

Modified Checklist for Autism in Toddlers, Revised, with Follow-Up

(M-CHAT-R/F)TM

Diana L. Robins, Ph.D.
Deborah Fein, Ph.D.
Marianne Barton, Ph.D.

Acknowledgement: We thank the M-CHAT Study Group in Spain for developing the flow chart format used in this document.

For more information, please see www.mchatscreen.com
or contact Diana Robins at mchatscreen2009@gmail.com

Note. This version contains minor corrections. August 10, 2018.

Permissions for Use of the M-CHAT-R/F™

The Modified Checklist for Autism in Toddlers, Revised with Follow-Up (M-CHAT-R/F; Robins, Fein, & Barton, 2009) is a 2-stage parent-report screening tool to assess risk for Autism Spectrum Disorder (ASD). The M-CHAT-R/F is available for free download for clinical, research, and educational purposes. Download of the M-CHAT-R/F and related material is authorized from www.mchatscreen.com.

The M-CHAT-R/F is a copyrighted instrument, and use of the M-CHAT-R/F must follow these guidelines:

- (1) Reprints/reproductions of the M-CHAT-R must include the copyright at the bottom (© 2009 Robins, Fein, & Barton). No modifications can be made to items, instructions, or item order without permission from the authors.
- (2) The M-CHAT-R must be used in its entirety. Evidence indicates that any subsets of items do not demonstrate adequate psychometric properties.
- (3) Parties interested in reproducing the M-CHAT-R/F 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 (mchatscreen2009@gmail.com).
- (4) If you are part of a medical practice, and you want to incorporate the first stage M-CHAT-R questions 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 a licensing agreement.

Instructions for Use

The M-CHAT-R can be administered and scored as part of a well-child care visit, and also can be used by specialists or other professionals to assess risk for ASD. The primary goal of the M-CHAT-R is 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 will be diagnosed with ASD. To address this, we have developed the Follow-Up questions (M-CHAT-R/F). Users should be aware that even with the Follow-Up, a significant number of the children who screen positive on the M-CHAT-R will not be diagnosed with ASD; however, these children are at high risk for other developmental disorders or delays, and therefore, evaluation is warranted for any child who screens positive. The M-CHAT-R can be scored in less than two minutes. Scoring instructions can be downloaded from <http://www.mchatscreen.com>. Associated documents will be available for download as well.

Scoring Algorithm

For all items except 2, 5, and 12, the response "NO" indicates ASD risk; for items 2, 5, and 12, "YES" indicates ASD risk. The following algorithm maximizes psychometric properties of the M-CHAT-R:

- LOW-RISK: Total Score is 0-2;** if child is younger than 24 months, screen again after second birthday. No further action required unless surveillance indicates risk for ASD.
- MEDIUM-RISK: Total Score is 3-7;** Administer the Follow-Up (second stage of M-CHAT-R/F) to get additional information about at-risk responses. If M-CHAT-R/F score remains at 2 or higher, the child has screened positive. Action required: refer child for diagnostic evaluation and eligibility evaluation for early intervention. If score on Follow-Up is 0-1, child has screened negative. No further action required unless surveillance indicates risk for ASD. Child should be rescreened at future well-child visits.
- HIGH-RISK: Total Score is 8-20;** It is acceptable to bypass the Follow-Up and refer immediately for diagnostic evaluation and eligibility evaluation for early intervention.

M-CHAT-R™

Please answer these questions about your child. Keep in mind how your child usually behaves. If you have seen your child do the behavior a few times, but he or she does not usually do it, then please answer **no**. Please circle **yes** or **no** for every question. Thank you very much.

- | | | |
|--|-----|----|
| 1. If you point at something across the room, does your child look at it?
(FOR EXAMPLE , if you point at a toy or an animal, does your child look at the toy or animal?) | Yes | No |
| 2. Have you ever wondered if your child might be deaf? | Yes | No |
| 3. Does your child play pretend or make-believe? (FOR EXAMPLE , pretend to drink from an empty cup, pretend to talk on a phone, or pretend to feed a doll or stuffed animal?) | Yes | No |
| 4. Does your child like climbing on things? (FOR EXAMPLE , furniture, playground equipment, or stairs) | Yes | No |
| 5. Does your child make <u>unusual</u> finger movements near his or her eyes?
(FOR EXAMPLE , does your child wiggle his or her fingers close to his or her eyes?) | Yes | No |
| 6. Does your child point with one finger to ask for something or to get help?
(FOR EXAMPLE , pointing to a snack or toy that is out of reach) | Yes | No |
| 7. Does your child point with one finger to show you something interesting?
(FOR EXAMPLE , pointing to an airplane in the sky or a big truck in the road) | Yes | No |
| 8. Is your child interested in other children? (FOR EXAMPLE , does your child watch other children, smile at them, or go to them?) | Yes | No |
| 9. Does your child show you things by bringing them to you or holding them up for you to see – not to get help, but just to share? (FOR EXAMPLE , showing you a flower, a stuffed animal, or a toy truck) | Yes | No |
| 10. Does your child respond when you call his or her name? (FOR EXAMPLE , does he or she look up, talk or babble, or stop what he or she is doing when you call his or her name?) | Yes | No |
| 11. When you smile at your child, does he or she smile back at you? | Yes | No |
| 12. Does your child get upset by everyday noises? (FOR EXAMPLE , does your child scream or cry to noise such as a vacuum cleaner or loud music?) | Yes | No |
| 13. Does your child walk? | Yes | No |
| 14. Does your child look you in the eye when you are talking to him or her, playing with him or her, or dressing him or her? | Yes | No |
| 15. Does your child try to copy what you do? (FOR EXAMPLE , wave bye-bye, clap, or make a funny noise when you do) | Yes | No |
| 16. If you turn your head to look at something, does your child look around to see what you are looking at? | Yes | No |
| 17. Does your child try to get you to watch him or her? (FOR EXAMPLE , does your child look at you for praise, or say “look” or “watch me”?) | Yes | No |
| 18. Does your child understand when you tell him or her to do something?
(FOR EXAMPLE , if you don’t point, can your child understand “put the book on the chair” or “bring me the blanket”?) | Yes | No |
| 19. If something new happens, does your child look at your face to see how you feel about it?
(FOR EXAMPLE , if he or she hears a strange or funny noise, or sees a new toy, will he or she look at your face?) | Yes | No |
| 20. Does your child like movement activities?
(FOR EXAMPLE , being swung or bounced on your knee) | Yes | No |

M-CHAT-R Follow-Up (M-CHAT-R/F)TM

Permissions for Use

The Modified Checklist for Autism in Toddlers, Revised, with Follow-Up (M-CHAT-R/F; Robins, Fein, & Barton, 2009) is designed to accompany the M-CHAT-R. The M-CHAT-R/F may be downloaded from www.mchatscreen.com.

The M-CHAT-R/F is a copyrighted instrument, and use of this instrument is limited by the authors and copyright holders. The M-CHAT-R and M-CHAT-R/F may be used for clinical, research, and educational purposes. Although we are making the tool available free of charge for these uses, this is copyrighted material and it is not open source. Anyone interested in using the M-CHAT-R/F in any commercial or electronic products must contact Diana L. Robins at mchatscreen2009@gmail.com to request permission.

Instructions for Use

The M-CHAT-R/F is designed to be used with the M-CHAT-R; the M-CHAT-R is valid for screening toddlers between 16 and 30 months of age, to assess risk for autism spectrum disorder (ASD). Users should be aware that even with the Follow-Up, a significant number of the children who fail the M-CHAT-R will not be diagnosed with ASD; however, these children are at risk for other developmental disorders or delays, and therefore, follow-up is warranted for any child who screens positive.

Once a parent has completed the M-CHAT-R, score the instrument according to the instructions. If the child screens positive, select the Follow-Up items based on which items the child failed on the M-CHAT-R; only those items that were originally failed need to be administered for a complete interview.

Each page of the interview corresponds to one item from the M-CHAT-R. Follow the flowchart format, asking questions until a PASS or FAIL is scored. Please note that parents may report “maybe” in response to questions during the interview. When a parent reports “maybe,” ask whether most often the answer is “yes” or “no” and continue the interview according to that response. In places where there is room to report an “other” response, the interviewer must use his/her judgment to determine whether it is a passing response or not.

Score the responses to each item on the M-CHAT-R/F Scoring Sheet (which contains the same items as the M-CHAT-R, but Yes/No has been replaced by Pass/Fail). The interview is considered to be a screen positive if the child fails any two items on the Follow-Up. If a child screens positive on the M-CHAT-R/F, it is strongly recommended that the child is referred for early intervention and diagnostic testing as soon as possible. Please note that if the healthcare provider or parent has concerns about ASDs, children should be referred for evaluation regardless of the score on the M-CHAT-R or M-CHAT-R/F.

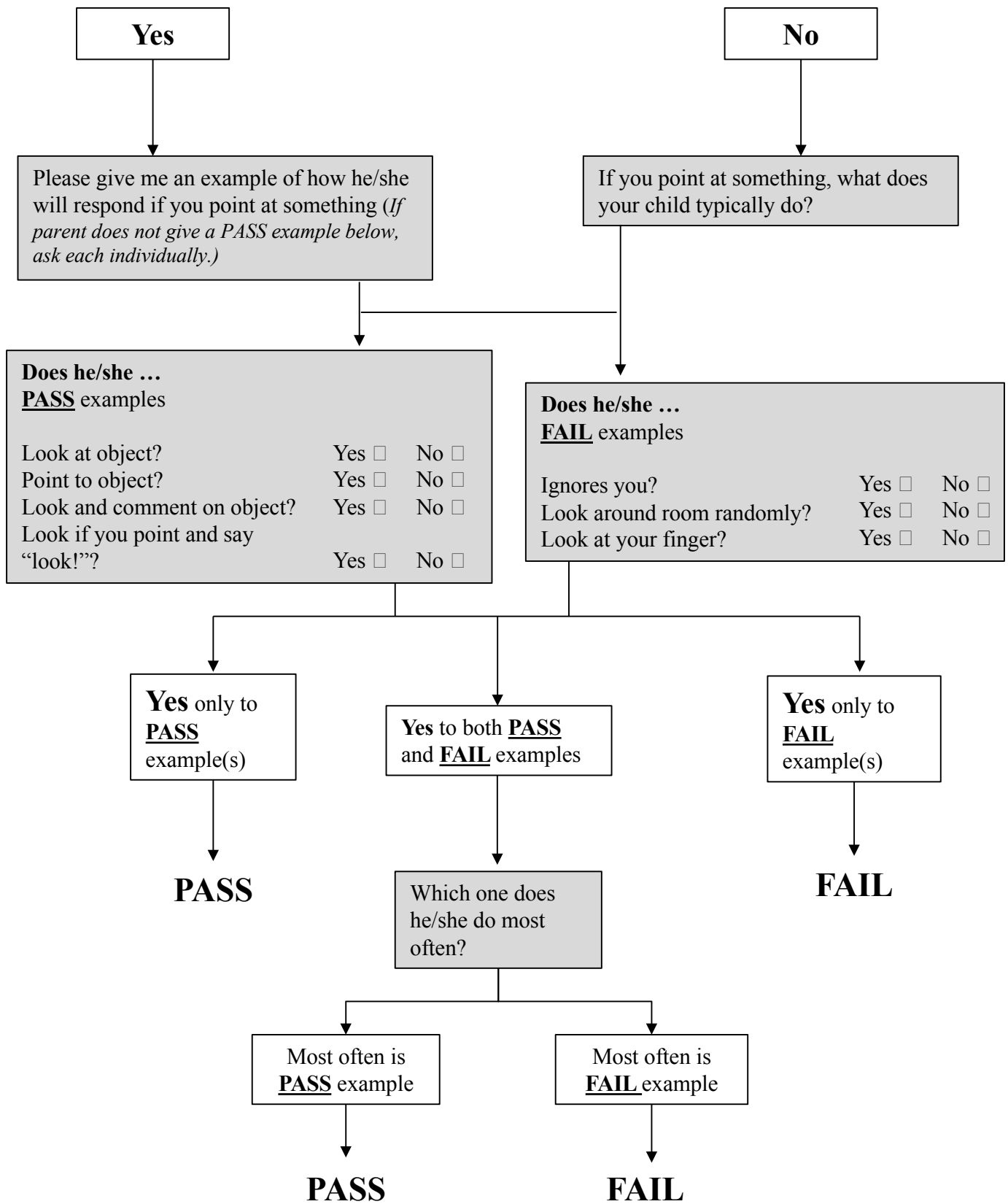
M-CHAT-R Follow-Up™ Scoring Sheet

Please note: Yes/No has been replaced with Pass/Fail

- | | | |
|--|------|------|
| 1. If you point at something across the room, does your child look at it?
(FOR EXAMPLE , if you point at a toy or an animal, does your child look at the toy or animal?) | Pass | Fail |
| 2. Have you ever wondered if your child might be deaf? | Pass | Fail |
| 3. Does your child play pretend or make-believe?
(FOR EXAMPLE , pretend to drink from an empty cup, pretend to talk on a phone, or pretend to feed a doll or stuffed animal) | Pass | Fail |
| 4. Does your child like climbing on things?
(FOR EXAMPLE , furniture, playground equipment, or stairs) | Pass | Fail |
| 5. Does your child make <u>unusual</u> finger movements near his or her eyes?
(FOR EXAMPLE , does your child wiggle his or her fingers close to his or her eyes?) | Pass | Fail |
| 6. Does your child point with one finger to ask for something or to get help?
(FOR EXAMPLE , pointing to a snack or toy that is out of reach) | Pass | Fail |
| 7. Does your child point with one finger to show you something interesting?
(FOR EXAMPLE , pointing to an airplane in the sky or a big truck in the road) | Pass | Fail |
| 8. Is your child interested in other children?
(FOR EXAMPLE , does your child watch other children, smile at them, or go to them?) | Pass | Fail |
| 9. Does your child show you things by bringing them to you or holding them up for you to see – not to get help, but just to share?
(FOR EXAMPLE , showing you a flower, a stuffed animal, or a toy truck) | Pass | Fail |
| 10. Does your child respond when you call his or her name?
(FOR EXAMPLE , does he or she look up, talk or babble, or stop what he or she is doing when you call his or her name?) | Pass | Fail |
| 11. When you smile at your child, does he or she smile back at you? | Pass | Fail |
| 12. Does your child get upset by everyday noises?
(FOR EXAMPLE , a vacuum cleaner or loud music) | Pass | Fail |
| 13. Does your child walk? | Pass | Fail |
| 14. Does your child look you in the eye when you are talking to him or her, playing with him or her, or dressing him or her? | Pass | Fail |
| 15. Does your child try to copy what you do?
(FOR EXAMPLE , wave bye-bye, clap, or make a funny noise when you do) | Pass | Fail |
| 16. If you turn your head to look at something, does your child look around to see what you are looking at? | Pass | Fail |
| 17. Does your child try to get you to watch him or her?
(FOR EXAMPLE , does your child look at you for praise, or say “look” or “watch me”) | Pass | Fail |
| 18. Does your child understand when you tell him or her to do something?
(FOR EXAMPLE , if you don’t point, can your child understand “put the book on the chair” or “bring me the blanket”) | Pass | Fail |
| 19. If something new happens, does your child look at your face to see how you feel about it?
(FOR EXAMPLE , if he or she hears a strange or funny noise, or sees a new toy, will he or she look at your face?) | Pass | Fail |
| 20. Does your child like movement activities?
(FOR EXAMPLE , being swung or bounced on your knee) | Pass | Fail |

Total Score: _____

1. If you point at something across the room, does _____ look at it?



2. You reported that you have wondered if your child is deaf. What led you to wonder that?

Does he/she...

often ignore sounds? Yes No

often ignore people? Yes No

No to both

Yes to either

PASS

FAIL

ALSO ASK FOR ALL CHILDREN:

Has your child's hearing been tested?

Yes

No

What were the results of the hearing test? (*choose one*):

- Hearing in normal range
- Hearing below normal
- Results inconclusive or not definitive

3. Does _____ play pretend or make-believe?

Yes

No

Please give me an example of his/her pretend play. *(If parent does not give a PASS example below, ask each individually.)*

Does he/she usually...

Pretend to drink from a toy cup?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pretend to eat from a toy spoon or fork?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pretend to talk on the telephone?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pretend to feed a doll or stuffed animal with real or imaginary food?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Push a car as if it is going along a pretend road?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pretend to be a robot, an airplane, a ballerina, or any other favorite character?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Put a toy pot on a pretend stove?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Stir imaginary food?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Put an action figure or doll into a car or truck as if it is the driver or passenger?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pretend to vacuum the rug, sweep the floor, or the mow lawn?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Other (describe)	Yes <input type="checkbox"/>	No <input type="checkbox"/>

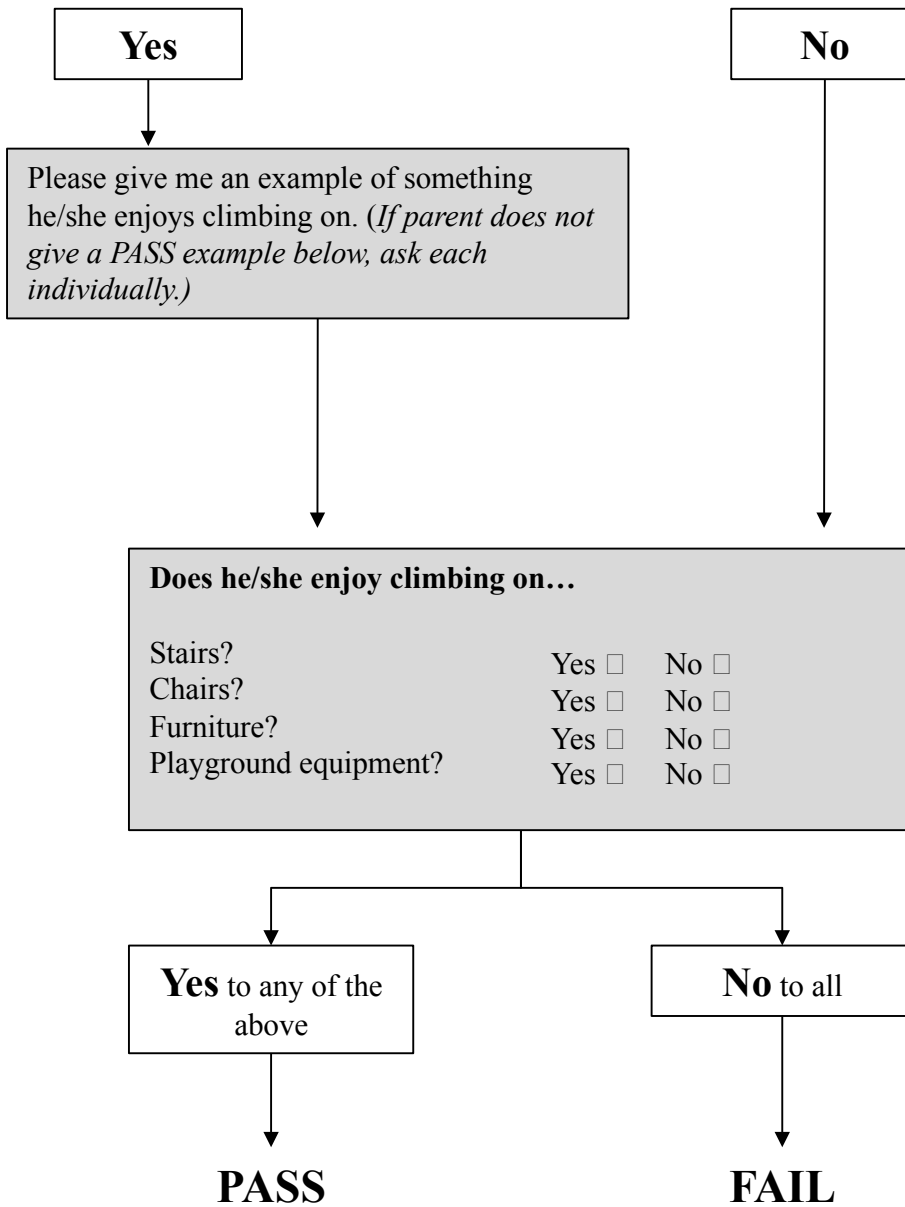
Yes to any

No to all

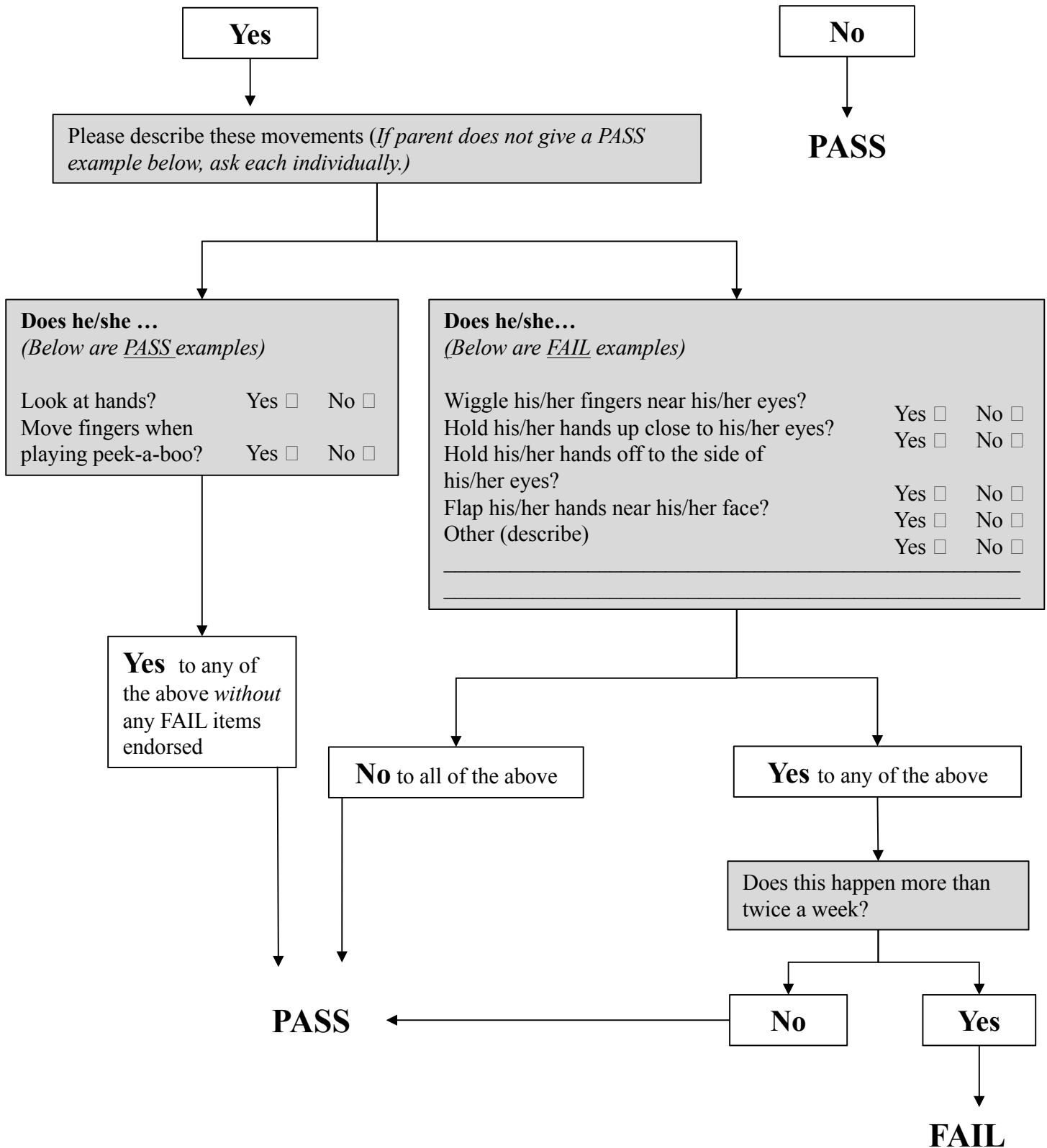
PASS

FAIL

4. Does _____ like climbing on things?



5. Does _____ make unusual finger movements near his/her eyes?



6. Does _____ point with one finger to ask for something or to get help?

Yes



PASS

No



If there is something your child wants that is out of reach, such as a snack or toy that is out of reach, how does he/she get it? (If parent does not give a PASS example below, ask each individually.)



Does he/she...

Reach for the object with his/her whole hand?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Lead you to the object?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Try to get the object for him/herself?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Ask for it using words or sounds?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

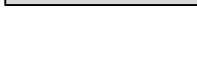


Yes to any of the above



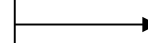
No to all of the above

If you said "Show me," would he/she point at it?



Yes

No

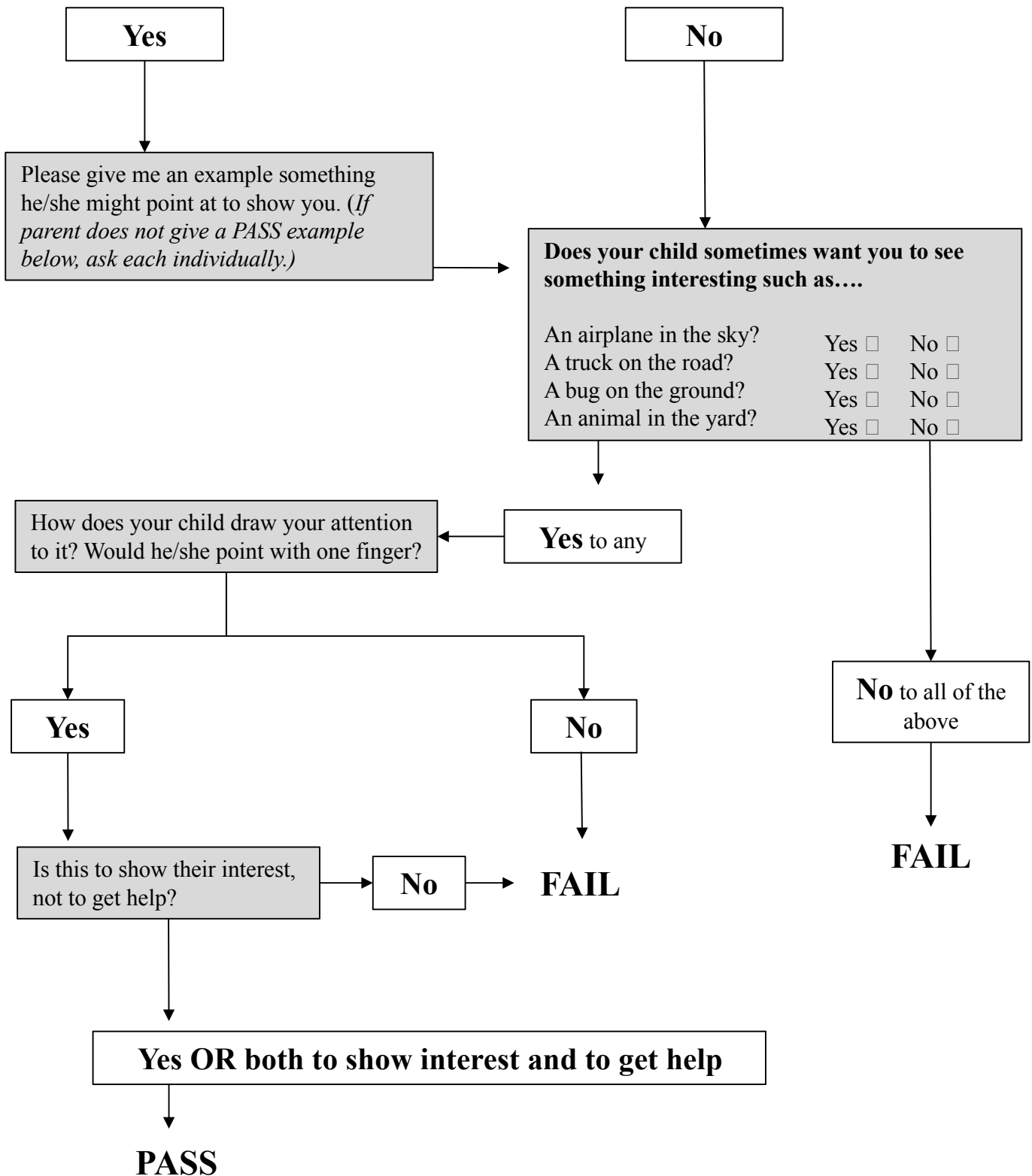


FAIL

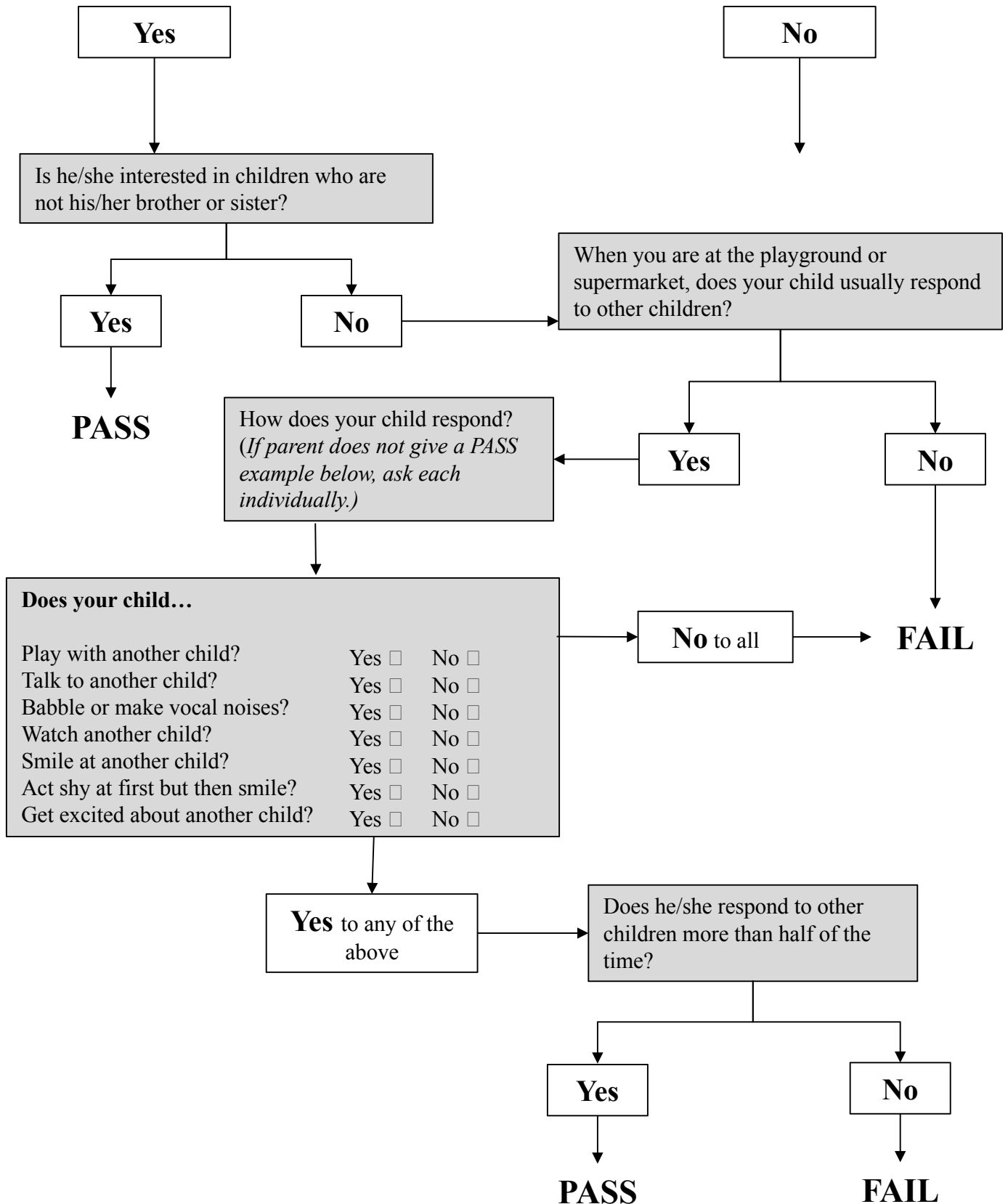


PASS

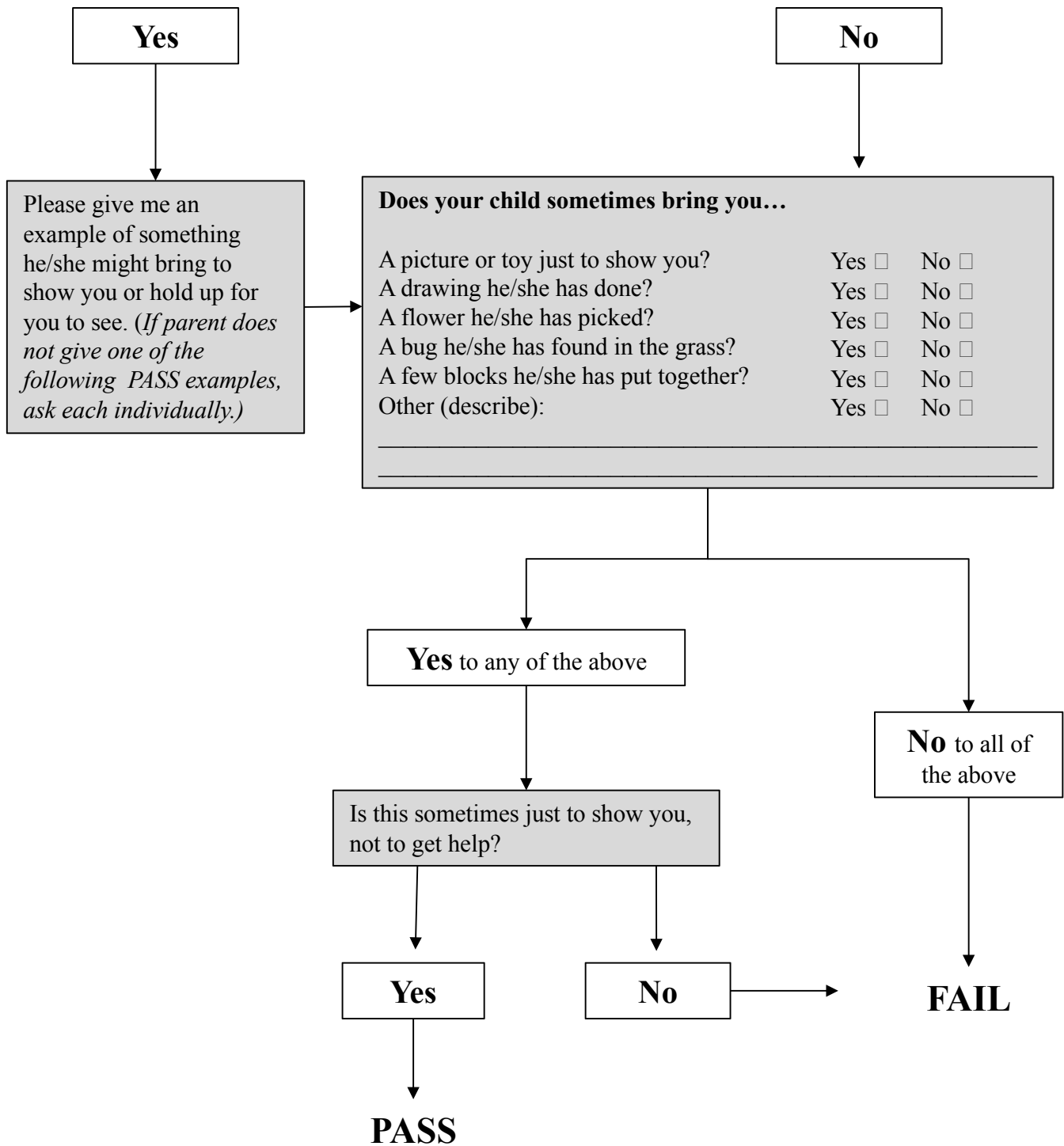
7. * If the interviewer just asked #6, begin here: We just talked about pointing to *ask* for something, ASK ALL → Does _____ point with one finger just to show you something interesting?



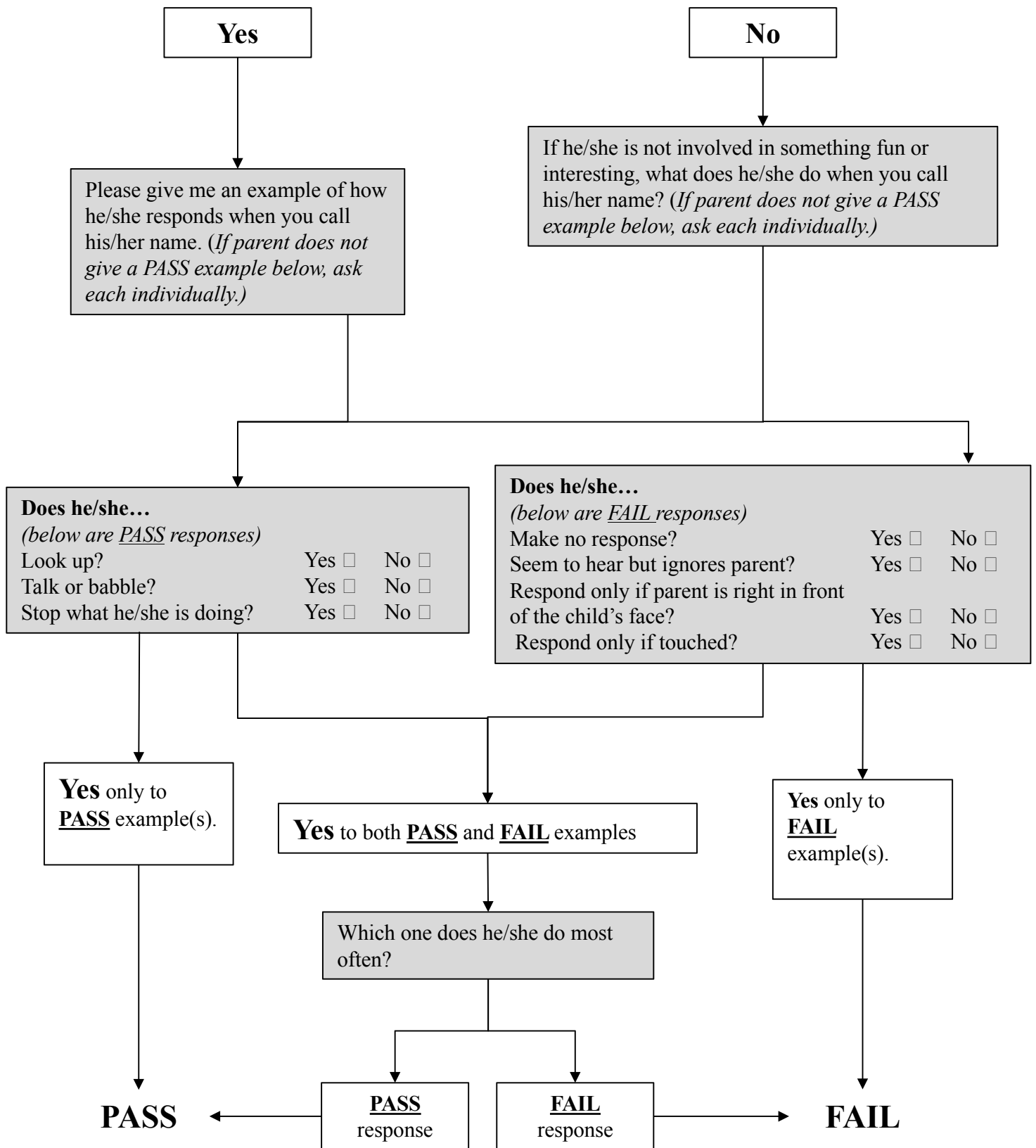
8. Is _____ interested in other children?



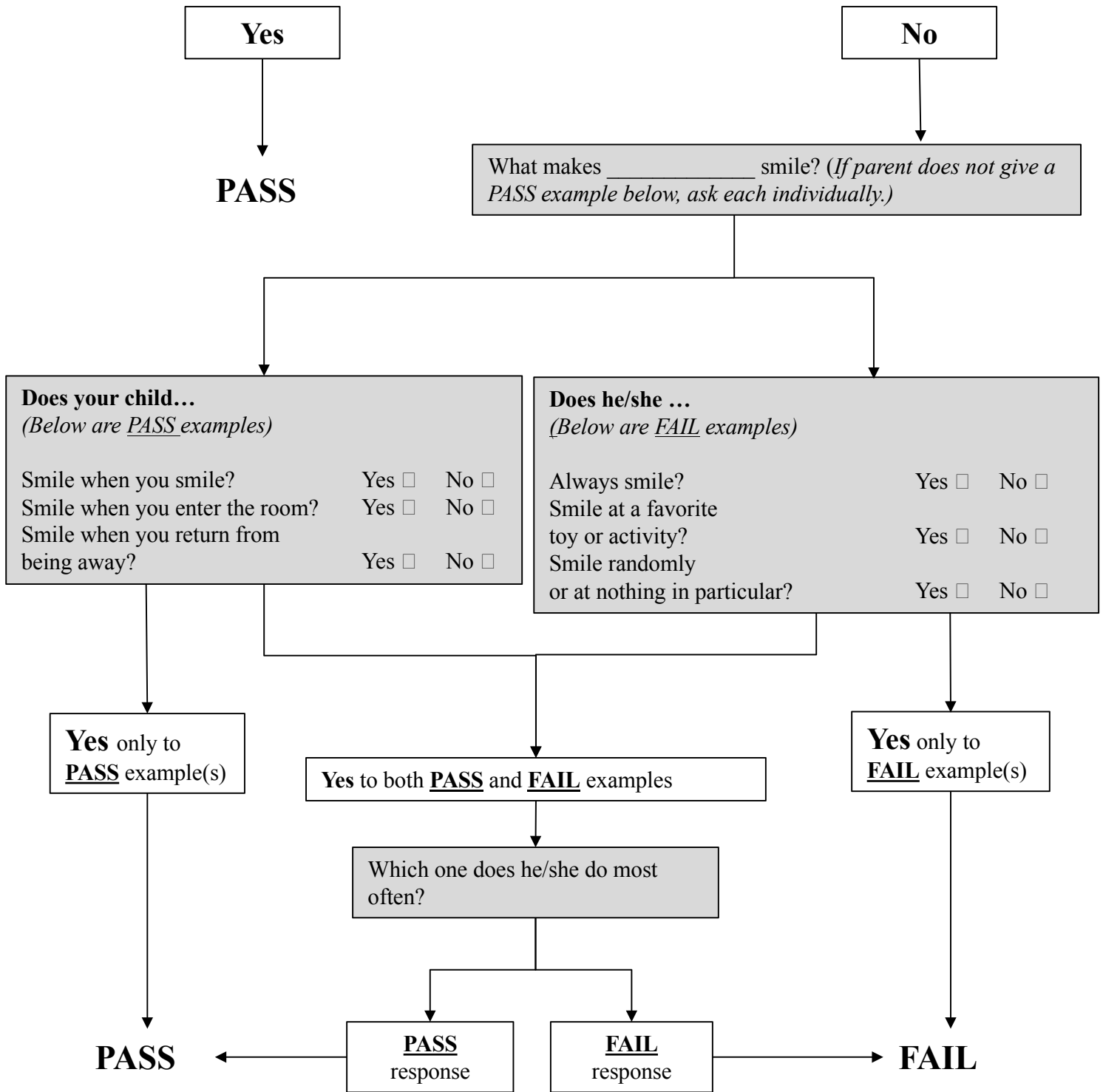
9. Does _____ show you things by bringing them to you or holding them up for you to see? Not just to get help, but to share?



10. Does _____ respond when you call his/her name?



11. When you smile at _____, does he/she smile back at you?



12. Does _____ get upset by everyday noises?

Yes

No

Does your child have a negative reaction to the sound of...

A washing machine?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Babies crying?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Vacuum cleaner?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Hairdryer?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Traffic?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Babies squealing or screeching?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Loud music?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Telephone/ doorbell ringing?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Noisy places such as a supermarket or restaurant?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Other (describe):	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Yes to one or none

PASS

Yes to two or more

How does your child react to those noises? (If parent does not give a *PASS* example below, ask each individually.)

Does your child...
(Below are *PASS* responses)

Calmly cover his/her ears?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Tell you that he/she does not like the noise?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Does your child...
(Below are *FAIL* responses)

Scream?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Cry?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Cover his/her ears while upset?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Yes only to PASS example(s)

Yes to both PASS and FAIL examples

Yes only to FAIL example(s)

Which one does he/she do most often?

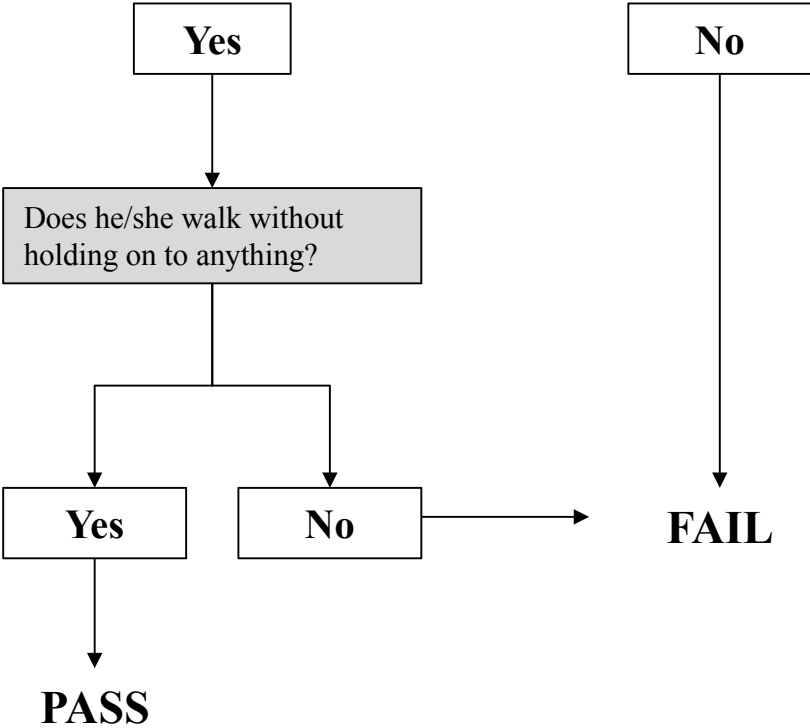
PASS

PASS response

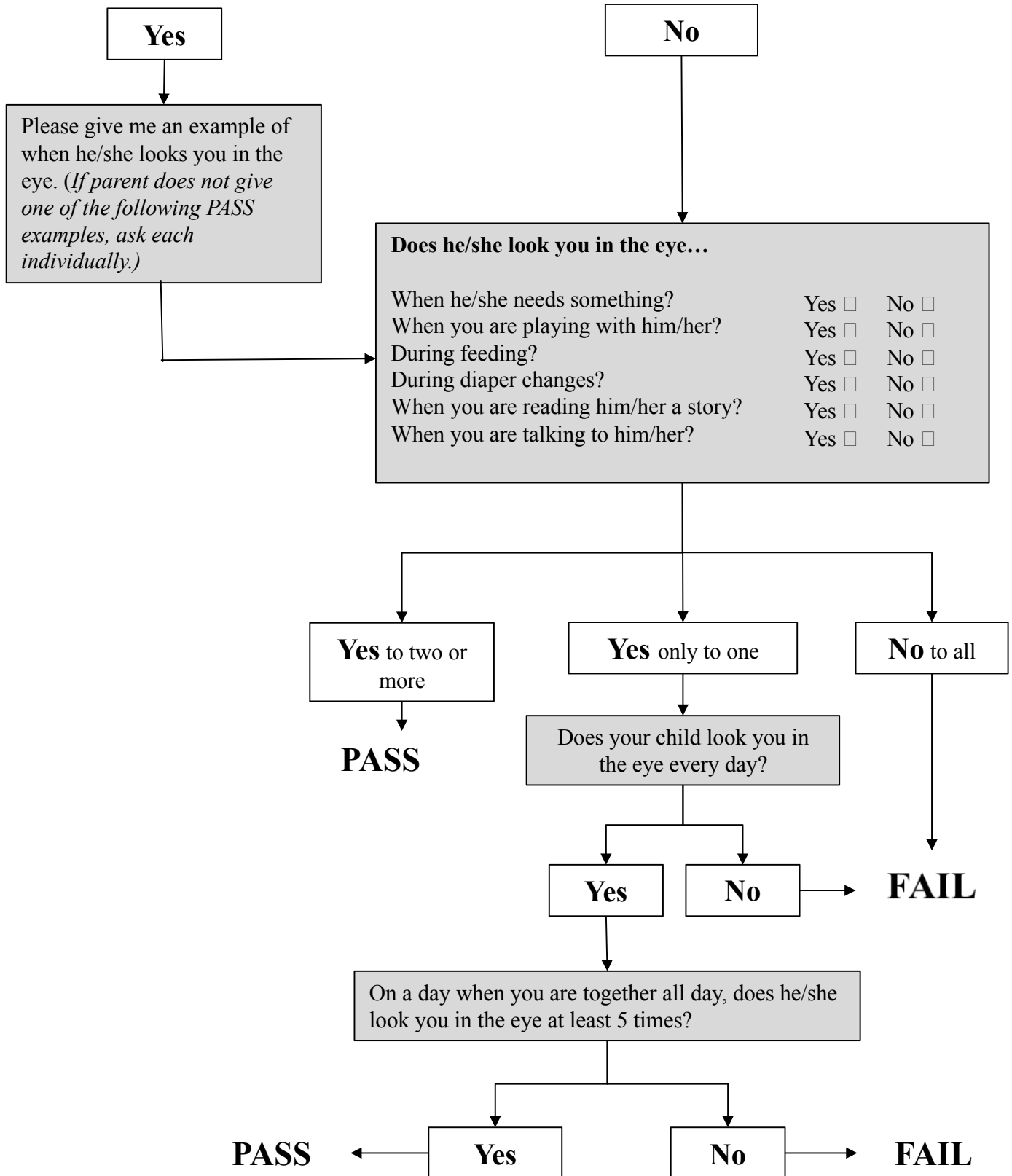
FAIL response

FAIL

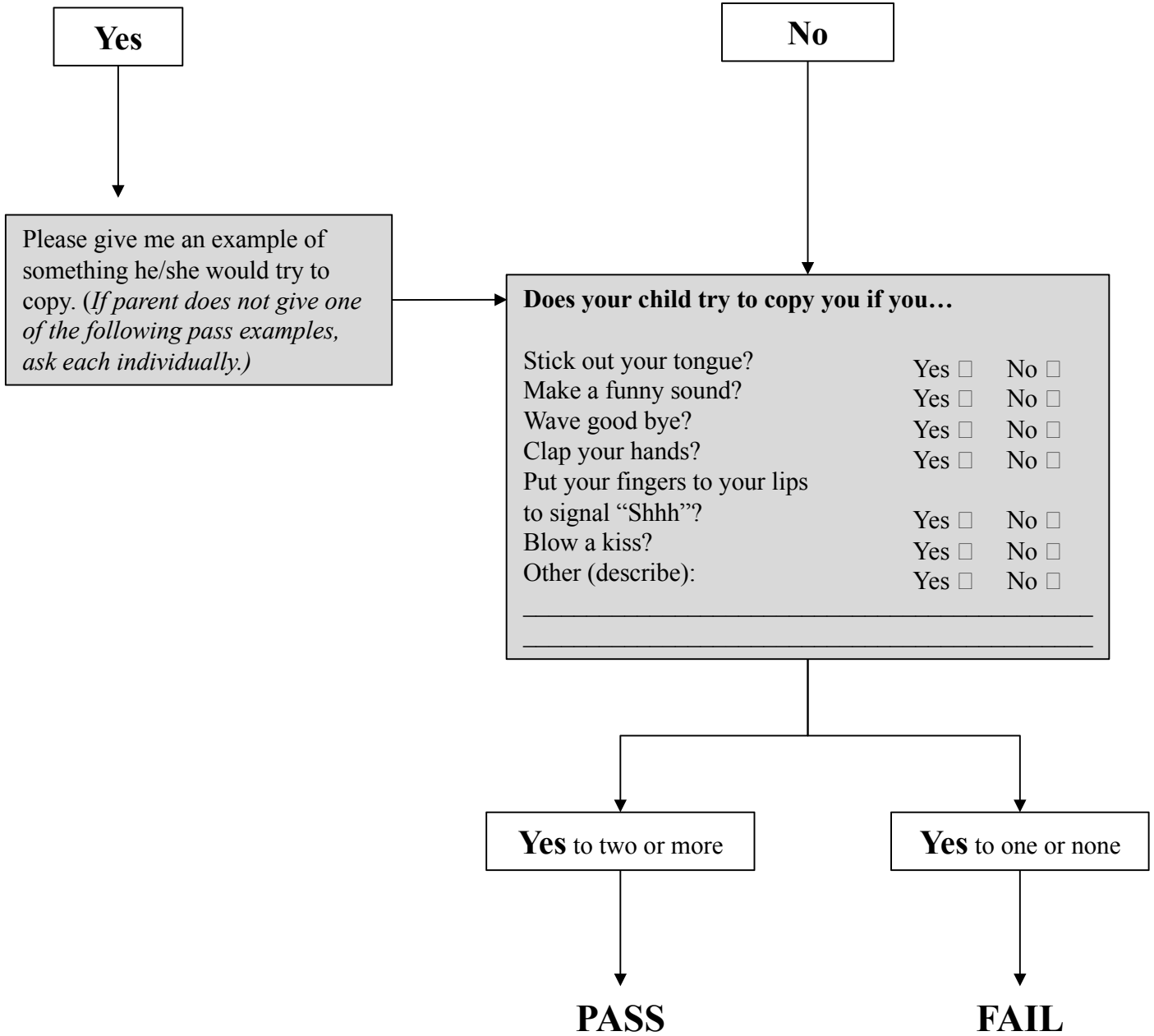
13. Does _____ walk?



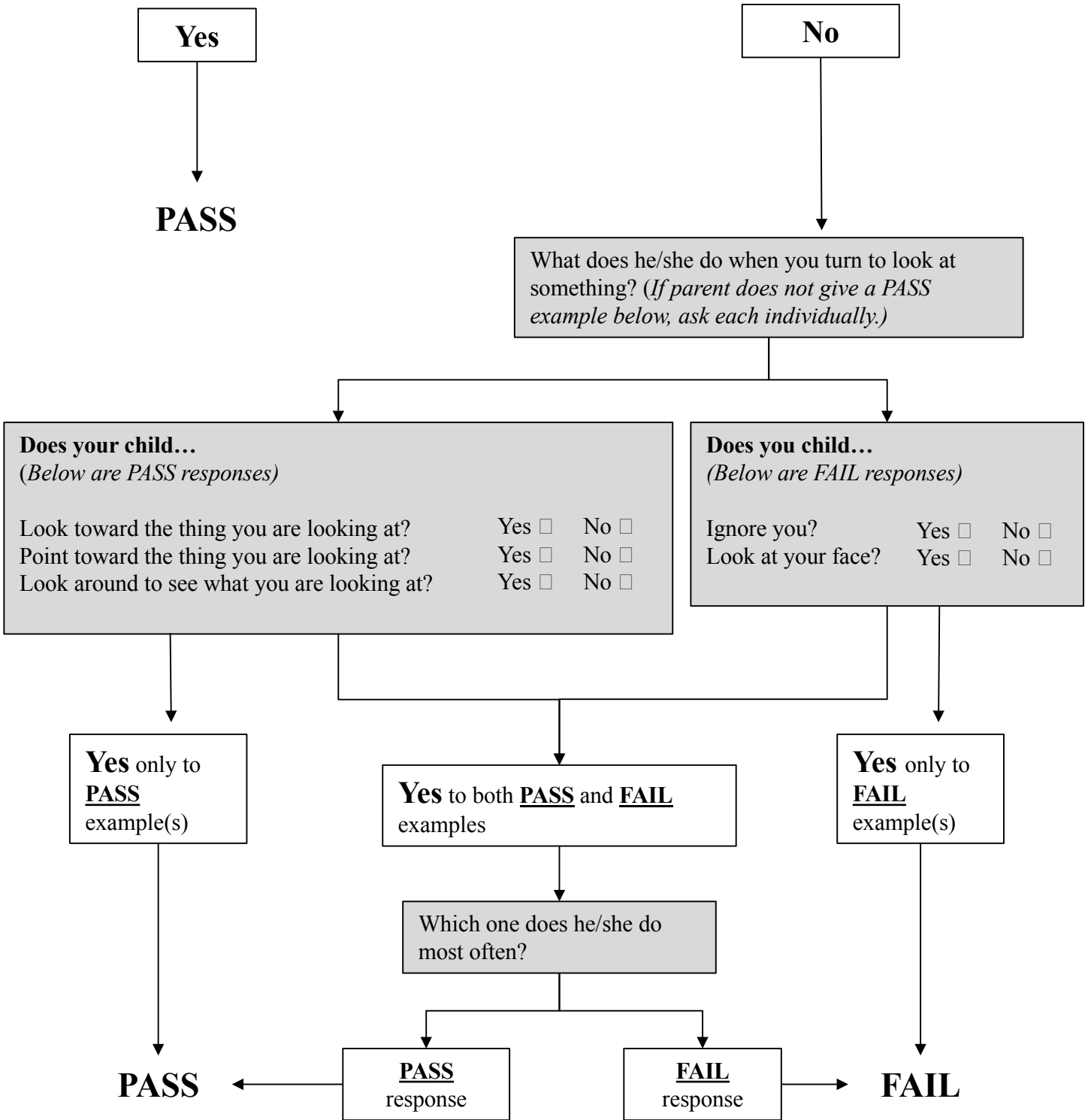
14. Does _____ look you in the eye when you are talking to him/her, playing with him/her, or changing him/her?



15. Does _____ try to copy what you do?



16. If you turn your head to look at something, does _____ look around to see what you are looking at?



17. Does _____ try to get you to watch him/her?

Yes

No

Please give me an example of how he/she would try to get you to watch him/her. (*If parent does not give a PASS example below, ask each individually.*)

Does he/she...

Say "Look!" or "Watch me!"?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Babble or make a noise to get you to watch what he/ she is doing?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Look at you to get praise or comment?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Keep looking to see if you are looking?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Other (describe):	Yes <input type="checkbox"/>	No <input type="checkbox"/>

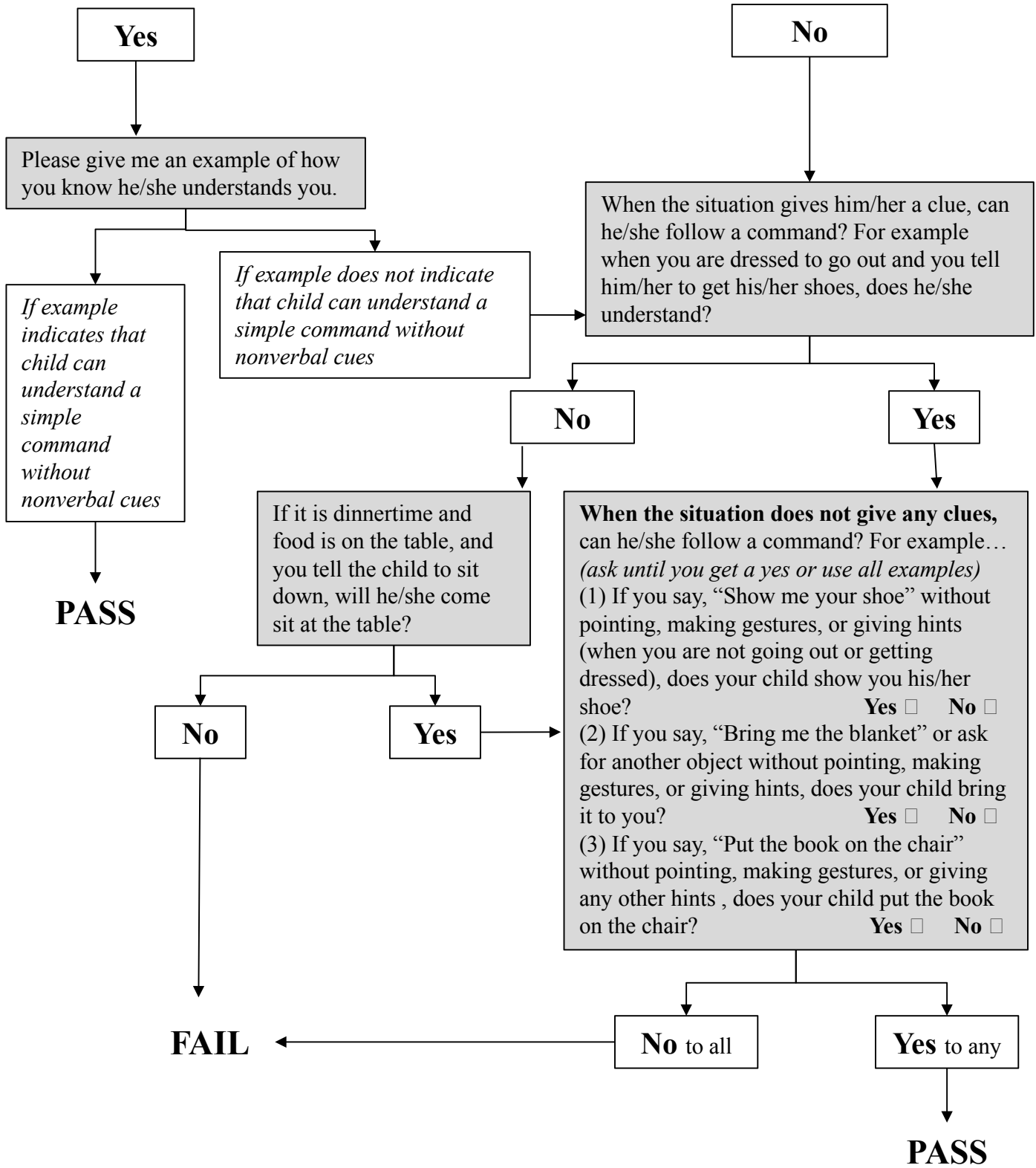
Yes to any

Yes to none

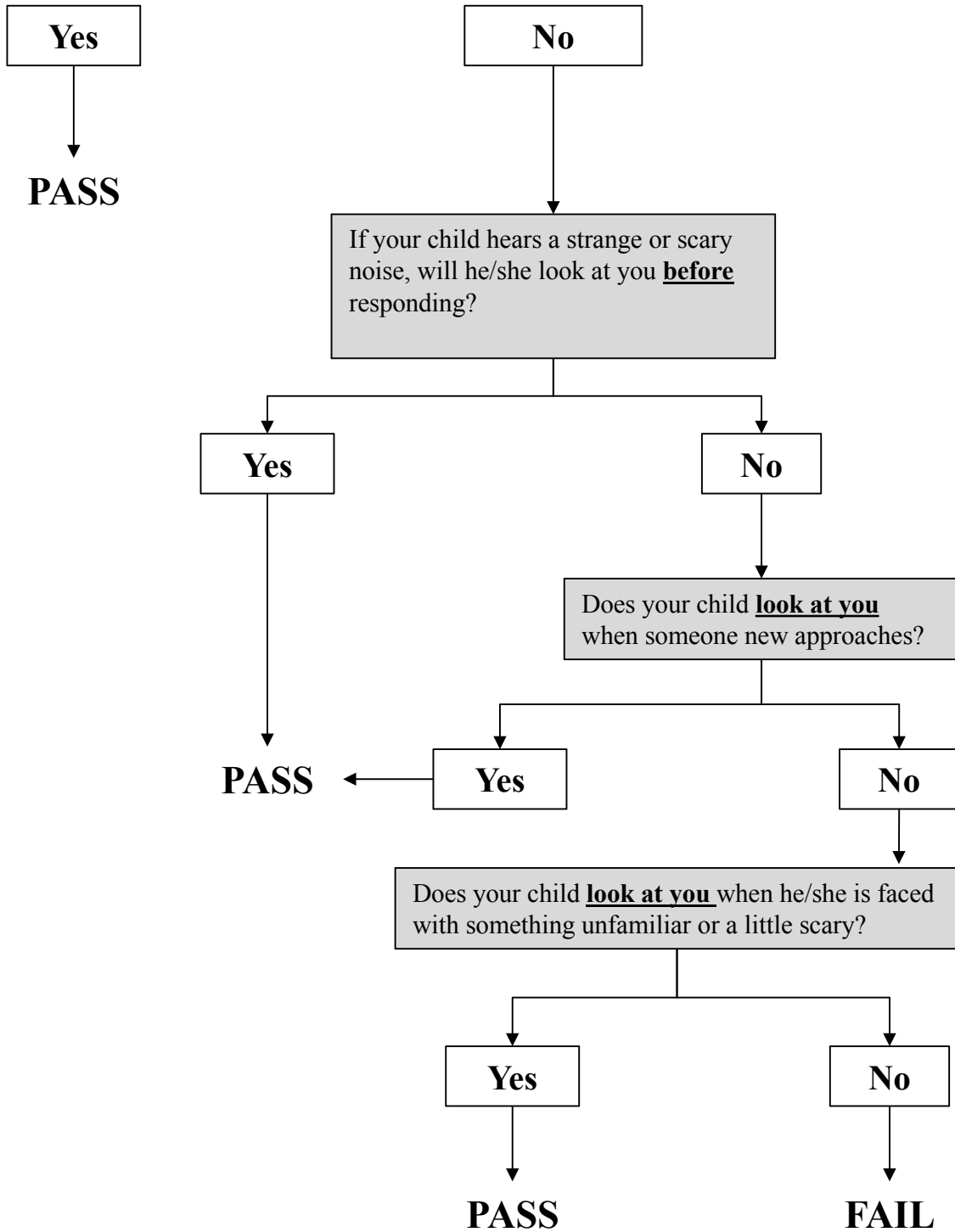
PASS

FAIL

18. Does _____ understand when you tell him/her to do something?



19. If something new happens, does _____ look at your face to see how you feel about it?



20. Does _____ like movement activities?

