

Kindergarten Clarifying Lessons: Learning Centers List for Using Numbers Everywhere

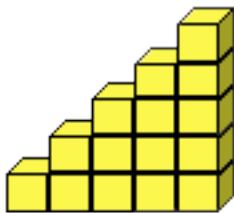
Math Learning Centers

Estimate How Many for the Next Step (K.1A, B, C; K.2A; K.13D; K.15)

Students work in pairs. Partners try to select the number of cubes needed to make the next step. (Or one partner will remove one step of the staircase, and the other partner will try to select the number of cubes necessary to replace the step.) Students discuss the reasoning they used in making their estimates. Teachers should listen for references to the use of one-to-one correspondence and number relationships.

Materials

- linking cubes
- teacher-made staircase with steps of one, two, three, four, and five cubes



Extension

Students try to estimate how many cubes it would take to make the entire staircase. Encourage them to explain their reasoning.

Investigate Numbers by Breaking Trains (K.1A, B, C; K.13B, D; K.15)

Students work in pairs. Each partner builds a train of a certain number of linking cubes, e.g., 5. (The number could be related to a unit being studied or the number assigned to study for that week.) One partner breaks his or her train into two parts, places one part in each hand, and places them on an index card. The second partner tries to break his or her train into two different parts. Partners continue building and breaking trains until all possible combinations have been made and are displayed on the index cards. Students should be able to justify why they think they have exhausted all possibilities.

Materials

- linking cubes
- index cards

Extensions

Challenge students to find other possibilities for a number by breaking its train into more than two parts.

Science Learning Centers

Sort Objects with Magnets (K.1A, C; K.8C; K.14A; K.15)

Students work in pairs. Partners take turns testing objects for attraction to the magnet. Students plan for arranging the two groups, those attracted and those not attracted, so that they can compare the two groups. Encourage students to make observations about the two groups. Listen for references to relative numbers of objects.

Materials

- a magnet
- several objects, e.g. buttons, coins, washers, etc.

Extension

Students continue to add to the collection. Encourage them to predict which group an object will belong to based on observations of the characteristics of the objects in each group.

Compare and Order Masses (K.1A, B, C; K.10A; K.13A, B, C, D; K.14A, B; K.15)

Students work in pairs. Partners take turns using the balance scale to compare the masses of two objects. Partners work together to order three objects according to their masses. The teacher listens for language such as greater than, less than, equal to, in between, etc.

Materials

- a balance scale
- objects to measure mass of, e.g., coins, buttons, shells

Extension

Students order a set of six or more objects according to their masses. Encourage them to try different strategies, such as comparing everything to say, two-color counters.

Language Arts Learning Centers

Describe an Item for Partner to Choose (K.1A, B, C; K.8C; K.14A, B)

Students work in small groups or all together in a large group. They sort a set containing a certain number of objects, e.g., 6, into two groups according to a particular attribute (red vs. not red, curved vs. not curved, etc.). (Objects can be chosen by the teacher to focus students on particular vocabulary.) Students use the vocabulary to describe the objects as they place them in each set. Students compare the number of objects in the two sets made from the original set

of six objects, then re-sort the objects according to other attributes to generate other combinations of six objects.

Materials

- a variety of objects (such as buttons, screws, keys, plastic animals)

Make Up Number Stories (K.1A, B, C; K.4; K.13A, B, D)

Students work in pairs. One partner uses the counters to act out a story involving numbers. The other partner listens and asks other questions about the story that the partners can use the counters to answer. Partners trade places and repeat the activity several times.

Materials

- two-color counters
- copies of story boards

Extensions

Students have calculators available to them to record the actions they describe in their stories. In this way they can begin to build connections between the physical objects and actions and the symbols that represent these objects, actions, and results.

Art/Fine Motor Learning Centers

Make Pictures with Pattern Blocks (K.1A, B, C; K.14A)

Students work in pairs. Each partner selects any combination of a certain number of pattern blocks, e.g., 6. (The number may be related to a unit being studied or the number for the week). The student may choose 6 blue pattern blocks, or 3 red and 3 blue, etc. Each student makes a picture with his or her set of pattern blocks. Partners discuss the likenesses and differences of their pictures. Partners repeat the activity with a different combination or different number of blocks.

Materials

- pattern blocks
- glue
- paper
- die-cut pattern block shapes (optional)

Extension

Students record their pictures by pasting die-cut pattern block shapes on paper. Lead the class in sorting and classifying the pictures according to the numbers of shapes used to make 6, e.g., 1 and 4 and 1 group; a 1 and 3 and 2 group, etc.

Explore Numbers with Toothpicks (K.1A, B, C; K.4; K.14A, B)

Students work independently. Each student selects a given number of toothpicks, e.g. 5, and glues the toothpicks in a design on a sheet of paper. Students continue to select 5 toothpicks and glue them into different designs on other sheets of paper. Students staple their sheets together to make "My Book of 5."

Materials

- toothpicks
- construction paper (approx. 4" by 6")
- glue

Extension

Students write or dictate descriptions of their number designs for each page. For example, "2 above and 3 below is 5 altogether."

Music/Movement Learning Centers**Make Numbers with Sounds (K.1A, B, C; K.4; K.13B, D; K.15)**

Students work in pairs. Each partner chooses a sound (made by hands or with an instrument) and plays a specified number of beats of that sound, e.g. 6. (One partner could point at the dots on a number card as the other partner plays the sound.) Partners play their sounds together the specified number of times and repeat several times with different sounds and different numbers.

Materials

- an assortment of musical instruments (such as a xylophone, wooden blocks, a triangle, etc.)

Extension

One partner or the teacher plays part of the 6 sounds with one instrument and the other partner or the rest of the students decide how many beats to play to make 6 altogether with the other sounds. Students discuss how they made their decisions.

Make a Number of Body Parts Touch the Ground (K.1A, B, C; K.13B, D)

Students work in pairs or in a large group. The first partner or the teacher names a number and the second partner or all the students in the class try to touch only that number of body parts to the floor. (0 is an interesting challenge.) Repeat several times with different numbers.

Extension

Students work in pairs to touch a total number of body parts to the floor. For example, if the teacher says, "Six," one partner might stand on two feet while the other partner puts both hands and both feet on the floor.