The Open-Ended Approach

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An elephant weighs about 20 times as heavy as Ali. If Ali weighs 25 kg. What is the weight of an elephant?

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Cue word : "20 times as heavy"

Concept : "multiplication" situation

Procedure : 25 x 20 = ?

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Closed question with an expected standard response

An elephant weighs 500 kg. How many children do you need to have the same weight?

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Open-ended situation for a varity of responces

Several solid figures are shown here :

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For this problem, students are asked to select figures accoding to different fixed attributes. This exercise offers students practice in identifying figures by using their previous knowledge.

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Consider the solid figures as shown. Choose one or more figures that share the same characteristicss with figure B and write down those characterstics.

Next, choose one or more figures that share characterstics with H and write down those characterstics.

Depending on the student's approach to the problem, groups of figures can be formed according to various characterstics.

Students are free to to choose their method of classification.

This problem can be used to summarize what they have learned in classroom activities

It can also be used as an introductory topic to develop a future lesson plan.

We want to enlarge this rectangle to double its dimensions. What drawing methods can you discover to do this? Draw your figure by as many different methods as you can. Explain your methods in words.

Reference

The Open-Ended Approach
A New proposal for Teaching Mathematics

Edited by

Jerry P. Becker & Shigeru Shimada

Thank You!