Didactical Document
Theme-Based Trail about Rational Numbers (Grades 3-4)

Trail Code: **695110**

Title	Grade	Main concepts	Students learn	Data to collect	Objects	MCM References
Part-whole *Green Panel*	3	-Fraction as part-whole -Connections with reflection symmetry	- Use fractions to indicate the relationship between a given number of parts and the total number of parts into which a whole is divided.	- Number of elements in a set - Number of elements that meet a requirement	Letters in a phrase	0425374
Part-whole *Red Tiles*	3	-Fraction as part-whole -Equivalent fractions	- Use fractions to indicate the relationship between a given number of parts and the total number of parts into which a whole is divided. - Simplify fractions.	- Number of elements in a set - Number of elements that meet a requirement	Tiles	0225385
Part-whole *Library plaque*	4	-Fraction as part-whole - Fraction and decimal representations - Equivalent fractions	- Use fractions to indicate the relationship between a given number of parts and the total number of parts into which a whole is divided. - Simplify fractions. - Decimal fractions and decimal representation.	- Number of elements in a set - Number of elements that meet a requirement	Letters in a plaque	1725376
Measure *The ramp*	3	- Fraction as measure	-Fix a line segment as a unit and identify a unit fraction 1/b as a number equal to the measurement of the length of each line segment resulting from the	- Measurement of a line segment	Ramp	0525383

			decomposition of the unit into b line segments of equal length.			
Measure *Position of the goalkeeper*	4	- Fraction as measure -Equivalent fractions - Sum/Difference of fractions	-Fix a line segment as a unit and identify a unit fraction 1/b as a number equal to the measurement of the length of each line segment resulting from the decomposition of the unit into b line segments of equal length. - Recognize that multiplying the numerator and denominator of a given fraction by the same natural number we get an equivalent fraction. - Recognize that the sum and difference of fractions with equal denominators can be obtained by adding and subtracting the numerators.	- Measurement of a line segment	Football field	7925373
Operator *Climbing the stairs*	4	- Fraction as operator	- Identify that the product of q by c/d is equivalent to the quotient of the product of q by c by d.	- Number of elements	Stairs	4925386
Operator *Parking spaces*	4	-Fraction as operator	- Identify that the product of q by c/d is equivalent to the quotient of the product of q by c by d; Identify that the product of q by c/d is equal to the product of c/d by q.	- Number of elements in a set - Number of elements that meet a requirement	Parking spaces	4525382
Operator *Flowerpot*	4	- Fraction as operator	- Identify that the product of q by c/d is equivalent to the quotient of the product of q by c by d; Identify that the product of q by c/d is equal to the product of c/d by q.	- Measurement of the edge of a cube	Cubic flowerpot	0725372

Operator *Chairs*	4	- Fraction as operator - Sum/Difference of fractions	- Recognize that multiplying the numerator and denominator of a given fraction by the same natural number we get an equivalent fraction. - Recognize that the sum and difference of fractions with equal denominators can be obtained by adding and subtracting the numerators. - Identify that the product of q by c/d is equivalent to the quotient of the product of q by c by d; Identify that the product of q by c/d is equal to the product of c/d by q.	- Number of elements	Chairs	6825371

Notes:

The teacher should propose a trail with 7-8 tasks containing diversified concepts (fraction as part-whole, measure, operator; fraction and decimal representations; continuous and discrete contexts). It is also important to present tasks with different cognitive levels (low; high) to motivate/challenge students.