African Safari

Summary

This lesson focuses on Operations and Algebraic Thinking 1, specifically with two-step word problems, by taking your students on an African Safari.

Main Core Tie Mathematics Grade 2 Strand: OPERATIONS AND ALGEBRAIC THINKING (2.OA) Standard 2.OA.1

Additional Core Ties

Mathematics Grade 2 Strand: MEASUREMENT AND DATA (2.MD) Standard 2.MD.10

Time Frame

2 class periods of 30 minutes each

Group Size

Small Groups

Materials

Suggested Materials:

12"x15" white paper, one per group pencils map of Africa, one per group counters, (ex:unifix cubes, disks, square tiles,etc.) for each group pictures or video of African animals for launch

Background for Teachers

Background:

Your students need to be familiar with solving one-step word problems, and efficiently use manipulatives, models or objects to represent these problems.

Teachers need to have established procedures for working with maniuplatives.

Students need to also know the meaning of symbols to represent the unknown.

Teacher and students need to be familiar with solving all problems types: adding to; taking from; putting together/taking apart and comparing.

Teachers should be familiar with asking guiding questions during and after this lesson. See attached Capacity Building Series website for support.

See attached USOE curriculum guide for additional information and supports.

Student Prior Knowledge

Prior Knowledge:

Students need to be comfortable with one-step problem solving within100 and working collaboratively.

Students should be familiar with understanding the unknown in all positions with addition and subtraction.

Students should be familiar with using manipulatives, drawings, and model to represent and solve

word problems Students can write equations to represent problems using a symbol for the unknown

Intended Learning Outcomes

Students should be able to use addition and subtraction to solve a two-step word problem, using manipulatives, drawing or model to represent the problem. Targeted Mathematical Practices: MP1; MP2; MP4: and MP6

Instructional Procedures

Students will pretend to be going on an African Safari and will identify five animals that they saw. In small groups they will draw or use manipulatives to represent these animals and then determine how many feet, eyes, heads and tails there are.

On the second day, using the same animals, students will determine how many feet, heads, tails, and eyes after one animal is eaten by a crocodile.

Strategies for Diverse Learners

Differentiation can include

limiting the amount of animals to two for struggling students

providing pictures of animals for students to use

to challenge students have them write several equations, using associative and commutative properties

Extensions

Students will construct a bar graph or pictograph representing their data.

Assessment Plan

Formative Assessment

do the students understand the task

ensure that students are generating the correct amount of animals (based on differentiation strategies)

does the number of feet, heads, tails, etc. correctly match the number of animals do the equations correctly represent the drawings or manipulatives used

are students working well collaboratively

Extension: does the graph match the data

Rubrics

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