

Lesson A/B-1

Organizing Things into Categories

Overview:

Organizing things into categories is a practice that permeates every aspect of life. More than the end result of neatly arranged items is the thinking that goes into conceiving how things might be and are organized: the patterns or sequences that emerge from, the gaps that may be exposed by, and the questions that may arise from the system of organization. Indeed, organization is fundamental to clear logical thinking. This lesson will introduce students to the concept and utility of organizing items into categories based on similarities and differences, and it will challenge them to organize things different ways according to different purposes.

Position in the Progression of Learning: Organizing things into categories is a key process of thinking that applies to and aids learning and retention in every area of study, as well as in innumerable aspects of everyday life. Therefore, starting with giving children the concepts of organization by relating these concepts to their personal experiences is a logical first step in the progression of learning. This skill immediately comes into play in Lessons A-2 and B-2.

Time Required:

Introductory discussion (10-15 minutes)

Noting examples of where and how organization is used in everyday life (citing and having students cite examples; 30-40 minutes)

Games/activities as desired (30-60 minutes)

Practices: Students who demonstrate understanding can:

1. Point out how items are arranged into categories (organized) in homes, stores, libraries, and other everyday life situations.
2. Organize an assortment of miscellanea into logical categories.
3. Point out how different purposes may require organizing things according to different criteria.

4. From organizing an assortment of miscellanea into categories, suggest items that are missing or might be desired to make complete sets.
5. From organizing an assortment of miscellanea into categories, point out “oddballs,” items that don’t seem to go in any of the preconceived categories. Suggest ways of dealing with them.
6. Use the following words in their proper context: organize, organization, category(ies).
7. Use organization in thinking/memory exercises.
8. Older children should demonstrate organizational skills in their everyday lives, as well as in thinking and writing reports.

Required Background: No special background is required.

Materials:

At the beginning of the lesson: no special items or equipment are required.

Later in the lesson: an assortment of miscellaneous items from “junk” drawers and/or closets that children can practice organizing into various categories

Teachable Moments:

Teachable moments will occur as you show children how your classroom is arranged, where various things are kept, and as you introduce children to the school library and media center. Cleaning up, sorting things out, and putting things away offer additional teachable moments. Parents/caregivers will find teachable moments in any visit to a supermarket or department store.

Methods and Procedures:

A convenient place to begin is by explaining to students how your classroom is arranged. As you do so, use the words organize(d) and category(ies). For example, you might say: Let’s look at the way I have our room organized; that is, arranged. The first category, or kind of things, is books. They are all kept on the shelves here. The second category is art and drawing supplies; they are kept in the cabinets here, and so on, as suits your particular room.

Similarly, on visiting the school library and media center, state that you want them to see how it is ORGANIZED. K through Grade 1 books are one CATEGORY; they are here. The category of visual media is there, and so on.

In Q and A discussion, have children reflect on the categories of things in their home bedrooms and how they are organized. Coach them as necessary in citing categories; clothing, toys, books, shoes, and how they are kept (supposed to be kept) each in its particular chest of drawers, closet, open shelves, and so on.

On subsequent occasions, have children visualize their kitchens, name the categories of things kept there (dishes, eating utensils, pots and pans, food stuffs, etc.) and how they are organized, each kept in particular drawers and cabinets. Likewise, you may have children visualize a familiar supermarket, recall, and name categories (fresh produce, fresh meats, breakfast cereals, canned goods) and how the store is organized so that each category is in a particular section.

Note that what students may cite as a category may be quite variable and still be correct. The key point for all to understand is that a category includes two or more different items that share a certain similarity or purpose. Most categories can be subdivided into more specific categories, and/or different categories may often be combined into a single larger category. For example, the category of fresh produce might be divided into subcategories: fruits, vegetables. Or, fresh produce may be combined with other foodstuffs into the single category we call groceries.

As children master the meaning and concept of categories and organization, use Q and A discussion to have them ponder its purpose and usefulness. Why do we put things in categories and organize them accordingly? If necessary, they may be prompted: How would customers in a supermarket find things if they were not arranged in categories? How would the store manager be able to keep track of what items needed to be restocked if they were not organized? Encourage children to look for and cite additional examples of how things are organized according to categories.

The following activity is an excellent way to have children exercise and demonstrate their organizational skills. For each individual or small group, prepare an assortment of miscellaneous items from around the room/home: various sorts of pencils/markers, scraps of different colored paper and cloth, play things, books, buttons, beads, string/cord, paper clips, staples, thumbtacks, etc., whatever is handy. The challenge for each student/group is to organize/sort their miscellanea into categories.

Arguments/questions may arise among students. Should the items be sorted according to size? ... color? ... use? ... material from which it is made? ... or other attribute? If such questions do not arise among children, bring them up yourself and let children debate it, or have children organize their miscellanea according to different criteria. The learning point to discuss and have students grasp is that things can be organized in numerous ways. We choose a system of organization that suits our purpose.

If we are doing an art project, it may be most useful to organize things according to color. If we wish to consider the different things that can be made from the same material, we organize them according to material, and so on. As students organize their miscellanea into different categories, have them identify the criterion that they are using and the usefulness or purpose behind that particular system of organization. Again, the lesson for students to grasp is that there is no single right way to do it. It can vary depending on what purpose we have in mind.

Making Categories and Organization into a Way of Thinking

Instruct students that, just as important as organizing things in our homes or a grocery store, for example, is organizing thoughts in our heads. Human brains are simply incapable of handling a lot of different things at the same time. The discordant information may be tucked away in our minds, but it is often impossible to recall and use it unless it is organized into certain patterns of thought. Without organization, many bits of information may be simply lost and forgotten. Learning, recall, thought, and understanding are greatly enhanced by organization.

A game that both children and adults enjoy and which demonstrates this principle is the following. Twenty miscellaneous items from around the house are placed on a tray. People are allowed to look at the tray for a total of 60 seconds; then the tray is removed or covered and each person lists as many of the items as they can in two minutes. The problem most people confront is that the mind gets stuck on one or two items and other items are lost from immediate recall.

There is a secret to developing greater success at this game, and you can help children learn the secret. It is to mentally sort things into categories. For example, there may be utensils from the kitchen, items from a desktop, an assortment of small toys, and some coins. By mentally putting the things in categories, one reduces the number of things one must recall directly. Assign the categories to the fingers of your hand. Then, as you recall the categories from your fingers, most, if not all, of the associated items in each category will be remembered as well.

We are often awed by “memory experts” who demonstrate their skill on shows. Indeed, they may have remarkable minds, but they have also developed the skill of making associations among all the bits of information. That is, they organize the bits into patterns, which makes recall easier.

Such games/activities will emphasize, again, that there is no single right way to organize things. The choice will be according to the purpose at hand. Kids generally enjoy challenges of sorting the same miscellanea according to different criteria.

Ways in which organization aids thinking include the following. (You may construct various activities to give students experience with each.) First, by organizing things, patterns may emerge. Imagine or actually put puzzle pieces together without the picture guide. It may be a struggle, but by organizing pieces according to color and form they will fit together and the pattern (picture) emerges. By the same token, organization reveals gaps, i.e., missing pieces. Scientists constantly engage in this sort of activity. They collect data (make observations) which become the puzzle pieces; they organize these in various ways until at some point a picture (a theory) emerges. Often there are gaps in the theory and they set about finding the missing links, which if found will tend to confirm the theory.

Second, we often think of organization in terms of arranging things according to similarities and differences, but arranging events according to time is just as important. This comes into play in making any sort of historical record and also in planning future events, everything from your day's activities to long-term goals. Ordering things according to time can reveal cause-effect relationships, although remaining aware of the fact two events occur one after the other does not, by itself, indicate a causal relationship (see Baloney Detection Kit #3, page 24).

Most importantly, organization is crucial to understanding. One can have a head full of trivia, but no understanding. It is when the pieces are sorted into categories or sequences that patterns and insight emerge, and understanding occurs.

In conclusion, organization permeates every aspect of thinking, doing, and learning. Therefore, aspects of organization can and should be applied in the context of all future lessons and students should be coached as necessary in using and developing organizational skills. For example, writing a report is a task that overwhelms many students. A large part of the feeling of overwhelm is because all the ideas tend to bounce around like the balls in a random number drawing machine. You will need to coach students that the first step is to jot down thoughts and ideas as they occur. Then it is a matter of sorting them into categories, arranging the categories, and fleshing them out. But let students know that any given organization is not cast in stone. Changing organizational structures to better meet the challenges at hand is an ongoing activity of humans. Making changes does not diminish the importance of organization.

Questions/Discussion/Activities to Review, Reinforce, Expand, and Assess Learning:

Continue to use the words category(ies) and organization as they apply in every day situations. For example, in cleaning up after an activity or at the end of the day, say: Let's get the room organized; put everything back in its proper category. Incidentally, assigning individual students to pick up and put away a given category of items will

avoid their crowding and pushing at storage locations.

Encourage children to notice how items are organized and/or displayed in categories in various stores, zoos, museums, and other places they may visit. Have children share these observations/experiences in ensuing classes or small group discussions. In each case, have students describe how items are grouped into categories and displayed in given locations.

In small groups, have children take turns organizing the same set of miscellanea according to different criteria: color, use, material from which it is made, etc.

As students finish organizing a set of miscellanea, have them suggest things that are missing. That is, what additional items might be needed to fill out or complete sets. Ask and discuss: Would you have been able to do this before the miscellanea was organized?

To Parents and Others Providing Support:

In addition to reviewing and repeating any of the games/activities described above, it will be helpful to:

While in any store, call your children's attention to how similar items are grouped into categories and displayed in certain locations. As children gain the concept, ask them to describe the organization that they observe in an unfamiliar store, library, museum, or other location.

Enlist children's support in sorting laundry into certain categories and putting it away accordingly.

Coach children to organize things in their rooms into categories and put things away accordingly. (Let children have a say in how the organization is done.)

Cleaning out a messy closet or drawer offers a practical exercise in sorting things into categories and organizing each to a given location. Discuss this with your children as you help them do it.

At bedtime, have children reminisce about the day's activities. To aid recall, coach your child in terms of thinking of things in terms of categories: fun and games, meal times, learning activities, etc.

For older children facing the writing of a report, coach them to first put down ideas and then to organize them into categories.

Books for Correlated Reading:

Aboff, Marcie. *If You Were a Set*. Capstone, 2008.

Mariconda, Barbara. *Sort It Out!* Sylvan Dell Publishing, 2008.

Marks, Jennifer. *Sorting by Color*. Capstone, 2007.

_____. *Sorting by Size*. Capstone, 2007.

_____. *Sorting Money*. Capstone, 2007.

_____. *Sorting Toys*. Capstone, 2007.

Wong, Nicole. *"L" Is for Library*. Upstart Books, 2006.