

Designation: E2299 - 03

# Standard Guide for Sensory Evaluation of Products by Children<sup>1</sup>

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#### 1. Scope

- 1.1 This standard guide provides a framework for understanding the issues relating to conducting sensory and market research studies with children. It recommends and provides examples for developing ethical, safe, and valid testing methods. It focuses specifically on the concerns relevant to testing with children from birth through preadolescence. The guide assumes that teens older than 15 years of age are generally capable of performing sensory tests like adults, and therefore, all standard procedures used with adult subjects apply. The one exception, however, is legal consent where parental permission should be obtained for anyone under 18 years of age.
- 1.2 The guide will take into account the wide range of children's physical, emotional, and cognitive levels of development. It will prove useful for developing tasks that are understandable to children. It recommends alternative modes for children to communicate their opinions or perceptions back to the researcher, such as appropriate scales and measures.
- 1.3 The ethical standard presented in this document should be viewed as a minimum requirement for testing with minors. The safety and protection of children as respondents, as well as an attitude of respect for the value of their input should be of primary concern to the researcher.
- 1.4 The considerations raised in this document may also be useful when testing with the elderly or with adults who have developmental handicaps.
- 1.5 This document is not intended to be a complete description of reliable sensory testing techniques and methodologies. It focuses instead on special considerations for the specific application of sensory techniques when testing with children. It assumes knowledge of basic sensory and statistical analysis techniques.

#### 2. Referenced Documents

2.1 ASTM Standards:<sup>2</sup>

# E253 Terminology Relating to Sensory Evaluation of Materials and Products

E1958 Guide for Sensory Claim Substantiation

2.2 Other Publications

Manual 26 Sensory Testing Methods: Second Edition<sup>3</sup>
STP 758 Guidelines for the Selection and Training of Sensory Panel Members<sup>3</sup>

# 3. Summary of Guide—Specific Applications for Testing With Children

- 3.1 The primary use of children in sensory studies is to measure the acceptability of foods, beverages, pharmaceutical colors and flavors, and other products designed to be marketed to, consumed by, or used by children.
- 3.2 In this sense, they answer many of the same questions posed by effective sensory tests with adults. Children are used to measure overall acceptance, liking, or preference between samples. The resulting information can be used to aid in formulation changes or to choose between alternative products.
- 3.3 Sensory testing with children can also be used to identify unique characteristics or functions of products, such as the effectiveness of childproof safety caps. Other applications include advertising research or identification of unfilled needs or wants as part of the product development process.
- 3.4 Finally, some organizations are using children for basic research into the effectiveness of different scaling methods or sensory testing methodologies with children of varying ages.

## 4. Significance and Use

- 4.1 It is necessary and useful to test with children because they represent the real end-users for many products. Some products are developed specifically for children, and some are dual-purpose products that are intended for adults and children. Examples include: baby foods, diapers, ready-to-eat cereal, juices, food or lunch kits, candy, toys, vitamins and other pharmaceuticals, music and videos, interactive learning tools, and packaging.
- 4.2 Children have influence over their parents' purchase decisions. They also have more money than in the past, and are responsible for more of their own purchase decisions at an earlier age. As a result, many manufacturers advertise specifically to children.

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<sup>&</sup>lt;sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>&</sup>lt;sup>3</sup> Available from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428, website: www.astm.org.

4.3 Creating a product for children requires input from children because their wants and needs differ from those of adults. For example, they may differ from adults in preferences or sensory acuity, or both, for sweetness, saltiness, carbonation, and texture. It is impossible to predict the nature of these differences without actual input from the intended target audience, and for that reason, testing with children continues to grow in the consumer product industry.

#### 5. Test Methods

- 5.1 Skill Development and Appropriate Testing:
- 5.1.1 Testing with children requires special consideration of their language development, motor skills, and social and psychological development. Every child is unique, and there is great variation within and across age groups. In developing appropriate test methodologies for children, it is more important to consider individual skill development than chronological age. Table 1 provides a general guideline for expectations of skill level and appropriate evaluation techniques for each age group. For each age group, there is corresponding text discussing special testing considerations.
- 5.1.2 The researcher should keep in mind that there are many children in each age grouping who will fall below or above these skill levels. It is the responsibility of the researcher to verify the ability of the children to complete the task as planned, or to modify it as required to meet the needs of the children selected for testing. For example, while some second grade children may be able to read and understand test instructions, others will need assistance with that task.
- 5.2 Infants (Birth to 18 months) and Toddlers (18 months to 3 years):
- 5.2.1 Recommended Evaluation Techniques and Types of Information:
- 5.2.1.1 Information may be gathered from behavioral observations, diaries, or records from an adult experimenter who may be a trained evaluator, or the child's primary caregiver. It is the adult who interprets infant or toddler responses. With toddlers, some verbal responses may also be obtained. When the primary caregiver is involved, having an unbiased observer watch the interaction between the child and adult is beneficial. Video taping the test allows greater flexibility and opportunity for additional review.
- 5.2.1.2 Information may include observations recorded before, during, or after product use in either a clinical environment or more natural usage situation (such as the home or a group child care environment). Behavioral observations may include hand and eye movement, facial expressions, time spent playing, amount and time of consumption, or interaction with the product. Diaries or records can be used to track intake or consumption, frequency and duration of use, length of attention span, or the condition of the product before, during and after use. In addition, an adult can fill out a simple questionnaire with facial scales as a way to mimic the child's response and aid in interpretation.
  - 5.2.2 Cautions:
- 5.2.2.1 Due to the limited language, attention span, and motor skills, the length of the testing session and number of products evaluated must be limited. Input from the primary caregiver as to the amount and length of exposure is critical.

- Consideration may be given to exposing the caregiver to the products prior to the test as a way to screen and eliminate a large number of samples. This technique also allows the caregiver to increase their comfort level about exposing their child to the product.
- 5.2.2.2 Caution should be used when the caregiver is asked to make a subjective judgement for the young child. Primary caregivers, especially parents, may respond from personal preferences, interpreting for the child their own personal opinion. At other times, primary caregivers or parents may unknowingly establish a pattern of responses that they believe would present their child in a positive manner to the evaluator. An option to reduce potential biases includes providing an environment that fosters honest responses (for example, fielding through a third party agency or non-company identified facility, indicating the importance of the data, or how the data will be used, or both). Another option is to have the parent feed the child first, record the child's response and then the parent may be instructed to taste and record their own response.
- 5.2.2.3 Whether the observer is the primary caregiver, an experimenter or trained evaluator, adult interpretation of observational responses are subjective and may be affected by factors unrelated to the product in question. For example, physical discomfort on the part of the child, such as tiredness or illness, may result in behaviors such as refusing to eat or pushing products away with hands. An unbiased observer or videotaping the session, or both, in conjunction with parental input can aid in cases where interpretation of a response is unclear. Multiple exposures and repeated evaluations may also be helpful.
  - 5.3 Pre-School (Age 3 to 5 years old):
- 5.3.1 Recommended Evaluation Techniques and Types of Information:
- 5.3.1.1 Behavioral observations and the diaries used with infants and toddlers are also appropriate with children 3 to 5 years old. In addition, preschool children can begin using verbal skills to communicate their responses about the products. One-on-one interviews in the presence of a primary caregiver, paired comparisons, or limited use of sorting and matching techniques using pictures are appropriate.
- 5.3.1.2 Keeping in mind individual differences, many children in this age group can perform simple tasks that provide quantitative results. Suggested quantitative methods for preschool children include using facial scales to measure liking, paired preference, and preference ranking techniques.
  - 5.3.2 Cautions:
- 5.3.2.1 Children 3 to 5 years old exhibit a wide range of developmental skills. This age group has relatively limited fine motor skills, attention span, verbal and cognitive skills. These characteristics, combined with possible emotional dependence, require that testing protocols be kept simple and non-threatening.
- 5.3.2.2 Careful consideration must be given to testing location. Suggested options include testing in central location, educational, play or social settings. Familiar settings such as preschools, churches, synagogues, or home settings may be ideal. Both controlled and relaxed environments offer advantages and disadvantages that the researcher must consider.

# TABLE 1 Summary of Skills and Behaviors of Children and Teens

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Skill/Behavior	Infant	Toddler	Pre-School	Beginning Readers	Pre-Teen	Teenage
	Birth to 18 months	18 months to 3 years	3 to 5 years	5 to 8 years	8 to 12 years	12 to 15 years
Language—Verbal, Reading/	Pre-Verbal. Rely on facial	Beginning to vocalize, adult	Early language development.	Moderately developed verbal	Increasingly verbal—self-	Generally strong language
Written Language,	expressions. Cannot read.	interpretation still required.	Can observe facial	and vocabulary skills;	expression improves.	and vocabulary skills.
Vocabulary	Cannot write. Use sounds,	Cannot read. Cannot write.	expressions, respond to	cognitive skills increase.	Reading and written	Reading and written
	very few words.	Early word usage	questions and pictures.	Early reading and writing	language skills increase	language skills continue to
		developing.	Generally reading and writing	skills vary greatly at this age.	rapidly and are sufficient for	increase. Adult level in most
			skills are not present.	Adult assistance is advised.	most self-administered tasks	respects.
					at the upper limits of this age	
					group.	
Attention Span	Gaged by eye contact and	Gaged by eye contact or	Limited, but increasing.	Limited by understanding of	Attention span is increasing,	Similar to adults,
	bodily movement. Bright	involvement with task, bodily	Bright colors, movement are	task and interest level,	but holding interest is critical	involvement and interest
	colors, sound, and	movement. Bright colors,	effective.	challenge. Limit tasks to < 15	and sometimes difficult.	subject to peer pressure.
	movements capture	sound, and movements		min.	Taking tests is a familiar	
	attention.	capture attention.			activity.	
Reasoning	Limited to pain and pleasure.	Limited, but concept of "no"	Limited, but beginning to be	Developing with increased	Full ability for understanding	Reasoning skills are fully
		becoming a factor. Definite	able to verbalize what is	learning, cause/effect	and reasoning, capable of	developed and similar to
		preferences begin to	liked and what is not.	concepts.	decision making.	adults.
		emerge.				
Decision Making	Do not make complex	Do not make complex	Limited, but concepts of what		Capable of complex	Fully capable of adult
	decisions.	decisions, but "yes"/"no" can	is liked and what is not	increasing, but influence of	decisions, peer influences a	decision processes, subject
		be decisive. Ability to choose	strengthen. Able to choose	adult approval is evident.	factor.	to peer influences.
		begins.	one thing over another.	LUIS		
Understanding Scales	Do not understand scales.	Do not understand scales.	Understanding of simple	Scale understanding	Capable of understanding	Similar to adults.
		tng.//	scales beginning, sorting or	increasing, simple is best,	scaling concepts with	
		100.//	identification tasks more	use easy vocabulary.	adequate instruction.	
			effective.			
Motor Skills	Possess some gross motor	Rapid gains in gross motor	Development of gross and	Gross motor skills	Hand to eye and other fine	Similar to adults.
	skills, no fine motor skills	skills, fine motor skills still	fine motor skills increasing.	developed, fine skills	motor skills developed.	
<u> </u>	B	limited.		becoming more refined.		
Recommended Evaluation	Behavioral Observations		Previous, plus: Paired	Previous, plus:	Previous, plus more abstract	Capable of all adult
Techniques	Diaries		Comparison	Simple attribute ratings	reasoning tasks.	evaluation techniques.
	/		Sorting and Matching Limited Preference	Liking scales—pictorial or simple word scales.	Hedonic scales.	
					Simple attribute scaling and	
			Ranking atalog/standar	Group discussions	ratings.	
Adult Involvement	Drimon, Coronivor	d_4e2f_8d	One-on-one interviews	Concept testing	Conseque oble to bondle "	Adult participation not
Adult irivoivement	Primary Caregiver  Trained Observer  G-4621-80dd-626162153231/88					
	Experimenter			auriiiiistereu tasks.		required, unless appropriate to evaluation technique.
	Expenimenter					to evaluation technique.



Generally, a relaxed atmosphere encourages more typical behavior when testing products with young children than a clinical setting, although a controlled setting may sometimes be necessary for test specific reasons.

- 5.3.2.3 Some children in this age group are uncomfortable with unfamiliar adults. A suggestion to ease their apprehension may be to include a warm-up period to introduce the child to the researcher and task in the presence of their parents.
  - 5.4 Beginning Readers (Approximately 5 to 8 years old):
- 5.4.1 Recommended Evaluation Techniques and Types of Information:
- 5.4.1.1 Children in this age group should be capable of completing any tasks that are used for testing with younger children. This age group usually has moderately developed verbal skills, an expanding vocabulary, increased cognitive abilities, and increased fine motor skills. Scale understanding is increasing, but limited word scales, facial scales, and paired preference are appropriate.
- 5.4.1.2 Although the early readers' ability to make decisions are increasing, choices should be limited and testing tasks should be simplistic. Appropriate techniques include using one-on-one interviews, short affective tests, or brief group discussions to accommodate the limited attention spans inherent to this age group.
- 5.4.1.3 Some children in this group are better able to convey more details about their likes and dislikes, preference ratings, product liking, and acceptance decisions than their younger counterparts, but not all have that capability. At this stage, since everything they do is so dependent on skill level, very simple tasks yield the best opportunities for success. Additional life experience and exposure to product advertising can lead to a better understanding of impressions about products and the development of more personal preferences. Children in this age group can certainly identify what they like, but not necessarily why they like it. Many do not understand the difference between sweet and sour, thick and thin, etc. Some children in this group, however, are able to understand and use just-about-right (JAR) scales, but only with very simple vocabulary.

#### 5.4.2 Cautions:

- 5.4.2.1 Scale understanding and use is still limited for this group. Facial scales or one-on-one interviews are likely to be more effective than word-only scales that may not be completely understood. Simple, basic vocabulary is key. At best, children in this group can indicate if they like "how something looks," but not if they like its "appearance." They can indicate if they like the "taste" of a product, but not its "flavor." They can respond to "how it feels in your mouth," but not to "texture." Simple vocabulary is necessary. Adult intervention may be required for clarification of test instructions or assistance with reading tasks, but the researcher must be aware of potential parental influence or a desire on the part of the child to please the adult interviewer.
- 5.4.2.2 At this age, most children can participate in short interviews without the presence of their parents. For some children, emotional maturity and shyness may interfere with their ability to adequately complete the task and may result in a complete lack of response. The researcher is faced with a decision on how to handle children who have difficulties, and

- must determine whether or not their data should be eliminated, or if the child should be replaced through additional recruiting.
- 5.4.2.3 As mentioned with the previous age groups, simplicity is key. The researcher who keeps the task simple and gives clear, concise verbal directions will improve the likelihood of a successful test.
  - 5.5 Pre-Teen (8 to 12 years old):
- 5.5.1 Recommended Evaluation Techniques and Types of Information:
- 5.5.1.1 Children in this age group should be capable of completing any tasks that are used for testing with younger children. Many children in this age group are also able to complete more challenging tasks and understand increasingly complex wording, which allows for greater flexibility in questionnaire design. Self-administered tests are usually appropriate for this age group. However, diversity in skill level can be especially pronounced in this age category. The researcher must continuously be aware of differences in skill levels, and be prepared for some children in this group to overlap with the early reader skill level. Sometimes, even basic reading skills are not fully developed until 11 to 12 years of age, and therefore, some children may require adult assistance in order to read the questionnaire or to complete self-administered questionnaires.
- 5.5.1.2 Quantitative techniques that are effective for this group are paired comparison or paired preference choices, ranking tasks, basic attribute and JAR scales (for example, sweet), and hedonic scaling (facial expressions may be more suitable than word anchors for the younger portion of the age group). One-on-one interviews are still appropriate for this age group. At this age, children can be expected to participate in short interviews without the presence of their parents. Responses to open-ended questions may be quite limited, and some younger children in this group may have difficulty with answering any open-ended questions, except in an interview format
- 5.5.1.3 Qualitative techniques such as focus group discussions are useful with this age group to address qualitative objectives, including concept testing. Depending on the testing situation, consider testing older children in this age group separately by gender.
- 5.5.1.4 In general, this age group is increasingly able to handle abstract ideas and complex decisions. Children in this age group have definitive ideas about their likes and dislikes, which may be quite different from adults. As verbal skills increase, they can provide increasingly informative descriptions about their impressions of products.

#### 5.5.2 Cautions:

5.5.2.1 At this stage in development, interactions between boys and girls have increasing potential to interfere with concentration and attention to the task at hand. To aid in obtaining clearly individual responses and to avoid the bias that comes with peer interaction, it may be necessary to separate children who are friends. This usually applies when testing in a group setting such as school or camp. This is similar to the concerns previously expressed regarding parent-child interactions, or problems encountered when testing with adults who are acquainted. The desire and pressure to agree with one's

peer group can be a powerful influence that may bias sensory test results, and good sensory practice dictates that the sensory professional anticipate potential sources of bias and protect against them as much as possible in structuring the test.

- 5.6 Teen (12 to 15 years):
- 5.6.1 Recommended Evaluation Techniques:
- 5.6.1.1 Teens are capable of completing all types of tests described for preteens. In addition, they are able to complete more complex questionnaires requiring multiple decisions. Their abilities are similar to those of adults, and they are able to participate in discrimination testing if they are trained to perform the task.
- 5.6.1.2 Evaluators between 12 and 15 years of age are increasingly verbal and can provide detailed descriptions of their likes and dislikes of products, as well as the reasons for those attitudes. JAR scales should pose no difficulty as long as the attributes in question are understood. Teens are able to use attribute scales and provide intensity ratings for product attributes.
  - 5.6.2 Cautions:
- 5.6.2.1 Consider the cautions described in 5.5.2.1. Again, it is important to emphasize that during group discussions, the researcher should consider separating males and females in order to limit distractions. Peer influence is important to teens and should be considered to assure unbiased responses.

# 6. Procedures—Test Design and Protocol

- 6.1 Test Types:
- 6.1.1 The standard formats used when testing with adults are also used with children, for example, home use, or central location tests, with modifications for the special circumstances that arise with children as subjects. Pretesting is recommended to determine the appropriate ratio of adults or administrators to children necessary for effective execution of the test. In addition, pretesting is necessary to determine the appropriateness of the questionnaire and the test method being used.
- 6.1.2 Computers are used effectively with children, depending on their experience and exposure. When using computers, the basics regarding skill-appropriate questionnaire design should be applied, using pictures and scales appropriate to children. When conducting tests outside the home, facilities should be structured to be user-friendly and safe for children.
- 6.2 Criteria for Using Children as Subjects—Recruitment and Screeners:
- 6.2.1 Children can be recruited from a wide variety of sources, with advantages and disadvantages to each (see case studies for examples of various recruitment scenarios). Overrecruiting is helpful with children as well as adults. Additionally, the behavior of the potential participants may be observed in the waiting room to eliminate those who may be too shy, nonverbal, or disruptive.
- 6.2.2 Many companies use children of their employees. Others use church-affiliated children's or youth groups, or organizations such as the Girl/Boy Scouts, YMCA, community centers, or sport's teams, as well as summer camps.
- 6.2.3 Schools are a common source of children for testing, especially if participation is used as a learning experience. Often, private schools are more flexible than public school districts in allowing testing during the school day. Whenever

- possible, it is recommended that children from more than one school be recruited. This will help the researcher avoid potential biases due to homogeneity of children in terms of ethnic origin, religion, parent's social background, etc.
- 6.2.4 More innovative recruiting sources include recreational parks, and state or county fairs. Standard techniques such as shopping mall recruiting or newspaper advertising are also used.
- 6.2.5 Screeners should be administered first to the primary caregiver, and then to the child participating. While skill level is an important factor in all aspects of sensory testing with children, skill level is not the most important factor during screening. The test design can be adapted to be appropriate for the ability of your desired target audience. Current usage of the product within the category is often a criterion for selection of participants, as well as the age and gender of the audience for whom the product is intended. In the case of new products, a willingness to try the product or an interest in the concept may be the most appropriate criterion.
- 6.2.6 When determining secondary screening qualifications, developmental factors such as articulation and comprehension must be considered. With young children, visual response techniques are sometimes employed for screening. Verbal screening is suggested for children up to age 7 or 8, because it has been observed that younger children may have difficulty completing a written questionnaire without assistance. The researcher may find it necessary to recruit a category user group as an initial step, and follow up with an additional screening to eliminate those children who have not yet developed the skill set necessary to complete the task required.
- 6.2.7 Consideration of allergies is especially important with children, making informed parental consent a necessity for participation. A list of ingredients contained in the test products is essential for informed parental consent, due to an apparent increase in childhood allergies. It may be necessary to note that products are manufactured in a facility that also processes nuts. Children with food allergies should not be allowed to participate. For pharmaceutical testing, it is important that the children are not currently taking medication.
- 6.2.8 Creating a safe testing environment must be a primary consideration, even if it requires planning for physical limitations at a given developmental stage, such as testing very sticky or chewy products with young children that may have loose teeth, or for teens with braces. Please refer to Section 8, Legal and Safety Issues, for additional screening considerations.
  - 6.3 Number of Subjects:
- 6.3.1 The number of children per test can vary based on the objective, the test design, and the scope of information desired. When testing with children, recruiting a somewhat larger assessor base is recommended because of the potential for unusable data, due to variation in children's ability to respond because of basic skill level. The experimenter is then challenged with a decision regarding what to do with data that appears to be compromised by inappropriate skill sets. If it is ignored, are you compromising the integrity of the test through tampering with the data? These questions are best avoided by

careful design of the study from the outset, and through careful and adequate screening and pretesting.

6.3.2 In a Central Location Test, when the number of children required is large, testing with smaller subgroups can make the task easier to manage. The number of administrators present should be proportional to the complexity of the task.

## 6.4 Description of the Task:

6.4.1 The most common use of children in sensory tests seems to be for issues concerning taste, visual appeal, or texture of food or pharmaceutical products. Visual tests of a product's eye appeal are also effective with children. Visual tests are often used with packaging, advertising issues, or with items such as toys. Home-use tests or one-on-one studies are useful for testing non food items such as disposable diapers. In-home testing may also be appropriate when the child is intended to be involved with the actual use of the product over time, such as making their own peanut butter and jelly sandwiches, or using ready-to-eat cereals on multiple occasions.

6.4.2 Depending on their skill level, children are capable of performing a variety of tasks. They can tell the researcher if a product is liked or disliked, and in some cases to what degree it is liked or disliked. They can rank products in order of their preference, and some are capable of answering simple and well-defined attribute questions. Use of a trained interviewer is essential with young children, and with older children, a trained interviewer allows a means of assessing how well the child understands the questions being asked. In a self-administered test, assumptions regarding the child's ability to comprehend must be made. Certain inherent biases exist when products are tested at home. Therefore, care should be exercised when determining the appropriateness for home-use tests that can be influenced by parents.

# 6.5 Time to Complete Task:

6.5.1 The key to successful testing with children is to keep the task short and to the point and to do the same with the length of the test session. The time required for task completion is largely dependent on the test design, objective, and execution plan. Taste tests should be kept short due to fatigue, but other tasks can be longer if evaluative tools are entertaining. It is essential to have the task completed before the child loses interest, and attention wanders.

#### 6.6 Questionnaires:

6.6.1 Depending on the age and developmental level of the children being tested, hedonic scales, including facial scales and the nine point kid's language scale (super good—super bad) have all been used successfully. Children are able to use directional scales if the questions are clearly understandable and use a simple vocabulary appropriate for the children's age group and skill level.

6.6.2 Fig. 1 gives examples of scales. Scale terminology needs to be validated for appropriateness to the children being tested. The questionnaire should be pretested to be sure the questions are understandable, the instructions can be followed, and the tasks can be completed independently. Pretesting also gives a sense of the average length of time needed for children to complete the testing tasks. Depending on the age of the children and the complexity of the questionnaire or task, a

warm-up exercise is effective in familiarizing the children with the scale(s) and giving them confidence before proceeding with the actual product evaluation.

6.6.3 When using self-administered questionnaires rather than one-on-one interviewing techniques, the questionnaire should be uncluttered, simple, and easy to read. Large type fonts and plenty of white space, as well as brief, clear instructions may help clarify the task of answering questions without adult assistance. Because of possible limitations with regard to their experience level, precautions should be used in terms of selection of attributes to be measured. Simplicity is the rule.

#### 6.7 Incentives:

6.7.1 The incentives offered vary as much as the sources of children for sensory testing. Gift certificates for both the children and their parents, money for the organization or school, and cash are often used. Other, less expensive options are also effective. Candy treats, small toys, baseball cards, stickers, or special pencils are some possibilities. Other ideas include tickets to movies, sporting events, or coupons. Discuss incentives offered with the parents in advance.

## 6.8 Location:

6.8.1 The actual location of the test depends on the study design or objective. If central location testing is appropriate, the test site must be selected to meet the requirements of the study, and to match the testing objective to the respondent's needs. For example, tables may be lowered to suit the respondents. Tables should be set up so children are not facing each other during the testing. Age appropriate pictures may enhance a sterile environment as long as they are not too distracting. Picnic style or beanbag chairs lend themselves to certain test situations. Schools, churches, research facilities, and state fairs have been used with success. Safety issues must always be considered, especially with young children. Adequate supervision is necessary at all times and will be more labor intensive than with adult testing. The researcher should anticipate interaction between children and plan appropriate intervention in order to minimize potential bias.

#### 6.9 Adult Involvement:

6.9.1 The age of the children being tested and the test objective are important considerations when deciding on the extent of adult involvement. Often, parents are in attendance but are given their own separate tasks in order to minimize their influence on their child's responses. In some cases, parental involvement is necessary and appropriate. In homeuse situations, parents are typically involved in administering the test and collecting the data.

#### 6.10 Permission:

6.10.1 Regardless of the extent or nature of the task, parental consent is required. It is prudent to protect the child, yourself, and those you represent as a researcher.

6.10.2 If products are ingested or topically applied, parents must be informed of the ingredients which "may or may not" be present in the samples. Parental permission slips must include: (1) permission to test, (2) consent for dispensation of compensation to the school or organization if appropriate, and (3) verification of no food or drug allergies on the part of the