

Golden Beads

Subtraction

Regrouping (Dynamic)

Materials:

A shelf containing:

- Entire set of golden beads (starting with the units and working right to left)
- (1) set of large decimal system numeral cards
- (2) sets of small decimal system numeral cards

- (2) Trays with a small coaster on each one to hold the unit beads

- Floor rug(s)

General Presentation:

1. Invite two children.
2. Go over to where the floor rugs are kept.
3. Choose a rug(s) and take it over to the floor and unroll it as you have been shown before.
4. Invite the children to layout the large numeral cards on the left hand side of the rug(s) in the order shown before.
5. Next, layout (1) set of small numeral cards to the right of the large numeral cards as shown before.
6. Next, layout the other set of small numeral cards to the right of the first set.
7. The remaining part of the rug will be used to perform the subtraction.
8. Give each child a tray.
9. The teacher should have the first child go over to where the large numeral cards are laid out and ask the child to get a specific amount (i.e. 5656).

10. Then the teacher should direct a child over to the shelf where the golden beads are and ask the child to fetch the quantity to match the numeral cards.
11. Have the child go to the “work rug” and lay out the numeral cards (minuend) to the left and the quantity to the right.
12. Ask the second child to go over to where the small numeral cards are laid out and get a specific amount in which the units are larger than in the large numeral cards (minuend) (i.e. 3238).
13. Then direct the child over to the shelf where the golden beads are and ask the child to fetch the quantity to match the numeral cards.
14. Have the child go to the “work rug” and lay out the numeral cards (subtrahend) underneath the large numeral cards and the quantity to the right.
15. Starting with the units, have the child bring down each of the beads counting “one unit, two units, three units, four units, five units, six units. We have only six units and we need eight units! How can I get more units? I am going to regroup a ten for units.”
16. Invite a child to take a tray over to the golden bead shelf and exchange one of the ten bars from the minuend for ten unit beads.
17. Have the child put the ten unit beads in the units place of the minuend. Continue counting “seven units, eight units.”
18. Continue with tens, hundreds, and thousands.
19. The golden beads that are remaining at the top are to be brought down starting with the units and placed below the subtrahend beads. Upon placement of the beads, say the quantity and then have a child go and get the small numeral card that represents it and place it below the subtrahend cards.
20. Continue the activity with the tens, etc.
21. When finished, the teacher should say, “When we started we had 5656 (minuend), we took away 3238 (subtrahend) and now we have remaining 2418 (remainder).”

22. Replace the large numeral cards back to their places on the rug and then return them to their box and then back to their shelf.
23. Replace the small numeral cards in the same way as the large numeral cards.
24. Replace the golden beads back to the shelf in order from right to left starting with the unit beads.
25. Roll you rug(s) as you have been shown and return it to its place.

Variations and Extensions:

1. Use a simple story problem to illustrate
2. Add the subtrahend and the remainder to check work

Points of Interest:

1. How a number becomes smaller when you take something away from it

Control of Error:

1. Quantity does not match symbol

Aims:

Process of subtraction, preparation for higher math, etc.

Age:

5 and up

Language:

Minuend, subtrahend, remainder, etc.