses, student work samples and the GMU Observation Feedback Form.

D. Mathematics Curriculum and Assessment Analysis (20%)

Addresses Learner Outcomes: C, D, E

The Mathematics Curriculum and Assessment Analysis will consist primarily of practiced based skills that focus on mathematics content in the elementary grades, such as creating an open-ended assessment, error analysis, analyzing cognitive demand of a task, evaluating instructional materials, and determining how to assess student understanding of mathematical concepts. Throughout the semester, brief content-specific check-ins will assist you in reviewing important mathematics content and pedagogy appropriate for the elementary grades. These check-ins will be in the format of three Blackboard Reflections and an Edthena video analysis assignment, each worth 5%.

2. Assignment and examination weighting

The assignments across the semester are intended to further your understandings of what it means to teach, learn, and assess mathematics in light of current reforms in mathematics education. All assignments are to be turned in to your instructor on time. **Late work will not be accepted for full credit.** If the student makes prior arrangements with the instructor, assignments turned in late will receive a 10% deduction from the grade per late day or any fraction thereof (including weekends and holidays).

Problem of the Day (20%)

Individual Student Assessment (30%)

Lesson Plan Summary Reports (30%)

Mathematics Content & Pedagogy Assessments (20%)

3. Grading policies

The mathematics education courses in GSE's Elementary Education Program integrate pedagogy and mathematics content appropriate for the elementary school grades. For students to earn a grade of A in the course, they must demonstrate excellence in *both* the pedagogical knowledge and the content knowledge of the mathematics appropriate at their level of teaching. Thus, the grading in the course is structured to help evaluate fairly student excellence in both areas. Problem sets and assessment work focuses primarily on ascertaining student excellence in handling mathematics content appropriate for the elementary grades, and represents 50% of students' grades. Pedagogical knowledge is ascertained primarily from readings, assignments and participation in the course, and represents 50% of students' grades. Therefore students who demonstrate excellence in both pedagogical knowledge and content knowledge receive grades of A.

At George Mason University course work is measured in terms of quantity and quality. A credit normally represents one hour per week of lecture or recitation or not fewer than two hours per week of laboratory work throughout a semester. The number of credits is a measure of quantity. The grade is a measure of quality. The university-wide system for grading graduate courses is as follows:

Grade	GRADING	Grade Points	Interpretation
A	94-100	4.00	Represents mastery of the subject through effort beyond basic requirements.
A-	90-93	3.67	
B+	85-89	3.33	Reflects an understanding of and the ability to apply theories and principles at a basic level
B	80-84	3.00	
C*	70-79	2.00	Denotes an unacceptable level of understanding and application of the basic elements of the course
F*	<69	0.00	

Note: "C" is not satisfactory for a licensure course
"F" does not meet requirements of the Graduate School of Education

4. **Other expectations**
    a. **Attendance:** It is your responsibility to attend all class sessions. You are held accountable for all information from each class session whether you are present or not. Reasons for any absence must be reported to the instructor in writing.

    b. **Tardiness:** It is your responsibility to be on time for each class session. Reasons for any absence must be reported to the instructor in writing.

TASKSTREAM REQUIREMENTS

Every student registered for any elementary education Program course with a required performance-based assessment is required to submit this assessment, **Student Assessment Interview**, to TaskStream (regardless of whether a course is an elective, a onetime course or a part of an undergraduate minor). Evaluation of the performance-based assessment by the course instructor will also be completed in TaskStream. Failure to submit the assessment to TaskStream will result in the course instructor reporting the course grade as Incomplete (IN). Unless the IN grade is changed upon completion of the required TaskStream submission, the IN will convert to an F nine weeks into the following semester.

GMU POLICIES AND RESOURCES FOR STUDENTS

a. Students must adhere to the guidelines of the George Mason University Honor Code (See http://academicintegrity.gmu.edu/honorcode/].

b. Students must follow the university policy for Responsible Use of Computing (See http://universitypolicy.gmu.edu/1301gen.html).

c. Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.

d. The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to

enhance students' personal experience and academic performance (See http://caps.gmu.edu/).

e. Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester (See http://ods.gmu.edu/).

f. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.

g. The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing (See http://writingcenter.gmu.edu).

PROFESSIONAL DISPOSITIONS

Students are expected to exhibit professional behaviors and dispositions at all times. http://cehd.gmu.edu/assets/docs/forms/secondary_ed/sec_ed_handbook.pdf

CORE VALUES COMMITMENT

The College of Education & Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: http://cehd.gmu.edu/values/

EMERGENCY PROCEDURES

You are encouraged to sign up for emergency alerts by visiting the website https://alert.gmu.edu. There are emergency posters in each classroom explaining what to do in the event of crises. Further information about emergency procedures exists on http://www.gmu.edu/service/cert

For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website http://gse.gmu.edu.

Important information needed for successful completion of licensure:

IMPORTANT INFORMATION FOR LICENSURE COMPLETION

Student Clinical Practice: Internship Requirements

Testing

Beginning with Spring 2015 internships, **all** official and passing test scores must be submitted and in the Mason system (i.e. Banner/PatriotWeb) by the internship application deadline. Allow a minimum of six weeks for official test scores to arrive at Mason. Testing too close to the application deadline means scores will not arrive in time and the internship application will not be accepted.

Required tests:

Praxis Core Academic Skills for Educators Tests (or qualifying substitute)
VCLA
Praxis II (Content Knowledge exam in your specific endorsement area)
For details, please check http://cehd.gmu.edu/teacher/test/

Endorsements

Please note that ALL endorsement coursework must be completed, with all transcripts submitted and approved by the CEHD Endorsement Office, prior to the internship application deadline. Since the internship application must be submitted in the semester prior to the actual internship, please make an appointment to meet with the Endorsement Specialist and plan the completion of your Endorsements accordingly.

CPR/AED/First Aid

Beginning with spring 2015 internships, verification that the Emergency First Aid, CPR, and Use of AED Certification or Training requirement must be submitted and in the Mason system (i.e. Banner/PatriotWeb) by the application deadline. Students must submit one of the "acceptable evidence" documents listed at http://cehd.gmu.edu/teacher/emergency-first-aid to CEHD Student and Academic Affairs. In order to have the requirement reflected as met in the Mason system, documents can be scanned/e-mailed to CEHDacad@gmu.edu or dropped-off in Thompson Hall, Suite 2300.

Background Checks/Fingerprints

All local school systems require students to complete a criminal background check through their human resources office (not through George Mason University) **prior to beginning field hours and internship**. Detailed instructions on the process will be sent to the student from either the school system or Mason. Students are **strongly advised** to disclose any/all legal incidents that may appear on their records. The consequence of failing to do so, whether or not such incidents resulted in conviction, is termination of the field hours or internship.

Please Note

Your G-Number must be clearly noted (visible and legible) on the face of the document(s) that you submit.

Application

The internship application can be downloaded at
http://cehd.gmu.edu/teacher/internships-field-experience
Deadlines

Spring internship application:
Traditional: September 15

Fall internship application:
Traditional: February 15
Year Long Internship: April 1 (All testing deadline are August 1 immediately proceeding the fall start; RVE deadline is December 1)

PROPOSED COURSE SCHEDULE:

Date	Topic	Readings Due	Assignments Due
Jan. 26th Week 1	How Do Children Learn Mathematics? NCTM Principles & Standards **Sign up for Lesson Plan #1 Presentation**	5 Process Standards (p. 3-4) Implications for Teaching Math (p. 21-29) Differentiating Instruction (p. 65-70) Orchestrating Productive Discussions Article (Blackboard) ***Topics from Chapter 1-6 will be referenced throughout the semester. You will want to SKIM and REFER TO these chapters to get an overview.**	**Math Autobiography**
Feb. 2nd Week 2	Lesson Planning Assessment Place Value & The Base Ten System	Chapter 5: Assessment Chapter 8: Early Number Concepts Chapter 11: Place Value ***Look For:*** A big idea to share	**Blackboard Reflection:** Analyzing Student Work ***PBA Checkpoint*** Read Rubric
Feb. 9th Week 3	Developing Student Strategies for Addition and Subtraction **LP#1 Group 1 Presentation**	Chapter 9: Meaning of Operations Chapter 10: Basic Facts Chapter 12: Addition and Subtraction ***Look For:*** A question you have	***PBA Checkpoint*** Identify Topic & Child
Feb. 16th Week 4	Developing Student Strategies for Multiplication and Division **LP#1 Group 2 Presentation**	Chapter 13: Multiplication and Division DMI Case: Sandra (Blackboard) ***Look For:*** Something different from how you learned	***PBA Checkpoint*** Identify Manipulatives
Feb. 23rd Week 5	Fraction Concepts **LP#1 Group 3 Presentation**	Chapter 15: Fractions ***Look For:*** Something you struggle with	***PBA Checkpoint*** Identify & Bring 2 Tasks/Representation to Class
March 2nd	Fraction Computation	Chapter 16: Fraction Operations	**PBA PLAN Due**

Week 6	**LP#1 Group 4 Presentation**	***Look For:*** Something that resonates with your thinking	
March 9th	**Spring Break – No Class Meeting**		
March 16th Week 7	Decimals & Percent **LP#1 Group 5 Presentation**	Chapter 17: Decimals and Percent ***Look For:*** Something you don't understand	
March 23rd Week 8	Proportional Reasoning	Chapter 18: Proportional Reasoning ***Look For:*** Something that intrigues you	**Group Lesson Plan #1 Due** ***PBA Checkpoint*** Conduct Interview By This Point
March 30th Week 9	**ONLINE CLASS: No Class Meeting** Virginia Department of Education Resources Student Error Analysis		**Individual Lesson Plan #1 Due** **VDOE Scavenger Hunt** **Blackboard Reflection:** Analyzing Student Work
April 6th Week 10	Measurement The Math Workshop	Chapter 19: Measurement ***Look For:*** Something that you don't understand	***PBA Checkpoint*** Write Evaluation
April 13th Week 11	Geometry Independent Planning	Chapter 20: Geometry ***Look For:*** Something that surprises you	**Lesson Plan #2 Due**
April 20th Week 12	**ONLINE CLASS: No Class Meeting** Edthena Analysis PBA Work Session		**Edthena Analysis Due**
April 27th Week 13	Algebra Concepts Group Planning	Chapter 14: Algebraic Thinking Chapter 12: Data Analysis ***Look For:***	***PBA Checkpoint*** Bring PBA Draft to Class for Critical Friend Analysis

		Something you have seen in your placement	
May 4th Week 14	Probability High Level Tasks	Chapter 22: Probability Chapter 23: Integers ***Look For:*** The most important thing	**Final PBA Due** Bring 2-3 Probability Tasks
May 11th Week 15	Sharing Our Work: PBA Looking Back: POD Tentative Panel Discussion		**Blackboard Reflection:** Final Thoughts

ASSESSMENT RUBRIC:
Below is the rubric for the performance-based assessment for EDCI 552, the Student Assessment Interview.

Criteria	Exceeds Requirements (A)	Meets Requirements (A-,B+,B)	Needs Improvement (C)	Inc.
Is the required information present about the child assessed?	5 In addition to the required information, the Report includes information about the child's performance in other academic, social, or behavioral areas. Cite references.	4 3 2 The Report includes the child's grade level, age, gender, race, academic ability level, and the child's level of understanding about the mathematics concept.	1 One or more of the required descriptive items about the child is missing.	0
Has the teacher selected one specific mathematics concept and assessed the concept using three different forms of representation (concrete, pictorial, abstract)?	5 Information on age-appropriate variations of the mathematics concept was gathered in preparation for the assessment. One math concept is clearly described and mathematically accurate. Three different forms of representation, with different examples in each form, are designed for use in interesting and creative ways. Connections are made among representational forms. Cite references.	4 3 2 One age-appropriate mathematics concept is selected, mathematically accurate, and clearly described. Three different forms of representation are described and used appropriately to assess the mathematics concept. Different examples may be used within each representational form.	1 One or more mathematics concepts are selected. They may not be age-appropriate. The Report is missing one or more forms of representation.	0
Do the tasks and questions match the specific mathematics concept being assessed? Is there variety in the tasks and questions used for each of the three different forms of representation?	5 In addition to the tasks/questions being aligned with the math concept, there are questions that differentiate and provide extensions for different levels of student performance. In addition to the variety of tasks/questions for each of the three forms of representation, tasks that show creativity and will be motivating for a child are included. Cite references.	4 3 2 The tasks and questions designed for the assessment are aligned with the mathematics concept being assessed. There are a variety of tasks and questions for each of the three forms of representation.	1 The tasks and questions designed for the assessment are not clearly aligned with the mathematics concept being assessed. The Report is missing tasks/questions that address one or more of the forms of representation.	0

Are the child's <u>work samples</u> included with three different forms of representation present in the work samples?	5 In addition to the variety of work samples from the child showing examples in each of the three forms of representation, a creative way of providing an explanatory overview of the child's work is included.	4 3 2 There are a variety of work samples from the child included showing examples in each of the three forms of representation. (concrete, pictorial, abstract)	1 There is only one work sample in each of the three forms of representation or work samples from one form of representation are missing.	0
Is the required question and response assessment <u>excerpts</u> present?	5 The Report includes key excerpts from the mathematics assessment that includes descriptive information on both the behaviors and the actual verbalizations that occurred during the assessment.	4 3 2 The Report includes excerpts of the mathematics assessment using the teacher and the child's actual verbalizations from the assessment (T for teacher; C for child).	1 The Report includes excerpts of the mathematics assessment, but some parts of the assessment conversation are limited.	0
Do the initial and follow-up <u>questions</u> used by the teacher demonstrate variety and higher levels of questioning? Are specific follow-up questions used appropriately?	5 The transcript shows that during the assessment, the teacher used a variety of questions to encourage the child to express his/her thinking, used many higher-level questions to encourage deeper thinking and responses from the child, and used specific follow-up questions to probe for understanding.	4 3 2 The transcript shows that during the assessment, the teacher used a variety of higher-level questions to encourage deeper thinking and appropriate follow-up questions to probe for understanding.	1 The transcript shows that during the assessment, the teacher used very few probing and follow-up questions when a specific follow-up question would have been appropriate.	0
Does the <u>evaluation</u> accurately represent the child's current level of understanding on this concept using supporting evidence and work samples from the assessment?	5 The evaluation provides an accurate and detailed description of the child's current level of understanding on the concept. Many different and specific examples from the assessment are given, including the child's quotations, student work, and information from other sources on math development, to provide supporting evidence for the evaluation of the child.	4 3 2 The evaluation provides an accurate description of the child's current level of understanding on the mathematics concept. Different examples from the assessment are given, including the child's quotations and student work, to provide supporting evidence for the evaluation.	1 The evaluation provides a minimal description of the child's understanding on the mathematics concept. A few examples from the assessment are given, but there is not enough information to	0

			provide supporting evidence for the evaluation.	
Does the <u>instructional plan</u> prescribe developmentally appropriate next steps for instruction and take into account the child's current level of understanding on this concept?	5 The plan is a creative, detailed description of developmentally appropriate next steps for instruction taking into account the child's current level of understanding. The plan identifies many specific examples of activities and tasks that would further enhance this child's knowledge of this concept. Information from other sources on math development and child development was used. Cite references.	4 3 2 The instructional plan describes developmentally appropriate next steps for instruction. The plan identifies several specific examples of tasks that would be appropriate to further enhance this child's knowledge on this concept. The plan describes these tasks in relation to the child's current level of understanding.	1 The plan describes some next steps for instruction that may not be developmentally appropriate. The plan gives general (rather than specific) examples of activities and tasks for the child. The tasks may not be appropriate either for the child or the development of the math.	0
Is there an appropriate <u>reflection</u> and evaluation of the assessment process?	5 In addition to the required information, the Report includes a detailed analysis, self-reflection, and self-evaluation of the assessment process.	4 3 2 The Report includes a reflection and evaluation on the assessment process including the required elements.	1 The Report does not include one or more of the required elements for the reflection.	0