

Supplemental Information

Instructions and Permissions for Use of the M-CHAT

The Modified Checklist for Autism in Toddlers (M-CHAT; Robins, Fein, & Barton, 1999) is available for free download for clinical, research, and educational purposes. There are two authorized websites: the M-CHAT and supplemental materials can be downloaded from www.firstsigns.org or from Dr. Robins' website, at <http://www.mchatscreen.com>

Users should be aware that the M-CHAT continues to be studied, and may be revised in the future. Any revisions will be posted to the two websites noted above.

Furthermore, the M-CHAT is a copyrighted instrument, and use of the M-CHAT must follow these guidelines:

- (1) Reprints/reproductions of the M-CHAT must include the copyright at the bottom (© 1999 Robins, Fein, & Barton). No modifications can be made to items, instructions, or item order without permission from the authors.
- (2) The M-CHAT must be used in its entirety. There is no evidence that using a subset of items will be valid.
- (3) Parties interested in reproducing the M-CHAT in print (e.g., a book or journal article) or electronically for use by others (e.g., as part of digital medical record or other software packages) must contact Diana Robins to request permission (drobins@gsu.edu).
- (4) If you are part of a medical practice, and you want to incorporate the M-CHAT into your own practice's electronic medical record (EMR), you are welcome to do so. However, if you ever want to distribute your EMR page outside of your practice, please contact [Diana Robins](#) to request permission.

Instructions for Use

The M-CHAT is validated for screening toddlers between 16 and 30 months of age, to assess risk for autism spectrum disorders (ASD). The M-CHAT can be administered and scored as part of a well-child check-up, and also can be used by specialists or other professionals to assess risk for ASD. The primary goal of the M-CHAT was to maximize sensitivity, meaning to detect as many cases of ASD as possible. Therefore, there is a high false positive rate, meaning that not all children who score at risk for ASD will be diagnosed with ASD. To address this, we have developed a structured follow-up interview for use in conjunction with the M-CHAT; it is available at the two websites listed above. Users should be aware that even with the follow-up questions, a significant number of the children who fail the M-CHAT will not be diagnosed with an ASD; however, these children are at risk for other developmental disorders or delays, and therefore, evaluation is warranted for any child who fails the screening.

The M-CHAT can be scored in less than two minutes. Scoring instructions can be downloaded from <http://www.mchatscreen.com> or www.firstsigns.org. We also have developed a scoring template, which is available on these websites; when printed on an overhead transparency and laid over the completed M-CHAT, it facilitates scoring. Please note that minor differences in printers may cause your scoring template not to line up exactly with the printed M-CHAT.

Children who fail 3 or more items total or 2 or more critical items (particularly if these scores remain elevated after the M-CHAT Follow-up Interview) should be referred for diagnostic evaluation by a specialist trained to evaluate ASD in very young children. In addition, children for whom there are physician, parent, or other professional's concerns about ASD should be referred for evaluation, given that it is unlikely for any screening instrument to have 100% sensitivity.

M-CHAT

Please fill out the following about your child's usual behavior, and try to answer every question. If the behavior is rare (you've only seen it once or twice), please answer as if your child does *not* do it.

1. Does your child enjoy being swung, bounced on your knee, etc.? Yes No
2. Does your child take an interest in other children? Yes No
3. Does your child like climbing on things, such as up stairs? Yes No
4. Does your child enjoy playing peek-a-boo/hide-and-seek? Yes No
5. Does your child ever pretend, for example, to talk on the phone or take care of a doll or pretend other things? Yes No
6. Does your child ever use his/her index finger to point, to ask for something? Yes No
7. Does your child ever use his/her index finger to point, to indicate interest in something? Yes No
8. Can your child play properly with small toys (e.g. cars or blocks) without just mouthing, fiddling, or dropping them? Yes No
9. Does your child ever bring objects over to you (parent) to show you something? Yes No
10. Does your child look you in the eye for more than a second or two? Yes No
11. Does your child ever seem oversensitive to noise? (e.g., plugging ears) Yes No
12. Does your child smile in response to your face or your smile? Yes No
13. Does your child imitate you? (e.g., you make a face-will your child imitate it?) Yes No
14. Does your child respond to his/her name when you call? Yes No
15. If you point at a toy across the room, does your child look at it? Yes No
16. Does your child walk? Yes No
17. Does your child look at things you are looking at? Yes No
18. Does your child make unusual finger movements near his/her face? Yes No
19. Does your child try to attract your attention to his/her own activity? Yes No
20. Have you ever wondered if your child is deaf? Yes No
21. Does your child understand what people say? Yes No
22. Does your child sometimes stare at nothing or wander with no purpose? Yes No
23. Does your child look at your face to check your reaction when faced with something unfamiliar? Yes No

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Modified Checklist for Autism in Toddlers (M-CHAT) Follow-Up Interview

****May be used for research or clinical purposes, but please do not post on a website; instead you may post a link to www.mchatscreen.com****

Reference to use if you cite the M-CHAT FUI in research:

Robins, D.L., Fein, D., & Barton, M.L. (1999). *Follow-up Interview for the Modified Checklist for Autism in Toddlers (M-CHAT FUI)*. Self-published.

Acknowledgement: We thank Joaquin Fuentes, M.D. for his work in developing the flow chart format used in this interview.

The M-CHAT Follow-Up Interview can be downloaded free of charge from <http://www.mchatscreen.com>

For more information, please contact Deborah Fein (deborah.fein@uconn.edu) or Diana Robins (drobins@gsu.edu)

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Instructions for the M-CHAT Follow-Up Interview

Select items based on M-CHAT scores. Administer only those items for which the parent indicated behavior that demonstrates risk for autism spectrum disorders (ASDs), meaning that the item was failed, and/or those which the healthcare provider has concerns may not have been answered accurately.

Note: Only a small number of children whose total score is ≥ 10 will have a Follow-up Interview score that does not warrant referrals for evaluation and intervention. Providers may opt to bypass the Follow-up Interview when the M-CHAT total score is 10 or greater, and immediately refer the child for diagnostic evaluation and early intervention services.

Score the M-CHAT Follow-up Interview items in the same manner as the M-CHAT. If an item is failed, it indicates risk for ASDs. Failure of two critical items (items 2, 7, 9, 13, 14, 15) or any three total warrants referral to a specialist. Please note that screening positive on the Follow-up Interview does not diagnose ASDs; it indicates increased risk for ASDs.

Please note that if the healthcare provider has concerns about ASDs, children should be referred to a specialist regardless of the score on the M-CHAT or M-CHAT Follow-up Interview.

Please use the following M-CHAT page to record the scores after the interview is completed.

M-CHAT

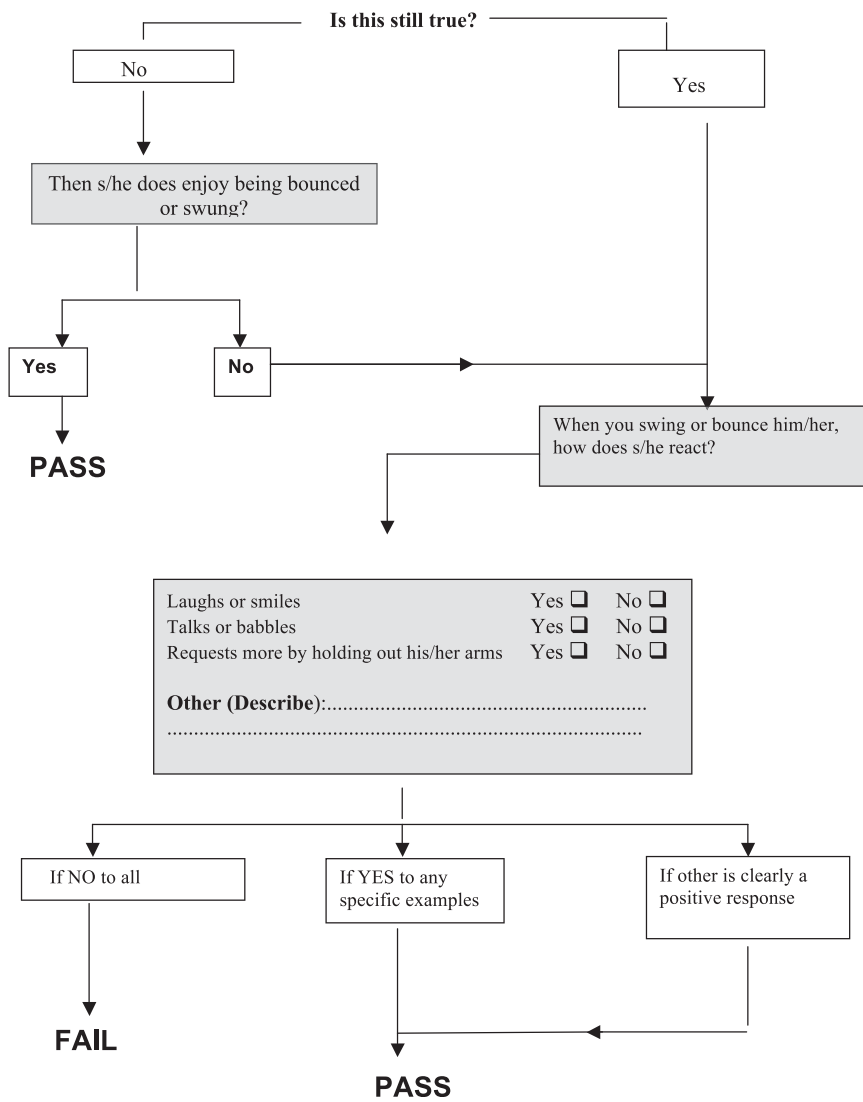
Please score the interview items on this page. Critical items are marked in **BOLD** and reverse score items, meaning those for which a score of “Yes” indicates risk for autism (11, 18, 20, 22) are noted by the word **REVERSE**.

- | | | |
|--|------------|-----------|
| 1. Does your child enjoy being swung, bounced on your knee, etc.? | Yes | No |
| 2. Does your child take an interest in other children? | Yes | No |
| 3. Does your child like climbing on things, such as up stairs? | Yes | No |
| 4. Does your child enjoy playing peek-a-boo/hide-and-seek? | Yes | No |
| 5. Does your child ever pretend, for example, to talk on the phone or take care of a doll or pretend other things? | Yes | No |
| 6. Does your child ever use his/her index finger to point, to ask for something? | Yes | No |
| 7. Does your child ever use his/her index finger to point, to indicate interest in something? | Yes | No |
| 8. Can your child play properly with small toys (e.g. cars or blocks) without just mouthing, fiddling, or dropping them? | Yes | No |
| 9. Does your child ever bring objects over to you (parent) to show you something? | Yes | No |
| 10. Does your child look you in the eye for more than a second or two? | Yes | No |
| 11. Does your child ever seem oversensitive to noise? (e.g., plugging ears) (REVERSE) | Yes | No |
| 12. Does your child smile in response to your face or your smile? | Yes | No |
| 13. Does your child imitate you? (e.g., you make a face-will your child imitate it?) | Yes | No |
| 14. Does your child respond to his/her name when you call? | Yes | No |
| 15. If you point at a toy across the room, does your child look at it? | Yes | No |
| 16. Does your child walk? | Yes | No |
| 17. Does your child look at things you are looking at? | Yes | No |
| 18. Does your child make unusual finger movements near his/her face? (REVERSE) | Yes | No |
| 19. Does your child try to attract your attention to his/her own activity? | Yes | No |
| 20. Have you ever wondered if your child is deaf? (REVERSE) | Yes | No |
| 21. Does your child understand what people say? | Yes | No |
| 22. Does your child sometimes stare at nothing or wander with no purpose? (REVERSE) | Yes | No |
| 23. Does your child look at your face to check your reaction when faced with something unfamiliar? | Yes | No |

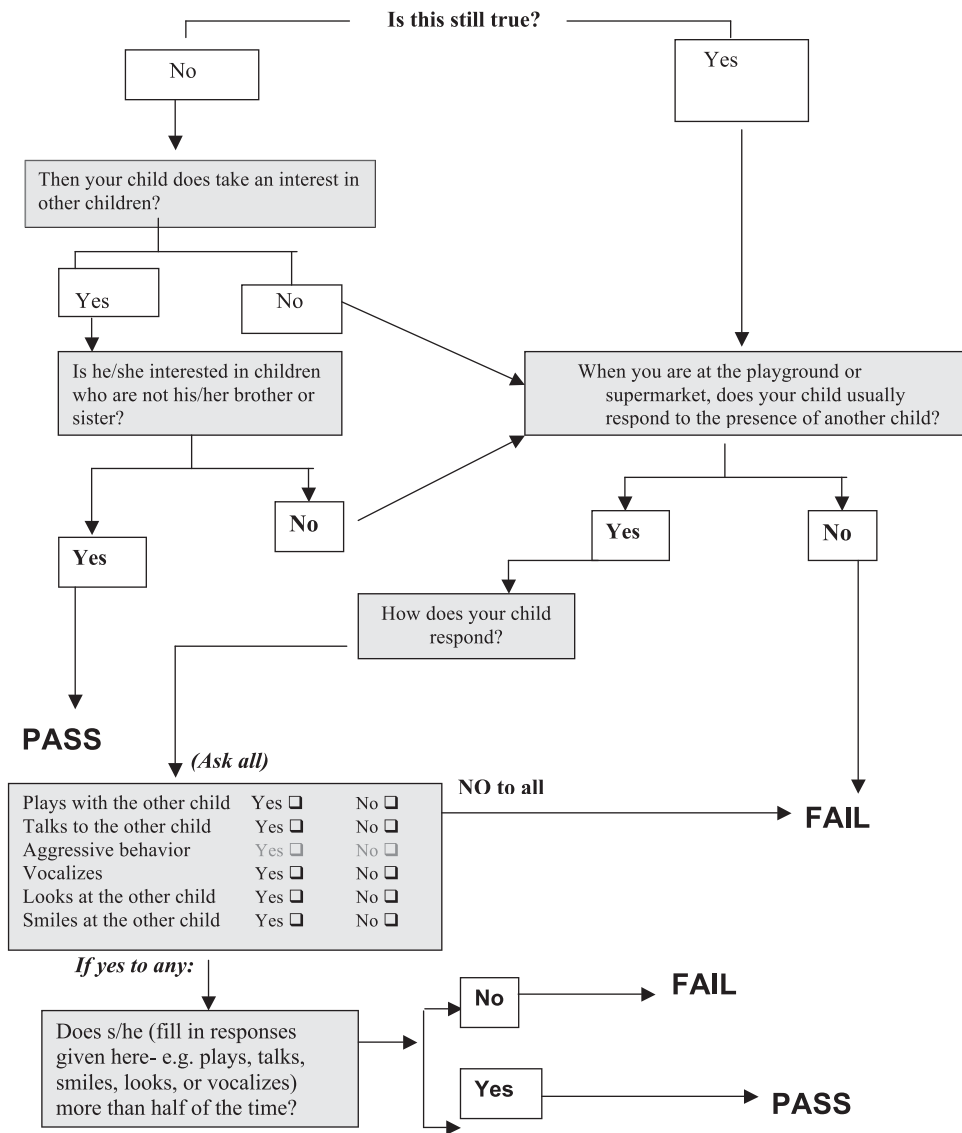
Critical Score: _____

Total Score: _____

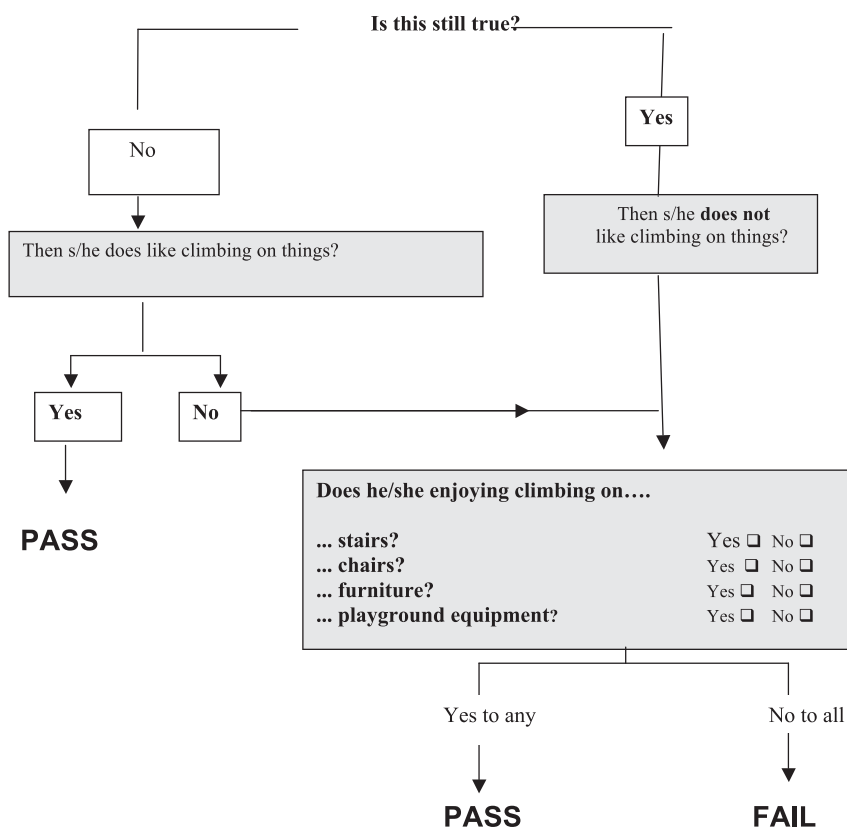
1. You reported that _____ does not enjoy being swung, bounced on your knee, etc.



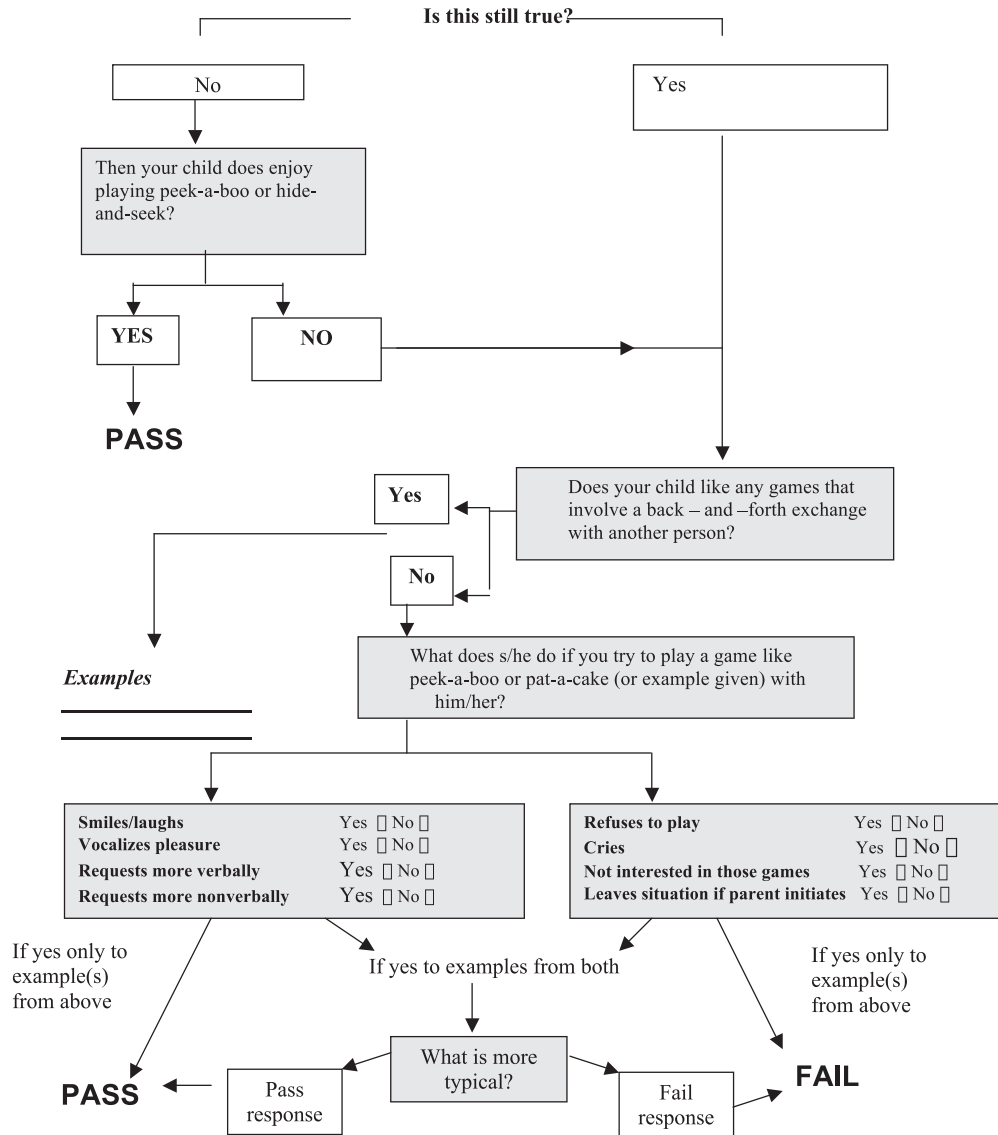
2. You reported that _____ does not take an interest in other children.
(Critical)



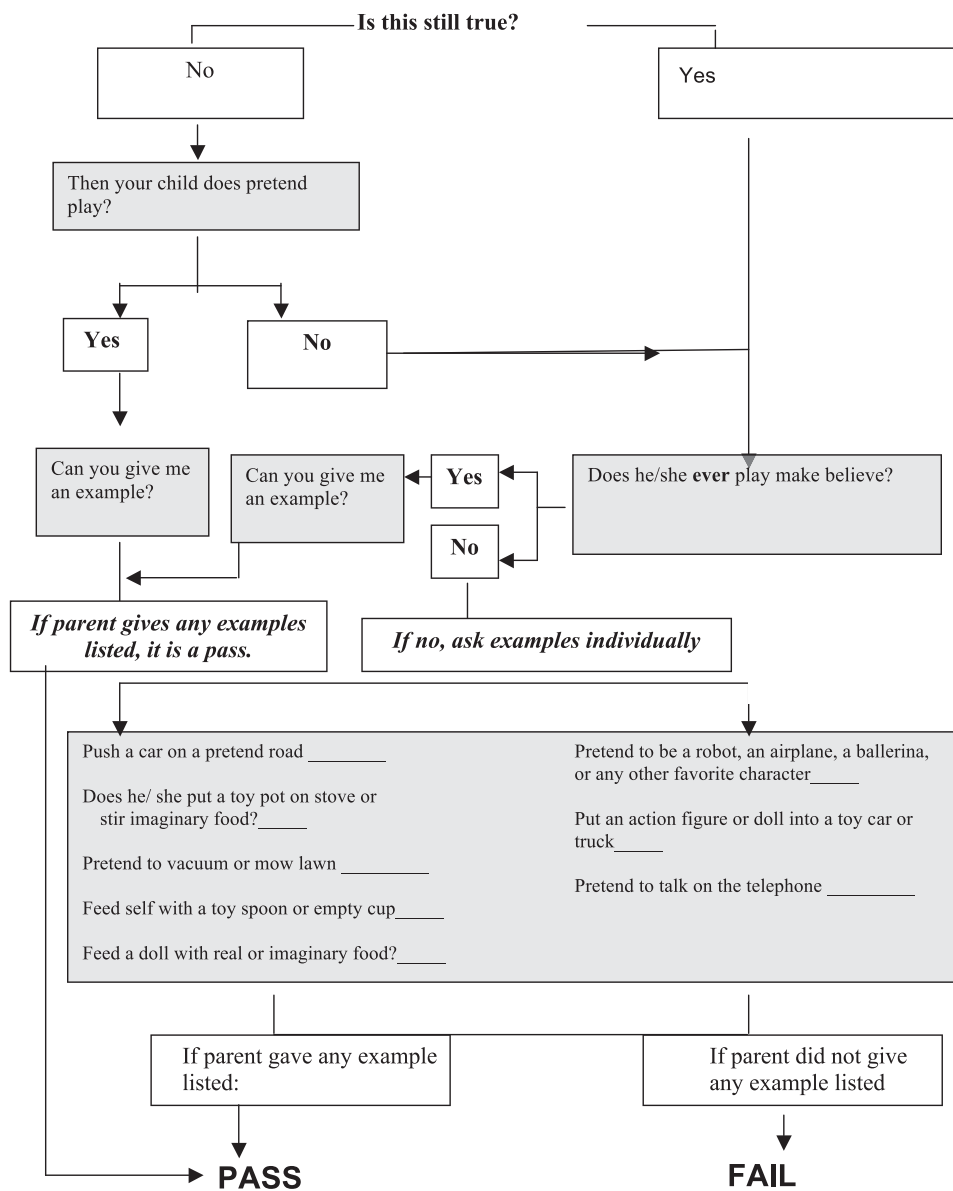
3. You reported that _____ does not like climbing on things, such as up stairs.



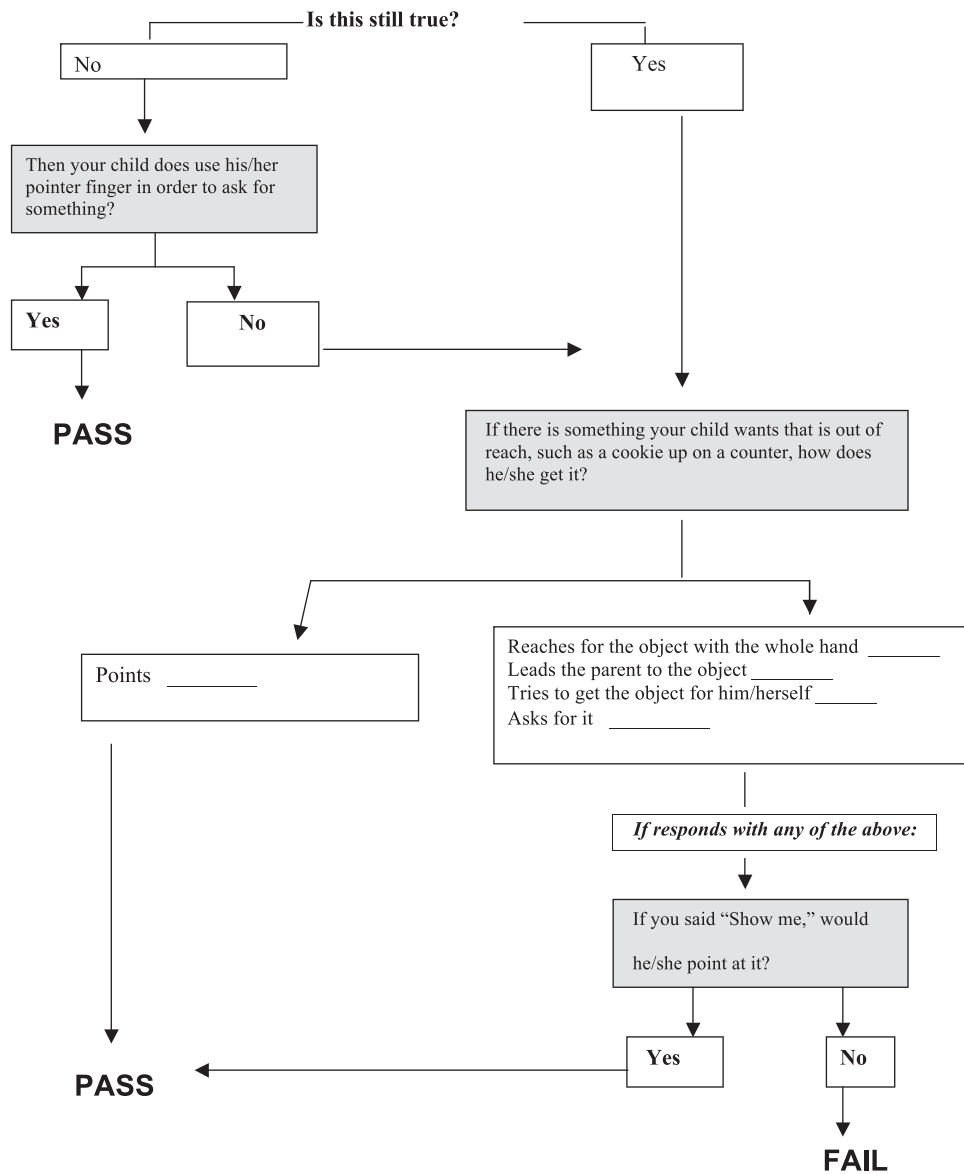
4. You reported that _____ does not enjoy playing peek-a-boo / hide – and –seek.



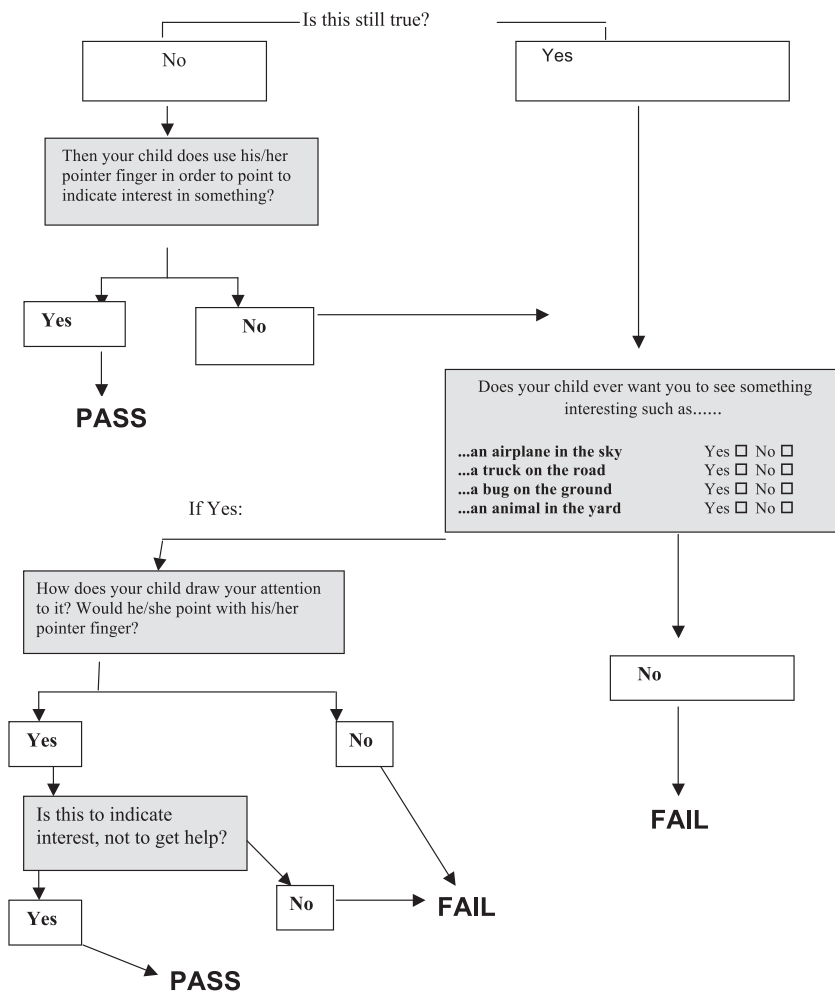
5. You reported that _____ does not ever pretend, for example, to talk on the phone or take care of dolls, or pretend other things.



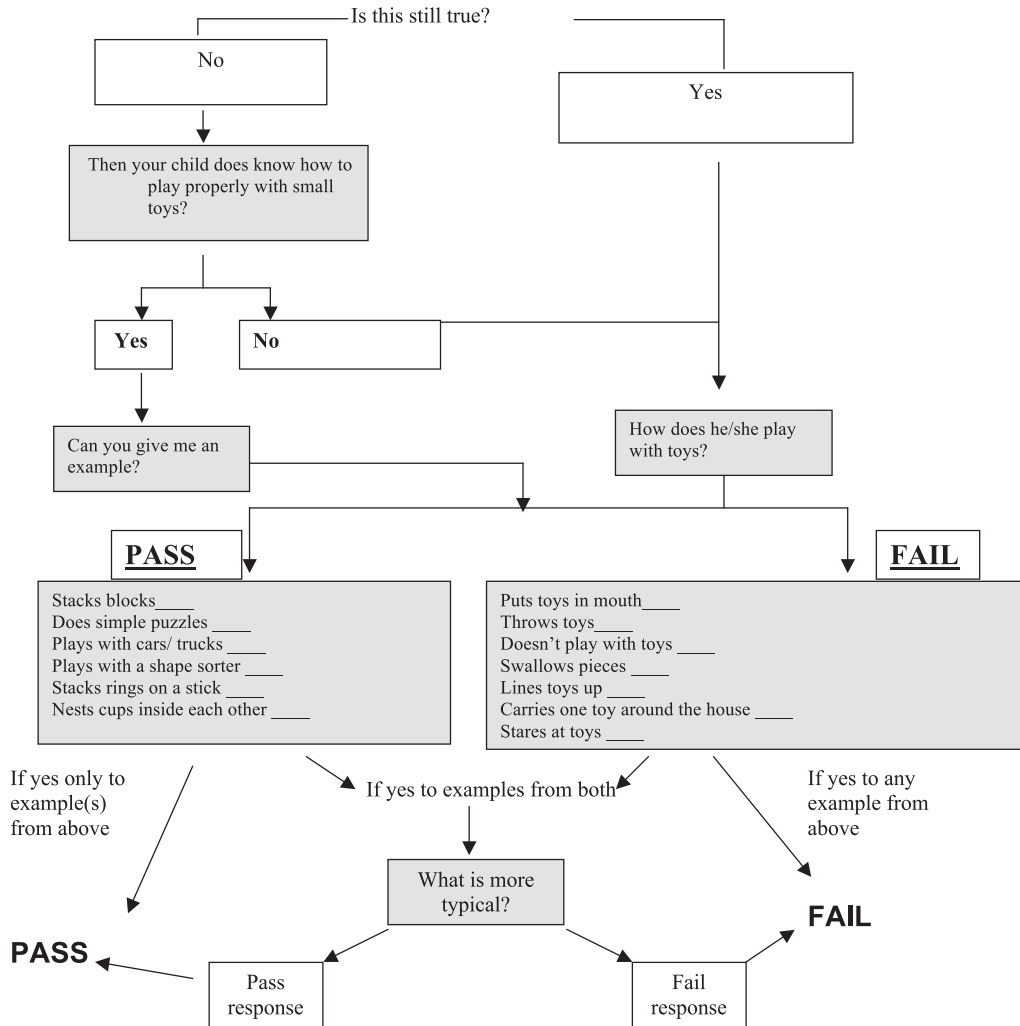
6. You reported that _____ does not use his/her pointer finger to point, to ask for something.



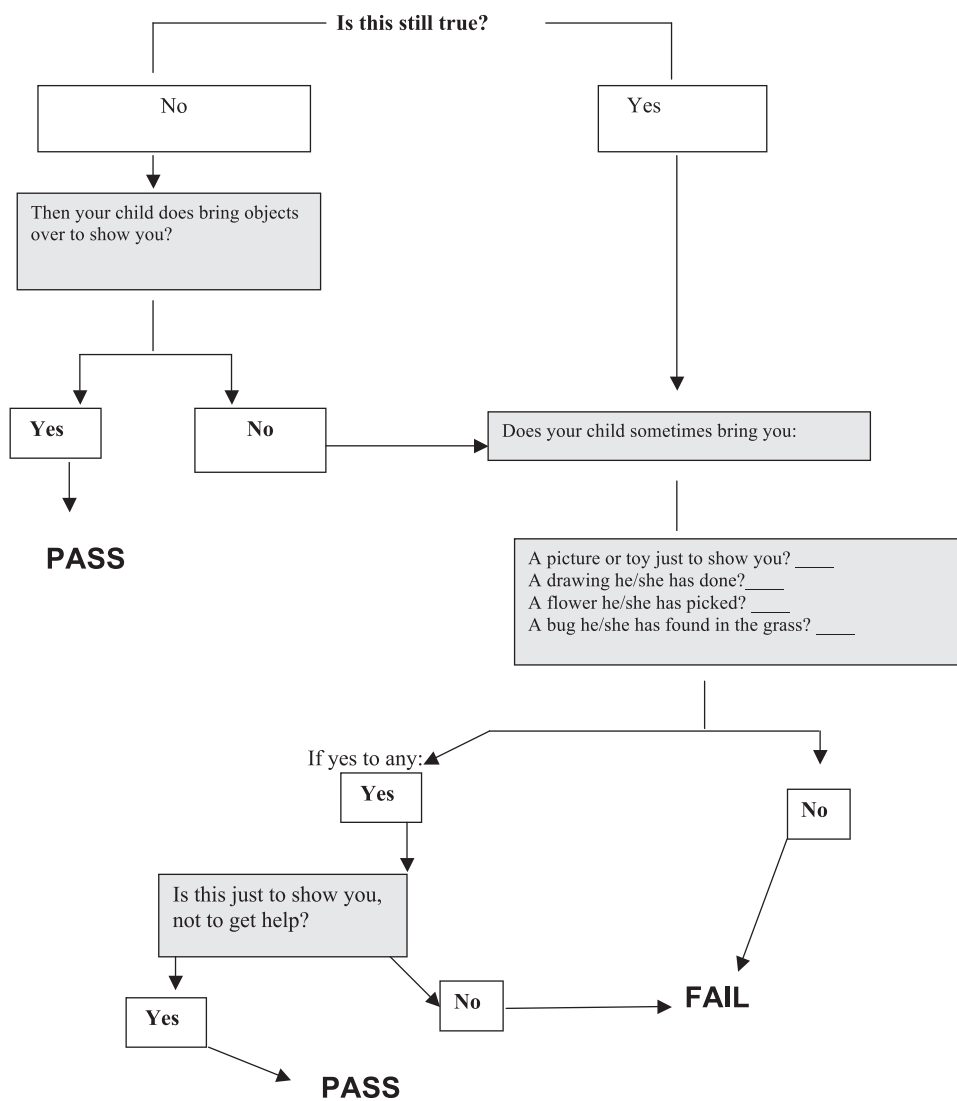
7. You reported that _____ does not use his/her pointer finger to point, to indicate interest in something. (Critical)



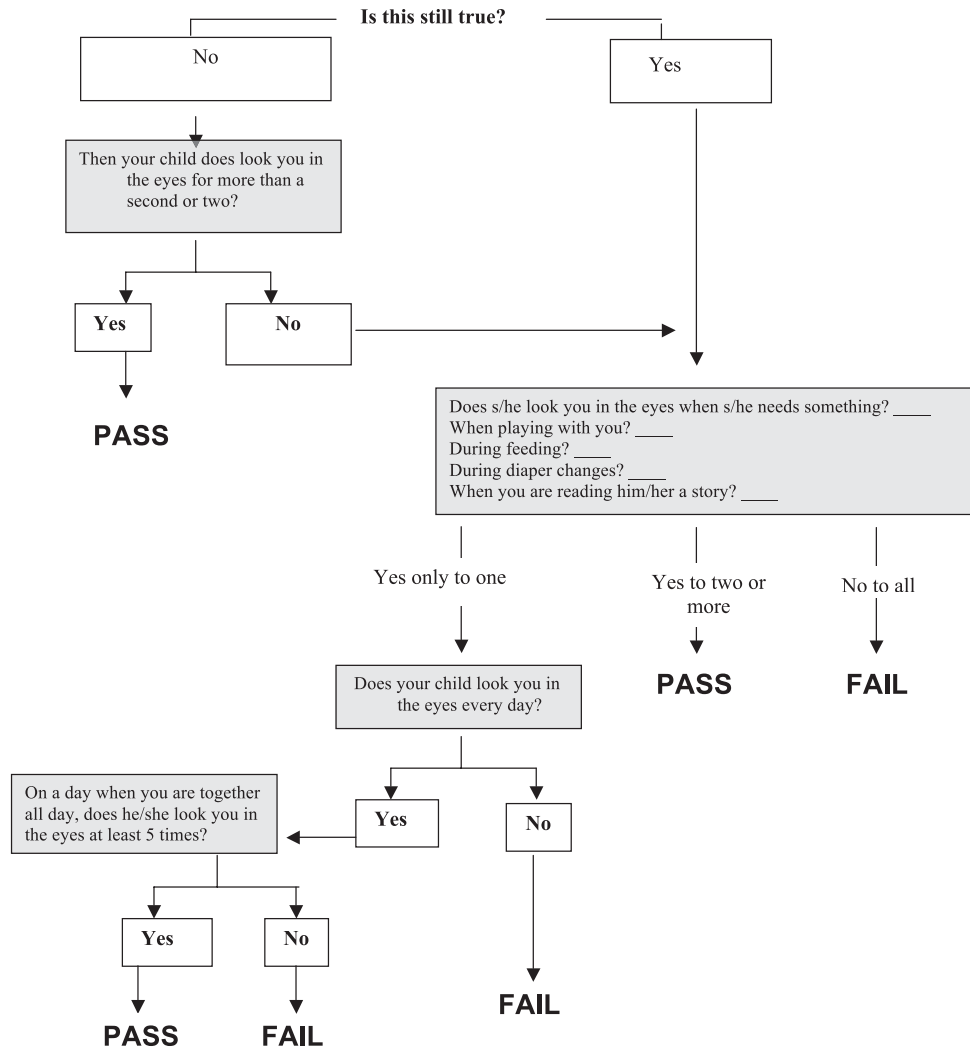
8. You reported that _____ does not play properly with small toys (e.g. cars or blocks) without just mouthing, fiddling, or dropping them.



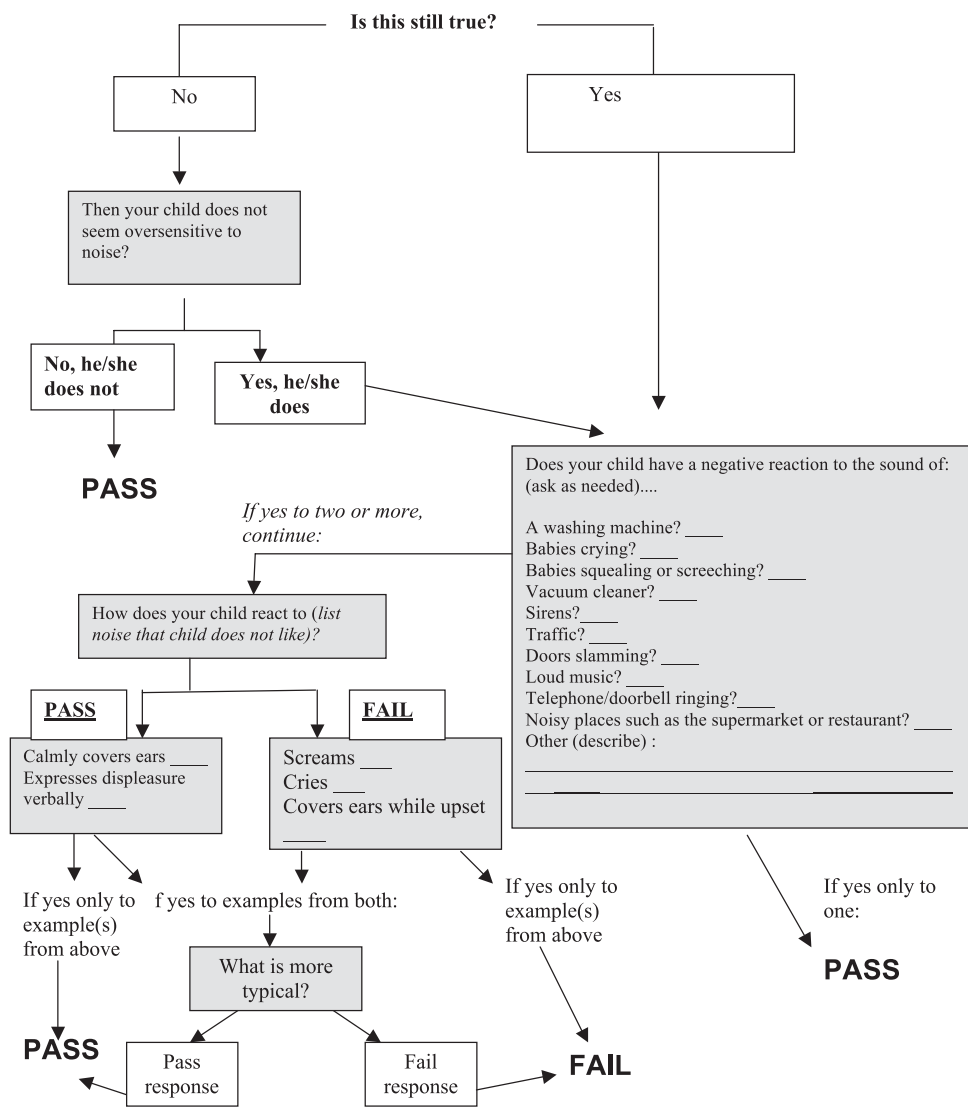
9. You reported that _____ does not bring objects over to you (parent) to show you something. (Critical)



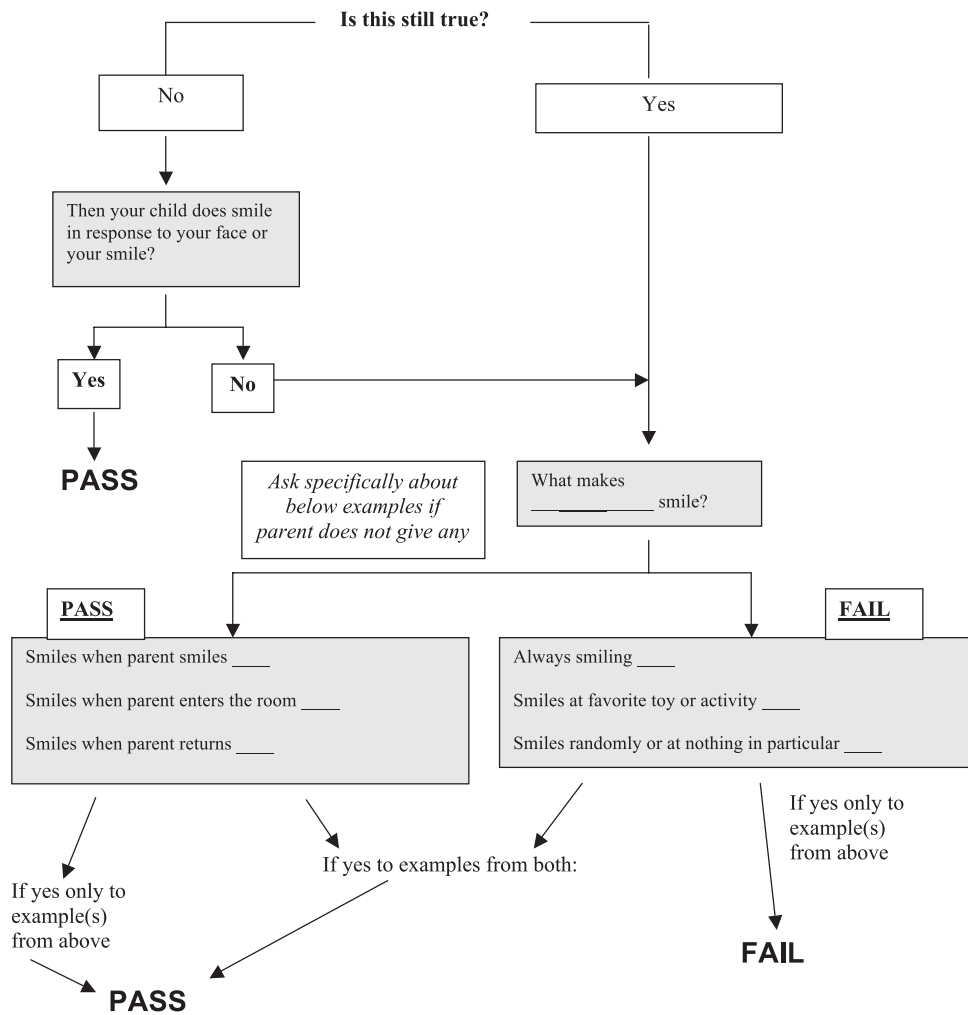
10. You reported that _____ does not look you in the eye for more than a second or two?



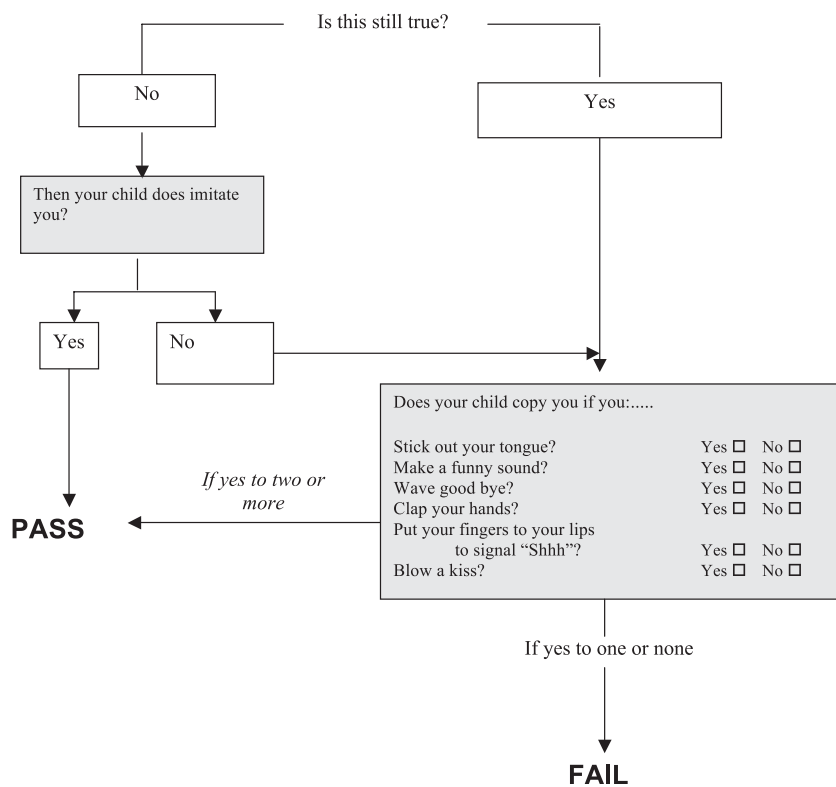
11. You reported that _____ sometimes seems oversensitive to noise.



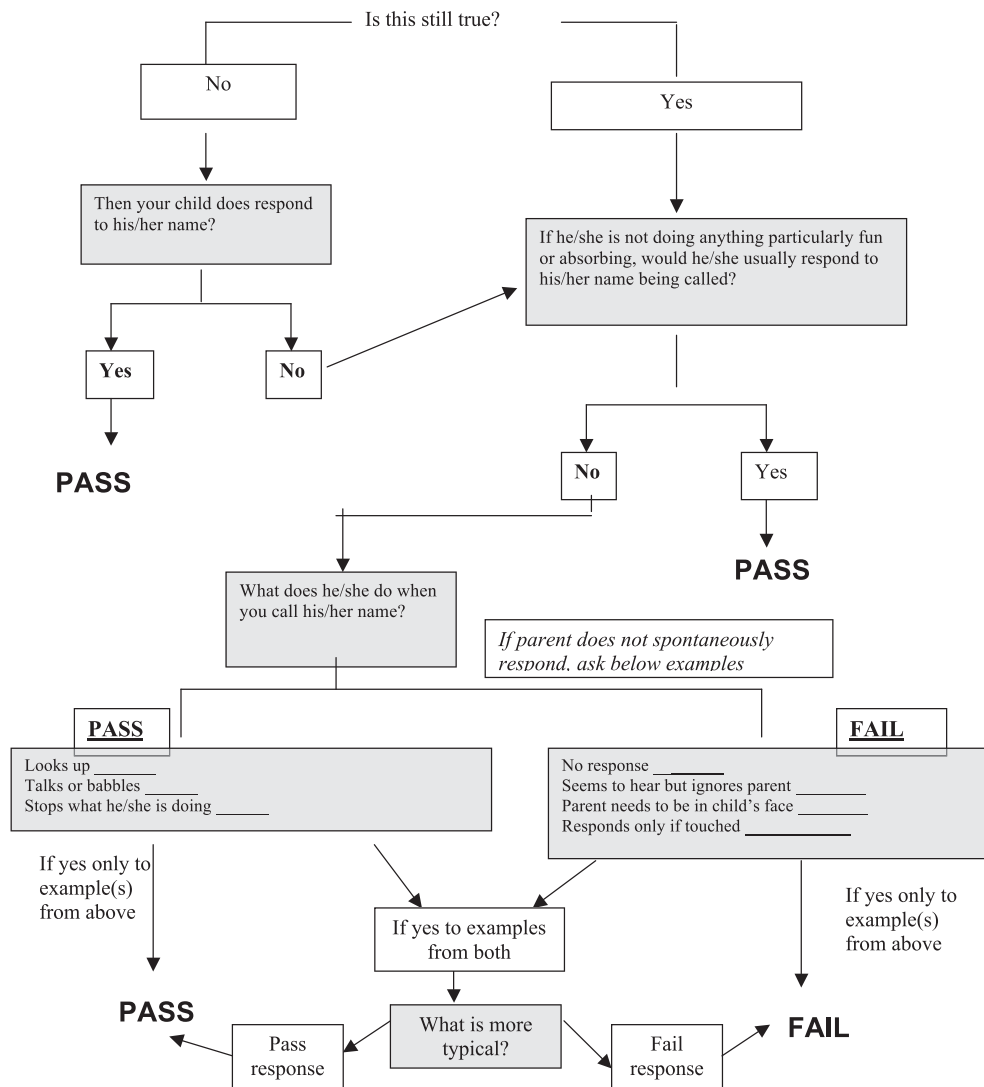
12. You reported that _____ does not smile in response to your face or your smile.



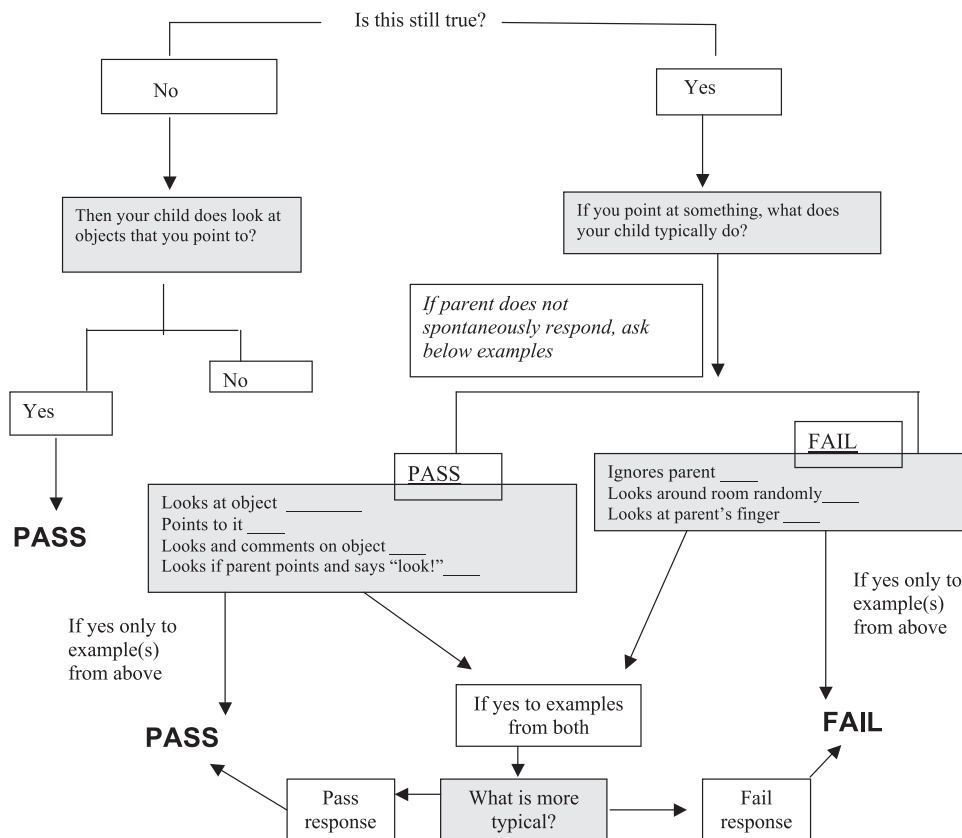
13. You reported that _____ does not usually imitate you. (Critical)



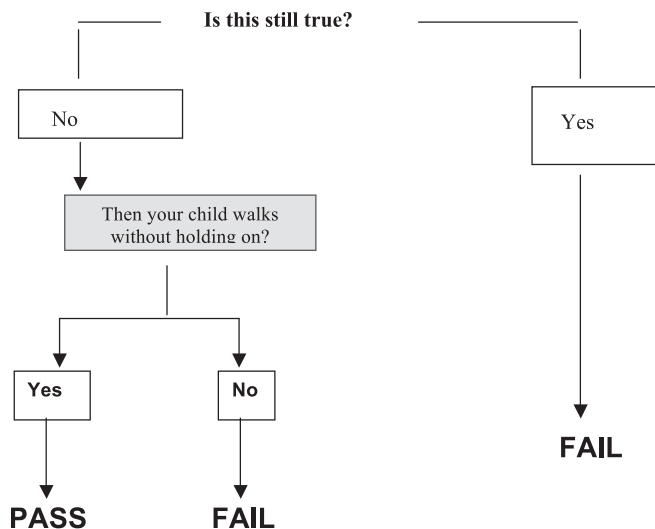
14. You reported that _____ does not respond to his/her name when you call.
(Critical)



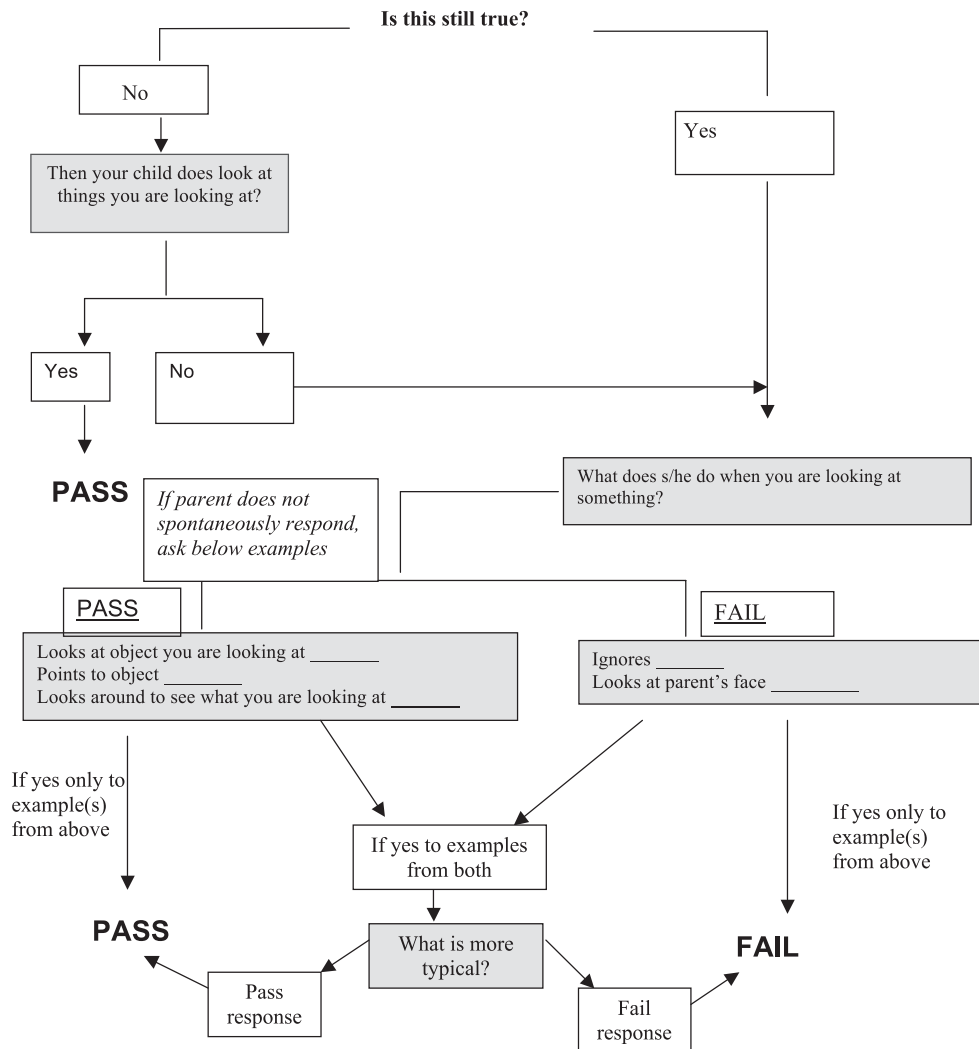
15. You reported that if you point at a toy across the room, _____ does not look at it. (Critical)



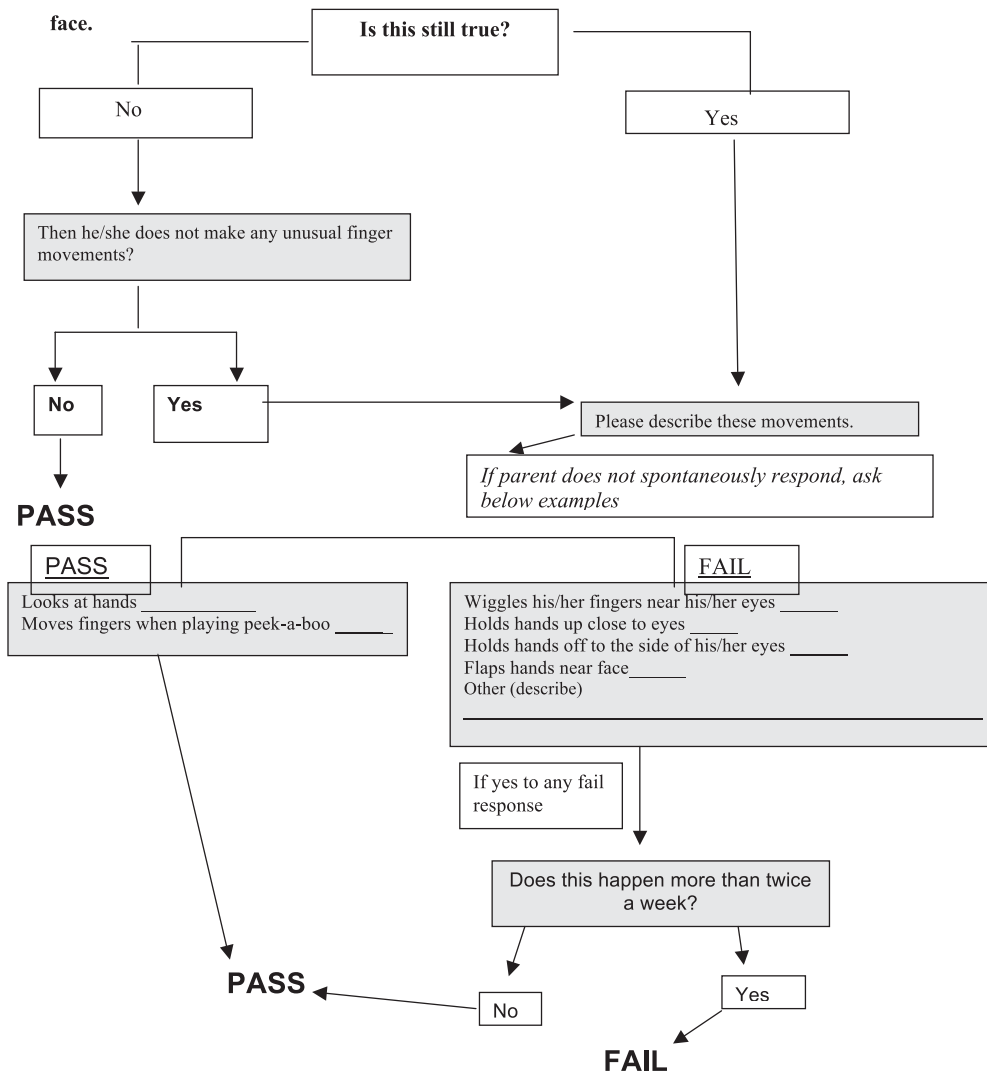
16. You reported that your child does not walk.



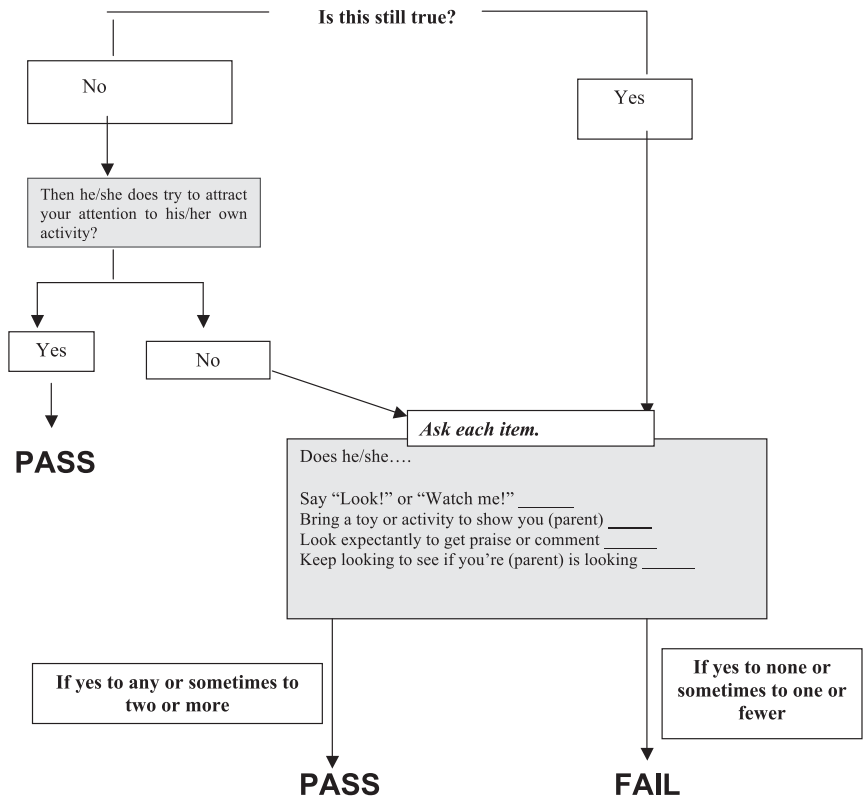
17. You reported that _____ does not look at things you are looking at.



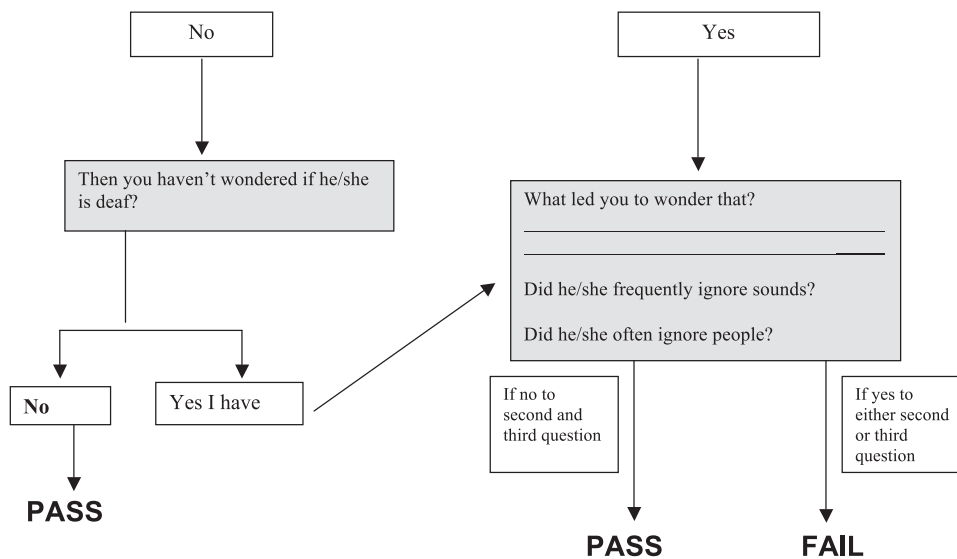
18. You reported that _____ makes unusual finger movements near his/her face.



19. You reported that _____ does not try to attract your attention to his/her own activity.



20. Have you wondered if your child is deaf?



Ask all parents:

Has your child's hearing been tested? *If YES*, what were the results?

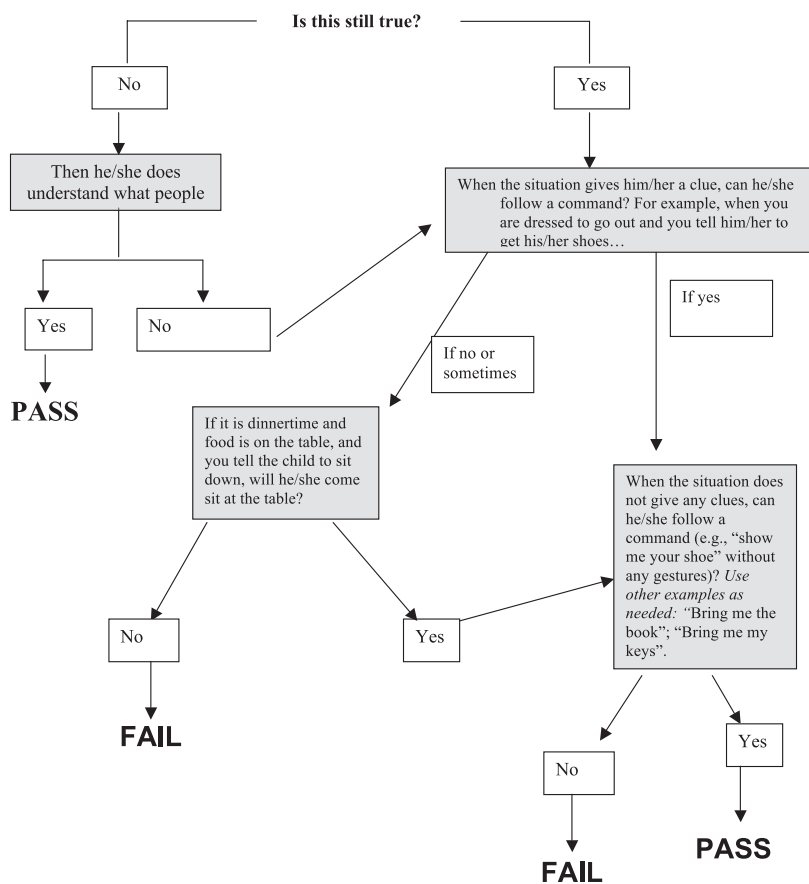
Note results _____ Hearing impaired _____ Hearing in normal range

If hearing is impaired > PASS

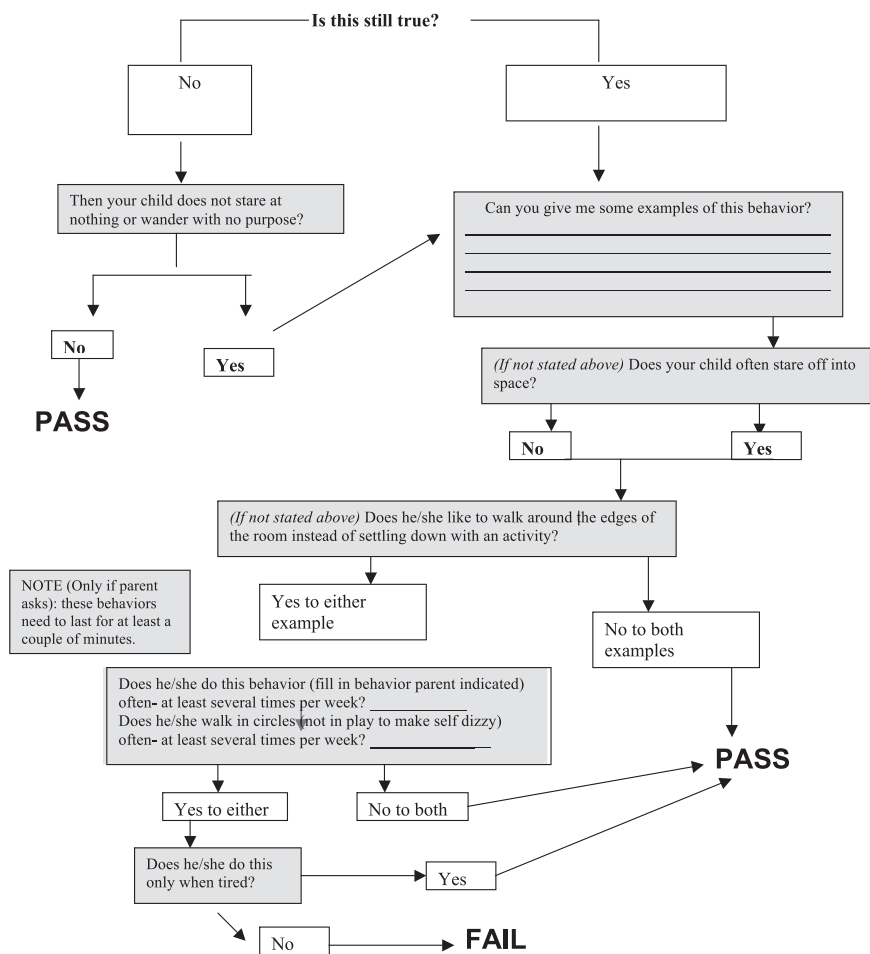
Note: If parents report that they wondered about their child's hearing only as part of a routine checkup > PASS

Note: Regardless of hearing test results, if child ignores sounds or people > FAIL

21. You reported that _____ does not understand what people say?



22. You reported that _____ sometimes stares at nothing or wanders with no purpose.



23. You reported that _____ does not usually look at your face to check your reaction when faced with something unfamiliar and a little scary.

