



**Academia Santa Rosa de Lima  
Bayamón, P.R.**

**Academic Syllabus**

**Course: Mathematics**

**Fourth Grade**

---

**Teacher:** Jessica Valentin Cintron  
**School Year:** August 2018- May 2019

## **I. Introduction and Course Structure**

The objective of the EduSystem Mathematics K-6 course is to help students develop skills and mathematical concepts in accordance with the standards set forth by the Department of Education of Puerto Rico and National Council of Teachers of Mathematics. The purpose of the series is to create awareness of why studying mathematics processes is important and how it is necessary for solving problems that relate to real-life situations. Through its content, strategies, and techniques, the EduSystem Mathematics K-6 series instills a deep understanding of the concepts, skills, and techniques for the subsequent study of higher mathematics and applications. The way in which the topics, examples, and recommended applications are presented allows students to visualize, understand, and value the usefulness of mathematics in every life. In each lesson, the objectives have been carefully aligned by taking into consideration the concepts and skills students need in order to establish connections between the different topics. It also focuses on the development of critical thinking skills which is the integral means of foundation for the students. The course encourages the direct application of what students learn and how they visualize the importance of mathematics as a universal discipline relating to society, community, organizations and institutions. Furthermore, the incorporation of situations and real-life problems in each of the topics aims to awaken an interest in the study of mathematics for students.

**Module:** Edusystem Digital Platform

## **II. The Objectives of the Course**

The objectives of the course are:

- Mathematical reasoning skills and their application.
- Help students develop an interest and appreciation for mathematics.
- Develop mathematical capability within students through experiences that stimulate their curiosity and focus it toward investigation.
- Promote that students visualize mathematics as an integral whole and not as a group of isolated topics.

- Develop the problem solving processes in students.
- Stimulate within students the need of using language and academic vocabulary to communicate mathematical ideas.
- Develop mathematical reasoning and critical thinking skills.
- Emphasize the concepts of numbers, operations, and calculations.
- Promote the learning of concepts in geometry and measurement through hands on experience.

### III. Lesson Content

Introduction/Unit 1: Place Value		
Theme	Objective Skills	Posibles fechas de examen / Valor
<ul style="list-style-type: none"> <li>✓ Place Value</li> <li>✓ The Thousands; Period</li> <li>✓ The Millions' Period</li> <li>✓ Ordinal Numbers</li> <li>✓ Rounding to the Thousands</li> <li>✓ Numeral Systems</li> <li>✓ Recognizing the Value of Coins and Bills</li> </ul>	<ul style="list-style-type: none"> <li>✓ Understand the value of each digit in a number.</li> <li>✓ Give the correct place value to each digit in a number.</li> <li>✓ Use ordinal numbers to establish a sequence.</li> <li>✓ Recognize ordinal numbers to 100.</li> <li>✓ Round whole numbers to the nearest place in the thousands.</li> <li>✓ Recognize the different denominations of bills and coins in our monetary system.</li> <li>✓ Recognize the value of bills and coins.</li> </ul>	<p>August</p> <p>100%</p>
Unit 2: Adding and Subtracting Four-Digit Numbers		
Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"> <li>✓ Adding and Subtracting Four-Digit Numbers</li> <li>✓ The Properties and Operations of Numbers</li> <li>✓ Adding Four-Digit Numbers</li> <li>✓ Estimating Four-Digit Numbers</li> <li>✓ Strategies to Estimate Subtractions</li> <li>✓ Subtracting Four-Digit Numbers</li> <li>✓ Estimating Sums and Differences of Money</li> </ul>	<ul style="list-style-type: none"> <li>✓ Recognize the properties and operations in addition.</li> <li>✓ Add four-digit numbers applying the place value concept.</li> <li>✓ Estimate four-digit sums using rounding rules.</li> <li>✓ Use strategies to estimate subtractions by applying rounding rules.</li> <li>✓ Use addition to check the answer of the subtraction.</li> <li>✓ Estimate amount of money.</li> <li>✓ Add money estimations.</li> <li>✓ Subtract money estimation.</li> </ul>	<p>September</p> <p>100%</p>

**Unit 3: Multiplication**

Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"><li>✓ Multiplication</li><li>✓ Multiplying by 2 and 3</li><li>✓ Multiplying by 4 and 5</li><li>✓ Properties of Multiplication</li><li>✓ Multiplying by 6 and 7</li><li>✓ Multiplying by 8 and 9</li><li>✓ Multiplication Tables</li></ul>	<ul style="list-style-type: none"><li>✓ Identify the multiplication process as a repeated addition.</li><li>✓ Recognize and apply the multiplication properties in order to solve problems.</li><li>✓ Find multiples using numeric patterns.</li><li>✓ The use of numeric patterns.</li><li>✓ Find multiples by using numeric patterns in a times table.</li></ul>	October 100%

**Unit 4: Let's Divide**

Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"><li>✓ Let's Divide</li><li>✓ Dividing by 2 and 3</li><li>✓ Dividing by 4 and 5</li><li>✓ Dividing by 6 and 7</li><li>✓ Dividing by 8 and 9</li><li>✓ Forming Basic Fact Families</li><li>✓ Dividing by 0 and 1</li></ul>	<ul style="list-style-type: none"><li>✓ Identify positions and vocabulary in the division process.</li><li>✓ Relate division as a repeated subtraction.</li><li>✓ Use multiples to identify the quotient.</li><li>✓ Relate the processes of both multiplication and division.</li><li>✓ From basic fact families.</li><li>✓ Use fact families to solve division.</li></ul>	November 100%

**Unit 5: Geometry**

Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"><li>✓ Geometry</li><li>✓ Polygonal Figures</li><li>✓ Solid Figures</li><li>✓ Congruent and Similar Figures</li><li>✓ Area and Perimeter</li><li>✓ Points, Lines and Planes</li><li>✓ Parallel and Perpendicular Lines</li><li>✓ Angle Classification</li><li>✓ Parts of Circle</li></ul>	<ul style="list-style-type: none"><li>✓ Classify polygonal figures according to their number of sides.</li><li>✓ Recognize polygonal figures.</li><li>✓ Recognize characteristics of the different polygonal figures.</li><li>✓ Identify plane figures.</li><li>✓ Identify solid figures</li><li>✓ Classify solid figures</li><li>✓ Classify and identify similar and congruent figures</li></ul>	December 100%

	<ul style="list-style-type: none"> <li>✓ Understand the area and perimeter concepts.</li> <li>✓ Calculate the area and perimeter of a figure.</li> <li>✓ Identify basic geometric concepts.</li> <li>✓ Identify and classify as parallel, perpendicular lines or as none of them.</li> <li>✓ Identify the parts of an angle.</li> <li>✓ Identify the circle concept.</li> </ul>	
--	---	--

#### Unit 6: Time and Graphs

Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"> <li>✓ Time and Graphs</li> <li>✓ Minute and Hours</li> <li>✓ Using A.M. and P.M. Abbreviations</li> <li>✓ Estimating Time</li> <li>✓ Elapsed Time</li> <li>✓ The Calendar</li> <li>✓ Gathering Data</li> <li>✓ Building Pictographs</li> <li>✓ Line Graphs</li> </ul>	<ul style="list-style-type: none"> <li>✓ Establish the difference between an analog clock and a digital clock.</li> <li>✓ Identify the parts of a clock.</li> <li>✓ Read the clock.</li> <li>✓ Identify a.m. and p.m. periods in a day.</li> <li>✓ Use the a.m. and p.m. abbreviations.</li> <li>✓ Estimate time.</li> <li>✓ Determine the elapse time.</li> <li>✓ Identify the calendar components.</li> <li>✓ Understand the use of a calendar.</li> <li>✓ Identify the concept of survey and its importance.</li> <li>✓ Recognize the concept of pictograph.</li> <li>✓ Interpret a line graph.</li> </ul>	<p>January</p> <p>100%</p>

#### Unit 7: Multiplying by Two-Digit Numbers

Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"> <li>✓ Multiplying by Two-Digit Numbers</li> <li>✓ Multiplying by multiples of 10</li> <li>✓ Multiplying Three and Four-Digit Numbers</li> <li>✓ Multiplying by Two-Digit Numbers</li> <li>✓ Estimating Products of Numbers and Amounts of Money</li> </ul>	<ul style="list-style-type: none"> <li>✓ Multiply by multiples of 10.</li> <li>✓ Multiply by three and four digit.</li> <li>✓ Multiply by two-digit number.</li> <li>✓ Estimate products of both numbers and amounts of money.</li> </ul>	<p>February</p> <p>50%</p>

### Unit 8: Dividing Two and Three-Digit Numbers

Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"> <li>✓ Dividing Two and Three-Digit Numbers</li> <li>✓ Dividing Multiples of 10</li> <li>✓ Dividing three-digit Numbers</li> <li>✓ Dividing Three-Digit Numbers with Remainders</li> <li>✓ Dividing by Two-Digit Numbers</li> <li>✓ Estimating Quotients</li> </ul>	<ul style="list-style-type: none"> <li>✓ Estimate quotients</li> <li>✓ Divide/ All digits</li> </ul>	<p>February</p> <p>50%</p>

### Unit 9: Measurement

Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"> <li>✓ Measurement</li> <li>✓ Units of Length in the English and Metric System</li> <li>✓ Units of Capacity in the English and Metric System</li> <li>✓ Units of Mass in the English Units of Length to the Fraction of an Inch</li> <li>✓ The Volume of an Object</li> </ul>	<ul style="list-style-type: none"> <li>✓ Identify the unit of length of the metric and English system.</li> <li>✓ Identify the units of capacity of the metric system.</li> <li>✓ Identify the units of mass of the metric system.</li> <li>✓ Measure objects.</li> <li>✓ Find the volume of an object.</li> </ul>	<p>April</p> <p>50%</p>

### Unit10: Fractions

Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"> <li>✓ Fractions</li> <li>✓ Parts of a Whole: Halves and Fourths</li> <li>✓ Parts of a Whole: Third and Sixths</li> <li>✓ The Fractional Part of a Group</li> <li>✓ Equivalent Fractions</li> <li>✓ Simplifying Fractions</li> <li>✓ Comparing Fractions</li> <li>✓ Adding and Subtracting Like Fractions</li> <li>✓ Proper and Improper Fractions</li> </ul>	<ul style="list-style-type: none"> <li>✓ Write how a fraction is read.</li> <li>✓ Identify a numerator and the denominator of a fraction.</li> <li>✓ Identify the numerator and the denominator of a fraction.</li> <li>✓ Identify the fractional part of a group.</li> <li>✓ Identify equivalent fractions.</li> <li>✓ Simplify fractions.</li> <li>✓ Compare fractions.</li> <li>✓ Add and subtract like fractions.</li> </ul>	<p>April</p> <p>50%</p>

Unit11: Probability and Statistics		
Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"> <li>✓ Probability and Statistics</li> <li>✓ Probability that an Event Will Occur</li> <li>✓ Determining the Sample Space of an Experiment</li> <li>✓ Confirming Predictions</li> <li>✓ Locating Ordered Pairs in a Graph</li> <li>✓ Finding the Average of a Set of Data</li> <li>✓ The Mode and Median of a Set of Data</li> </ul>	<ul style="list-style-type: none"> <li>✓ Describe an event as certain, probable or unlike.</li> <li>✓ Identify the sample space of an experiment.</li> <li>✓ Represent and locate ordered pairs in a graph.</li> <li>✓ Find the average of a set of data.</li> <li>✓ Find the mode and the median of a set of data.</li> </ul>	<p>May</p> <p>50%</p>
Unit12: Decimals		
Theme	Objective Skills	Possible Date of Test / Value
<ul style="list-style-type: none"> <li>✓ Decimals</li> <li>✓ Tenths</li> <li>✓ Hundredths</li> <li>✓ Thousandths</li> <li>✓ Estimating and Rounding Decimals</li> <li>✓ Comparing Decimals Numbers</li> <li>✓ Adding and Subtracting Decimal Numbers</li> </ul>	<ul style="list-style-type: none"> <li>✓ Recognize the tenths.</li> <li>✓ Write a decimal in its standard and word form.</li> <li>✓ Recognize the hundredths.</li> <li>✓ Recognize the thousandths.</li> <li>✓ Compare decimal numbers.</li> <li>✓ Add and subtract decimal numbers.</li> </ul>	<p>May</p> <p>50%</p>

**Note:** The dates of the tests, their value, and the order of the lessons presented can be subject to changes because of students' necessities.

**Nota:** Las fechas de los exámenes, el valor de los mismos y el orden presentado puede estar sujeto a cambio, de acuerdo a las necesidades de los estudiantes.

#### **IV. Libros de referencia y materiales didácticos**

- Module: Edusystem Digital Platform
- Curriculum Map: English Program
- Standards: English
- Print Material
- Links Related to Education
- Technology Equipment (computer, radio, projector)
- Physical Installation (Library/Vocabulary)
- Reading Station

#### **V. Strategies, Techniques and Teaching Methods** **Strategies**

- ECA
- Cooperative Learning
- Hands on Learning

#### **Techniques**

- Social Discussion
- Instructional Conversation/Vocabulary
- Demonstration
- Reading Aloud
- Virtual Library
- Flipped Classroom

#### **Methods**

- Explore
- Inquiry
- Discover
- Problem Solution
- Cross Over Learning
- Read to understand

## VI. Evaluation Methods: Instruments and Criteria

Assessment	Sumativo	Formativo
• Test	•	
• “Quizzes”	•	
• Homework	•	
• Warm ups	•	
• Oral Reports	•	
• “Collage”	•	
• Problem Solving Activities		•
• Word Bank/Math Vocabulary		•
• Create Graphs		•
• Reading Problems		•

**Nota:** El 75% de la nota de la clase es de exámenes, pruebas cortas y “Quizzes”. El 25% de la misma será de Assessment. Estos porcentajes varían dependiendo del tiempo y de las necesidades de los estudiantes.

## VII. Course Requirements

- Students must be familiarized with the criteria and the process of evaluation of the class.
- The student must bring all school materials every day to the classroom.
- Assist regularly to class and be on time.
- The school uniform must be clean and used every day.
- If the student is absent, he or she must turn in a medical excuse.
- The student must be responsible with homework.
- Classroom must be clean and organized at all times.
- Be responsible with classroom material.
- Use proper and respectful vocabulary.
- Bring papers signed or any other document (document's falsification is prohibited).



**Nota:** Este documento puede estar sujeto a diversos cambios y modificaciones, tomando en cuenta las necesidades de cada grupo.



**Academia Santa Rosa de Lima  
Bayamón, P.R.**

**Academic Syllabus  
Course: Mathematics**

---

**Certification**

I, \_\_\_\_\_, father, mother or person in charge of  
\_\_\_\_\_, a fourth grade student \_\_\_\_\_ certify I

have read The Academic Syllabus of Santa de Rosa de Lima Academy for the 2018-2019 **Science** Course.

Signature of: Father, Mother or Person in charge: \_\_\_\_\_

Student's signature: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/2018

**Nota:** Favor de imprimir la boleta y devolver al maestro de **Estudios Sociales** durante la primera semana de clases..

