

## Poster Tips for all Posters

1. These posters were created based on research that demonstrates that preschool children acquire skills best through active, hands-on learning with concrete objects (i.e., actual objects and actual situations vs. pictures of objects and hypothetical situations).
2. Use concrete objects and manipulatives when asking the questions or instructing the child. If the child is not already working with some objects, place some objects in front of the child or have the child gather some items from the classroom or outdoors.
3. The questions and instructions can also be applied to the child's environmental surroundings whether the child is in a new or familiar environment. First try the child in a familiar environment and then in a new environment.
4. Try to focus on the first question or instruction before asking the other questions to determine what the child already knows and will spontaneously tell you.
5. The questions and instructions on the posters tend to be listed in order of difficulty, with the last question generally being the most complex, but each child's abilities vary, so some questions may be more appropriate than others.
6. You do not need to ask all the questions and instructions on the poster or even ask them in the order listed on the poster. Try to gauge the child's readiness based on responses to some of the easier questions. As the child progresses, your questioning can become more involved and complex, and so will the child's answers.
7. The wording of the questions and instructions are meant as examples and can be changed and expanded to accommodate the current situation and the child's level of ability.
8. It is okay if children cannot answer the questions on the posters or if they answer them incorrectly at first. The idea is to get them thinking, so that they become better able to answer the questions with time.
9. We recommend using the posters in the order that they are numbered (i.e., begin with Poster 1, then after one month move on to Poster 2, and so on), because many of the skills and concepts in Posters 1 and 2 lay the foundation for the more complex skills in Posters 3, 4, and 5.

## Poster Tips for Individual Posters

### *Poster 1: Comparing, Matching, Classifying, and Sorting*

Start off by having the child compare two items. As the child becomes better at making comparisons, you can increase the number of items to be compared. This poster works well with children who do not yet have a lot of verbal skills because of the "show me" instructions. Once children become more verbal, you can work more with having them describe *how* objects are alike and different.

### *Poster 2: One-to-One Correspondence, Counting, Comparing, and Ordering*

Some children may not be familiar with some of the vocabulary terms on this poster (e.g., widest, thinnest), but use opportunities to introduce these terms to children, so they can later use the terms for comparing and ordering purposes. Also, when working with children on ordering items by size, you may need to first model the order for the child.

### *Poster 3: Patterns*

For young children, mathematical patterns can be chunks that repeat (ABABAB...) or grow (ABAABAAAB...). Preschoolers can learn about patterns in many of the following ways: 1) through movement (e.g., arms spread out, then pulled in, arms spread out, then pulled in); 2) creating sounds (e.g., clapping, singing, rhyming); 3) manipulating or observing objects (e.g., red bead, blue bead, red bead, blue bead); and 4) learning daily routines (e.g., children washing their hands after they go to the bathroom or children clearing their dishes off the table after they are done eating).

### *Poster 4: Experimenting*

Although, as with other posters, the questions and instructions on this poster can be asked separately, children will benefit from your using all the questions and instructions on this poster in the order listed. NOTE: The process of following through on all the questions and instructions may take some time (e.g., all day, all week, all month), depending upon the experiment that you are conducting.

Some examples of experiments that are appropriate for preschoolers are:

- what objects stick to magnets
- how the height of a ramp affects the speed and distance of an object

- how to most quickly melt an ice cube
- observing the mixing of different liquids, such as vegetable oil, corn syrup, water, and food coloring, and observing which objects float or sink in those liquids
- listening to how sounds travel through water, wood, and metal

*Poster 5: Noting Change, Time, and Frequency*

Some examples of changes that are appropriate for preschoolers to observe are:

- changes in an ice cube when it is left on a table, placed in liquid, or placed in the shade vs. the sun
- changes during and after eating: changes in amount of the food or liquid; changes in the child's state of hunger or thirst
- changes that occur while cooking: changes in texture while mixing ingredients; changes after baking; changes after freezing
- changes in the child's height and weight over the course of the school year

© Copyright 2002. The University of Texas at Austin. All Rights Reserved. This material is based upon work funded by the National Science Foundation under Planning Grant #ESI-0100315. Any opinions, findings, conclusions, or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.