Maths lessons with Scratch

Subject: Multiply a Fraction by a Fraction

1. Lesson Overview

Introduction Multiplication of fractions is one of the most difficult topics at the primary level,

age of students: 10-12

2.General Aim:

-understand the meaning of multiplying two fractions relating to the concept of the area of a rectangle.

The pupil will be able to:

-add or subtract two given fractions with different denominators

- find the result of multiplying two given fractions

- find the result of dividing a given whole number by a given fraction.

- solve word problems using 4 operations (addition, subtraction, multiplication, division) of fractions.

3. Specific Objectives of the Lesson (Multiply a fr action by a fr action) :

By the end of the lesson, pupils will be able to:

- multiply two given fractions

-solve word/story problem involving multiplication of fractions

4.Actions:

- writing different names for a fraction

- comparing unit fractions

- relating a fraction to the division of a whole number by a counting number

-addition and subtraction of fractions with different denominators

- relating decimal names to tenths and hundredths and locating them on the number line

- relating decimal names and percentage to hundredths

-multiplying a whole number by a fraction

- finding a fraction of a given whole number

-dividing a fraction by a counting number

-renaming simple fractions as tenths and hundredths and writing their decimal names

- comparing two fractions with different denominators

- changing simple fractions to hundredths and writing their percentage names, and vice versa

5.ACTIVITIES:

Step 1 (3min) Teacher gives pupils square sheets of paper to represent the plot of land. Core Point. 1 (Area) =(Length)×(Width) Mr. Adamu had a plot of land in the shape of a square of side 1 km. Fati’s father bought 3 1 (\*1) of the land and gave 2 1 (\*2) of it to Fati. We want to find out the fraction of the plot Fati got. Length Width Area 8

Step 2 (7min) Teacher guides pupils to fold the paper into 3 equal parts vertically and shade a third of it.

Step 3 (10 min) Teacher guides pupils to fold the sheet again horizontally into halves and shade one half of it in another way.

Step 4 (5min) Pupils identify the rejoin with double shading as Fati’s portion of the plot that is 2 1 of 3 1 .

Step 5 (5 min) Teacher gives another similar problem as in Step 1. In this step, (\*1) is 4 3 and (\*2) is 32 .

Step 6 (10 min) Pupils fold the square sheet to solve the second problem. Step 7 (10 min) Teacher asks the pupils to count and describe the meaning of the numerator and the denominator of the answer.

CONCLUSION (5 min): Teacher and the pupils reach the conclusion on how to calculate the multiplication of two fractions.

Materials:

Papers to fold for each stedent

Scratch game: Multiplication prepared by the teacher

Constructing own multiplication chart by students themselves i n Scratch program.

Kahoot it : Quiz prepared by the teacher.