



**Dear Parents,**

**In Mathematics, your child will work to answer the following questions through exploration of these ideas and concepts:**

***How does the position of the number affect its value?***

- Understand why multiplying or dividing by a power of 10 shifts the *value* of the digits of whole number or decimal.
- Recognize that in a multi-digit number, a digit in one place represents ten times what it represents in the place to its right and  $1/10$  of what it represents in the place to its left.

***How can I decompose numbers to help me divide?***

- Divide multi-digit whole numbers using a variety of strategies, explaining their calculations through illustrations, equations, arrays and/or area models.
- Multiply multi-digit whole numbers using a variety of strategies.

***How can a fraction represent the division of two natural numbers?***

- Interpret a *fraction* as division of the *numerator* by the *denominator* ( $a/b = a \div b$ )
- Solve word problems involving division of natural numbers leading to answers in the form of fractions or mixed numbers using visual fraction models or equations.

***How can I use visual models to represent multiplication involving fractions?***

- Apply and extend previous understandings of multiplication to multiply fractions using visual fraction models.
- Solve word problem involving multiplication of fractions and mixed numbers using visual fraction models or equations.

***What is volume and how do we measure it?***

- Recognize volume as an attribute of solid figures and understand concepts of volume measurement.
- Measure volume by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.
- Solve real-world and mathematical problems involving volume, and relate volume to the operations of multiplication and addition.

**In Science, your child will answer the following questions through exploration of ideas and concepts about *Structure and Properties of Matter*:**

***How does matter change? When matter changes, does its weight change?***

- Matter of any type can be subdivided into particles that are too small to see. The matter still exists and can be detected by other means.
- Gases are made from matter particles too small to see and are moving freely around in space.
- Models can be used to explain observations about matter.
- Matter can change form and the amount (weight) of matter is conserved when it changes.

***How can properties be used to identify materials?***

- Observations and measurements of a variety of properties can be used to identify materials.
- Models can be used to explain observations about matter.

***How do substances combine or change to make new substances?***

- New substances may be formed when two or more different substances are mixed.
- Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not.