INLAND EMPIRE HEALTH PLAN

IEHP UM Subcommittee Authorization Guidelines

Screening, Assessment and Treatment of Autism Spectrum Disorder

Clinical Indications:

A. Surveillance:

Surveillance and screening for ASD should be part of every preventive care visit from infancy through school-age, and at any time thereafter if there are concerns about the Member's social acceptance, learning or behavior. Siblings of children with ASD should be carefully monitored for acquisition of social, communication, and play skills, and the occurrence of maladaptive behaviors. All children should be screened at regular intervals in accordance with recommendations for preventive pediatric health care developed by the American Academy of Pediatrics, "Bright Futures" guidelines. (See **Appendix A** for the American Academy of Pediatrics (AAP) "Recommendations for Preventive Pediatric Health Care.") The screening includes but is not limited to the following:

1. A health and developmental history
2. A comprehensive physical examination
3. Appropriate immunizations, lab tests, and lead toxicity screenings
4. Access to a comprehensive diagnostic evaluation (CDE) based upon a recommendation of a licensed physician and surgeon or a licensed psychologist for medically necessary diagnosis and treatment

The American Academy of Neurology (AAN) recommends the following developmental screening tools: Ages and Stages Questionnaire, the BRIGANCE Screens, the Child Development Inventories, and the Parents' Evaluations of Developmental Status (American Academy of Neurology, 2).

B. Screening:

A standardized screening tool should be administered at any time when concerns about ASD are raised by parents or secondary to clinician observations or surveillance questions. All Members should be screened at the 18-month preventive care visit. Also consider screening all Members at the 24 month visit because some children may regress after 18 months of age *The M-CHAT-R/F (Modified Checklist for Autism in Toddlers, Revised, with Follow Up) is a scientifically validated screening tool intended to be used at regular well-child checkups for children 16 to 30 months of age that assesses risk for ASD. The M-CHAT-R/F is available for download at http://mchatscreen.com*. (See ***Appendix B*** *for a sample form.)*For siblings of children with ASD,

screening should be performed not only for autism-related symptoms but also for language delays, learning difficulties, social problems, and anxiety or depressive symptoms. Any of the following criteria listed by the America Academy of Neurology (AAN) are absolute indications for immediate evaluation for ASDs (American Academy of Neurology, 3).

a. No babbling, or pointing or other gesture by 12 months, or
b. No single words by 16 months, or
c. No 2-word spontaneous (not echolalic) phrases by 24 months, or
d. ANY loss of ANY language or social skill at ANY age

See **Appendix C** for the American Academy of Pediatrics' (AAP) list of *"Selected Level 1 and 2 ASD screening measures"*. Level 1 screening tools are administered to all children within the context of a primary care medical home and are designed to differentiate children who are at risk of ASDs from the general population, especially those with typical development. Level 2 screening tools are used more often in early intervention programs or developmental clinics that serve children with a variety of developmental problems.

C. Assessment:

1. Procedure:

If the results of an ASD-specific screening tool are positive or concerning then the following steps should be taken for all Members at the time of the visit:

a. Provide parental education
b. Refer for a formal audiologic evaluation even if the neonatal screening result was normal (may include frequency-specific brainstem auditory evoked response with or without sedation or otoacoustic emissions)
c. Lead screening if pica is present or Member lives in a high risk environment
d. Vision screening and referral to optometry/ophthalmology if indicated
e. Schedule Member for a follow-up visit within 1 month to determine the status of the referrals and to address any further parental concerns
f. Refer to the local school district if the child is over 36 months of age
g. Refer to Inland Regional Center (IRC) for appropriate services if the Member is under 36 months and has a significant developmental delay or refer if the Member is over 36 months and has an Autism Spectrum Disorder.
h. Refer the Member to IEHP for access to a Comprehensive Diagnostic Evaluation (CDE) including access to genetics, pediatric neurology, speech, occupational and physical therapy evaluations). Fax a copy of the Member's ASD screening form and visit note to IEHP. The Member does not have to have a diagnosis of ASD in order to be referred for assessment services
i. IEHP BH Care Management Staff will refer the Member to a Qualified Autism Service Provider (QASP) or Psychologist for a CDE. The CDE must be performed by a licensed physician or licensed psychologist with training and direct experience assessing children with developmental disabilities.
j. The CDE may include, but is not limited to, the following: A comprehensive unclothed medical examination (by the primary care physician/pediatrician); a parent/guardian interview; direct play observation; review of relevant medical,

psychological, and/or school records; cognitive/developmental assessment; measure of adaptive functioning; language assessment (by a speech language pathologist); sensory evaluation (by an occupational therapist); and if clinically indicated, neurological and/or genetic assessment to rule out biological issues (by a developmental pediatrician, pediatric neurologist, and/or geneticist). (California Department of Health Care Services, 10)

2. Other Assessment Services:

a. The following services may also be included in the assessment of the Member's condition:

i. Medical evaluation including a complete history and physical exam focusing on the discovery of co-morbid conditions or identifiable syndromes or medical disorders associated with autism such as Fragile X syndrome, neurocutaneous disorders, phenylketonuria, fetal alcohol syndrome, Angelman syndrome and Smith-Lemli-Opitz
ii. Genetic counseling for parents of a child with ASD

b. The following services may also be considered on a case by case basis depending on clinical findings:

i. Evaluation by a genetics specialist
ii. Genetic testing in children with an ASD and coexisting global developmental delay/mental retardation or intellectual disability:
- High resolution karyotype
- DNA analysis for Fragile X syndrome
- Methyl CpG-binding protein 2 (MECP2) analysis for female Members with regression and autistic features that are also consistent with Rett syndrome
- Other medically necessary genetic testing as ordered by a genetic specialist, neurologist

ii. Selective metabolic testing based on the presence of suggestive clinical and physical findings or it the results of the newborn screen are unknown
iii. Quantitative plasma amino acid assays to detect phenylketonuria
iv. EEG: for clinical spells that may represent seizures or adequate sleep-deprived EEG with appropriate sampling of slow wave sleep in the presence of clinical seizures or suspicion of subclinical seizures, or a history of regressions at any age, but especially in toddlers and preschoolers

3. Background Information for Other Possible Assessments:

a. Genetic testing:

i. The AAN (American Academy of Neurology, 2), the AAP (American Academy of Pediatrics, 4,5) and DDS (California Department of Developmental Services, 8) recommend genetic testing in children with autism, specifically high resolution chromosome studies (karyotype) and DNA analysis for Fragile X in

the presence of mental retardation (or if mental retardation cannot be excluded) and/or dysmorphic features, as well as when there is a family history of Fragile X or undiagnosed mental retardation. The likelihood of a positive test in a child with high-functioning autism is low. Other testing may be considered based on clinical suspicion. For example, a methyl CpG-binding protein 2 (MECP2) analysis should be considered in females presenting with autistic features and regressions that are also consistent with Rett syndrome. The primary care physician may chose to refer the patient to a subspecialist (geneticist) for assistance with the etiologic work-up or the search for co-morbid conditions.

b. Metabolic Testing:

i. The AAN, AAP and DDS recommend selective metabolic testing based on suggestive clinical and physical findings such as lethargy and cyclic vomiting with mild illnesses, early seizures, dysmorphic or coarse features, mental retardation or unknown results of newborn screen. Subspecialists such as a geneticist or pediatric neurologist may facilitate this work-up.

c. EEG:

i. There is inadequate evidence to recommend an EEG study in all individuals with ASDs. The AAN, AAP and DDS recommend considering EEGs in children with clinical seizures or clinical signs that might represent seizures, as well as children with clear regression in social and communicative skills.

d. Neuroimaging:

There is no clinical evidence to support the role of routine clinical neuroimaging in the diagnostic work-up of ASD's, even in the presence of macrocephaly. The AAN, AAP and DDS recommend that screening on all children with ASDs is not necessary.

e. Other testing:

The AAN finds that there is inadequate supporting evidence for hair analysis, celiac antibodies, allergy testing, immunologic or neurochemical abnormalities, micronutrients such as vitamin levels, intestinal permeability studies, stool analysis, urinary peptides, mitochondrial disorders, thyroid function tests, or erythrocyte glutathione peroxidase studies.

4. Experimental and Investigational Services that are not approved for the Assessment of ASD

IEHP considers the following procedures and services experimental and investigational because the peer-reviewed medical literature **DOES NOT** support their use in the **routine evaluation** of children with possible ASD:

a. Allergy testing (particularly food allergies for gluten, casein, candida and other

molds)
b. Assessment of the immune status
c. Erythrocyte glutathione peroxidase studies
d. Event-related brain potentials
e. Hair analysis for trace elements
f. Intestinal permeability studies
g. Neuroimaging such as CT, MRI, MRS, PET, SPECT and fMRI, even in the presence of macrocephaly (See IEHP UM Guidelines on "MRI Utilization and the Diagnosis of ADHD and Autism.")
h. Nutritional testing
i. Provocative chelation tests for mercury
j. Stool analysis
k. Test for celiac antibodies
l. Tests for micronutrients such as vitamin levels
m. Tests for mitochondrial disorders including lactate and pyruvate
n. Urinary peptides

D. Treatment:

Children with ASD have the same basic health care needs as children without disabilities and should receive the same preventive and health promoting services, including immunizations. These Members may also have unique health care needs related to their etiologic conditions or co-morbidities. Members can access medically necessary treatment services through IEHP.

1. Physical Therapy, Occupational Therapy, Speech Pathology and Audiological Services:

a. When ASD or Developmental Delay is suspected and the clinical diagnosis is speech delay or global delay, the initial evaluation for physical therapy, occupational therapy, speech pathology and audiology are considered covered benefits.
b. For Early Periodic, Screening, Diagnostic, and Treatment (EPSDT)-eligible children under age 21, Managed Medi-Cal Plans must provide a broader range of medically necessary services. 42 U.S.C. section 1396d(r) provides that EPSDT benefit includes "such other necessary health care, diagnostic services, treatment, and other measures described in [42 U.S.C. section 1396d(a)] to correct or ameliorate defects and physical and mental illnesses and conditions discovered by the screening services, whether or not such services or items are covered under the state plan" (42 U.S. Code 1396d(r)(5)).

c. Pursuant to Title 22 CCR section 51340, speech therapy, occupational therapy, and physical therapy services are not subject to the benefit limitations set forth under Title 22 CCR section 51304. In addition, Managed Medi-Cal Plans are required to provide speech therapy, occupational therapy, and physical therapy services when medically necessary to correct or ameliorate defects discovered by the screening services, whether or not such services or items are covered under the state plan.

d. Where another entity—such as a Local Education Agency (LEA), Regional Center, or local governmental health program—has overlapping responsibility for providing services to a child under age 21, Managed Medi-Cal Plans must assess what level of medically necessary services the child requires, determine what level of service (if any) is being provided by the other entity, and then coordinate the provision of services with the other entity to ensure that Managed Medi-Cal Plans and another entity are not providing duplicative services. In any event, Managed Medi-Cal Plans have the primary responsibility to provide all medically necessary services including services which exceed the amount provided by LEAs, Regional Centers, or local governmental health programs. Managed Medi-Cal Plans should not rely on a LEA program, Regional Center, Child Health and Disability Prevention Program (CHDP), local governmental health program, or other entities as the primary provider of medically necessary services. The Managed Medi-Cal Plan is the primary provider of such medical services except for those services that have been expressly carved out.

2. Behavioral Health Treatment (BHT)

a. BHT Services are a covered Medi-Cal benefit pursuant to the Welfare and Institutions Code Section 14132.56. Behavioral health treatment services are evidence-based treatments that are proven to be effective in the treatment of ASD. BHT services teach skills through the use of behavioral observation and reinforcement, or through prompting to teach each step of a targeted behavior (California Department of Health Care Services 10, 11).

b. BHT services are administered by a California State Plan CMS approved Provider as defined by Health and Safety Code Section 1374.73(c) (3), in conjunction with an approved behavioral health treatment plan, and services must meet medical necessity as defined by Welfare and Institutions Code Section 1432(v).

c. Evidence-based BHT services include the following (National Autism Center, 23):
    i. Behavioral interventions
    ii. Cognitive behavioral intervention package
    iii. Comprehensive behavioral treatment for young children
    iv. Language training (production)
    v. Modeling
    vi. Natural teaching strategies
    vii. Parent/Guardian training
    viii. Peer training package
    ix. Pivotal response training
    x. Schedules
    xi. Scripting
    xii. Self-management
    xiii. Social Skills Package
    xiv. Story based intervention

d. In order to be eligible for BHT services (California Department of Health Care Services, 10), the following criteria applies:
    i. Be under 21 years of age
    ii. Have a diagnosis of ASD based upon completion of a CDE (For individuals under three years of age, a rule out or provisional diagnosis is acceptable to receive BHT services)
    iii. Have a recommendation from a licensed physician and surgeon or a licensed psychologist that evidence-based BHT services are medically necessary
    iv. Be medically stable; and
    v. Be without a need for 24-hour medical/nursing monitoring or procedures provided in a hospital or intermediate care facility for person with intellectual disabilities (ICF/ID).

3. Other Covered Services:

a. The following services may be covered if considered medically necessary:
    i. Medical management of co-morbidities
    ii. Periodic monitoring for elevated blood lead level concentrations for Members with pica or mouthing behaviors or Members living in a high risk environment Psychopharmacology

4. Services Not Approved for the Treatment of ASD

a. IEHP considers the following procedures and services experimental and investigational because the peer-reviewed medical literature DOES NOT support their use in the **routine treatment** of children with possible ASD
    i. Anti-fungal medications (i.e. ketoconazole, fluconazole, nystatin, metronidazole)
    ii. Anti-viral medications (i.e. amantadine, oseltamavir, acyclovit, valacyclovir, famcycolvir, Isoprinosine)
    iii. Auditory integration therapy
    iv. Chelation therapy
    v. Cognitive rehabilitation
    vi. Elimination diets (i.e. gluten/casein-free diet)
    vii. Herbal remedies (i.e. plant tannins, garlic, astragalus)
    viii. Immune globulin infusion
    ix. Nutritional supplements (i.e. megavitamins, high-dose pyridoxine and magnesium)
    x. Manipulative therapies
    xi. Secretin infusion
    xii. Systemic hyperbaric oxygen therapy
    xiii. Tomatis sound therapy
    xiv. Vision therapy
    xv. Vitamins and minerals (i.e. zinc, manganese, selenium)

b. In addition, the following services do not meet DHCS criteria or qualify as Medi-Cal covered BHT services in the treatment of children with a possible diagnosis of ASD (California Department of Health Care Services, 10):
    i. Services rendered when continued clinical benefit is not expected
    ii. Respite, day care, custodial care or educational services
    iii. Reimbursement of a parent, legal guardian, or legally responsible person for costs associated with the participation under the behavioral health treatment plan
    iv. Vocationally or recreationally based treatment services
    v. Services, supplies, or procedures performed in a non-conventional setting including, but not limited to, resorts, spas, and camps
    vi. Services rendered by a parent, legal guardian, or legally responsible person
    vii. Services that are not evidence-based practices. There are 13 interventions that per the National Autism Center have little or no evidence in the scientific literature that would draw a firm conclusion about their effectiveness with individuals with ASD (National Autism Center, 13) and include the following:
        - Animal-assisted therapy (ie, Hippotherapy/Equestrian therapy)
        - Auditory integration training
        - Concept mapping
        - DIR/Floor Time
        - Facilitated communication
        - Gluten-free/Casei-free diet
        - Movement-based intervention
        - Sensory intervention package
        - Shock therapy
        - Social behavioral learning strategy
        - Social cognition intervention
        - Social thinking intervention

5. Carve Out Services:

Behavioral health services related to the treatment of Tier 3 severely mentally impaired individuals is carved out to the county mental health departments for ongoing services.

Rationale:

Autism Spectrum Disorder (ASD) refers to a group of neurodevelopmental disorders previously referred to separately as early infantile autism, childhood autism, Kanner's autism, high-functioning autism, atypical autism, pervasive developmental disorder not otherwise specified, childhood disintegrative disorder, and Asperger's disorder. These conditions are now all called ASD (American Psychiatric Association, 6). ASD is a developmental disorder characterized by

problems with verbal and non-verbal communication, impaired social interaction and unusual or repetitive activities. Symptoms are present in early childhood and limit or impair everyday functioning. According to new data from the Centers of Disease Control, ASD affects approximately 1 in 68 children in the United States. This prevalence rate represents a 30 percent increase in the past two years (Center for Disease Control, 12). In California, the rate of those diagnosed with an ASD has more than quadrupled, from 7,487 cases in 1996 to 32,809 in 2006. As the number of children diagnosed increases, so does the demand for additional services.

Studies show that even though parents may feel that something is wrong with their child by 18 months of age and usually seek medical assistance by the time the child is 2, the average age of diagnosis of autism is about 6 years. The diagnosis of ASD is usually not made until 2-3 years after the symptoms are initially recognized because there are concerns about labeling the child or giving the child an incorrect diagnosis. Also, the pathway from initial concern to diagnosis is often complex and time-consuming. Identifying children with ASD as early as possible is important because intensive intervention in the preschool years is a key factor to improving outcomes for most of these children. Early diagnosis of ASD with prompt intervention leads to earlier educational and family support, as well as appropriate medical care and treatment.

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Recommendations for Preventive Pediatric Health Care

Bright Futures/American Academy of Pediatrics

Bright Futures
prevention and health promotion for infants, children, adolescents, and their families™

Each child and family is unique; therefore, these Recommendations for Preventive Pediatric Health Care are designed for the care of children who are receiving competent parenting, have no manifestations of any important health problems, and are growing and developing in satisfactory fashion. Additional visits may become necessary if circumstances suggest variations from normal.

Developmental, psychosocial, and chronic disease issues for children and adolescents may require frequent counseling and treatment visits separate from preventive care visits.

These guidelines represent a consensus by the American Academy of Pediatrics (AAP) and Bright Futures. The AAP continues to emphasize the great importance of continuity of care in comprehensive health supervision and the need to avoid fragmentation of care.

Refer to the specific guidance by age as listed in *Bright Futures* guidelines (Hagan JF, Shaw JS, Duncan PM, eds. *Bright Futures Guidelines for Health Supervision of Infants, Children and Adolescents*. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2008).

The recommendations in this statement do not indicate an exclusive course of treatment or standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

	INFANCY								EARLY CHILDHOOD							MIDDLE CHILDHOOD						ADOLESCENCE										
AGE[1]	**Prenatal**[2]	**Newborn**[3]	**3-5 d**[4]	**By 1 mo**	**2 mo**	**4 mo**	**6 mo**	**9 mo**	**12 mo**	**15 mo**	**18 mo**	**24 mo**	**30 mo**	**3 y**	**4 y**	**5 y**	**6 y**	**7 y**	**8 y**	**9 y**	**10 y**	**11 y**	**12 y**	**13 y**	**14 y**	**15 y**	**16 y**	**17 y**	**18 y**	**19 y**	**20 y**	**21 y**
HISTORY Initial/Interval	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MEASUREMENTS																															
Length/Height and Weight		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Head Circumference		●	●	●	●	●	●	●	●	●	●	●																			
Weight for Length		●	●	●	●	●	●	●	●	●	●																				
Body Mass Index[5]												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Blood Pressure[6]		★	★	★	★	★	★	★	★	★	★	★	★	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SENSORY SCREENING																															
Vision[7]		★	★	★	★	★	★	★	★	★	★	★	★	●	●	●	●	★	●	★	●	★	●	★	★	●	★	★	★	★	★
Hearing		●[8]	★	★	★	★	★	★	★	★	★	★	★	★	●	●	●	★	●	★	●	★	★	★	★	★	★	★	★	★	★	★
DEVELOPMENTAL/BEHAVIORAL ASSESSMENT																															
Developmental Screening[9]								●			●		●																		
Autism Screening[10]											●	●																			
Developmental Surveillance		●	●	●	●	●	●		●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Psychosocial/Behavioral Assessment		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Alcohol and Drug Use Assessment[11]																					★	★	★	★	★	★	★	★	★	★	★
Depression Screening[12]																					●	●	●	●	●	●	●	●	●	●	●
PHYSICAL EXAMINATION[13]		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PROCEDURES[14]																															
Newborn Blood Screening[15]		←	●	→																											
Critical Congenital Heart Defect Screening[16]		●																													
Immunization[17]		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Hematocrit or Hemoglobin[18]						★			●	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Lead Screening[19]							★	★	● or ★[20]		★	● or ★[20]		★	★	★	★															
Tuberculosis Testing[21]				★			★		★			★		★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Dyslipidemia Screening[22]												★			★		★		★	←	●	→	★	★	★	★	★	★	←	●	→
STI/HIV Screening[23]																					★	★	★	★	★	←	●	→	★	★	★
Cervical Dysplasia Screening[24]																															●
ORAL HEALTH[25]							★	★	● or ★		● or ★	● or ★	● or ★	●			●														
Fluoride Varnish[26]							←				●	→																			
ANTICIPATORY GUIDANCE	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

1. If a child comes under care for the first time at any point on the schedule, or if any items are not accomplished at the suggested age, the schedule should be brought up to date at the earliest possible time.
2. A prenatal visit is recommended for parents who are at high risk, for first-time parents, and for those who request a conference. The prenatal visit should include anticipatory guidance, pertinent medical history, and a discussion of benefits of breastfeeding and planned method of feeding, per the 2009 AAP statement "The Prenatal Visit" (http://pediatrics.aappublications.org/content/124/4/1227.full).
3. Every infant should have a newborn evaluation after birth, and breastfeeding should be encouraged (and instruction and support should be offered).
4. Every infant should have an evaluation within 3 to 5 days of birth and within 48 to 72 hours after discharge from the hospital to include evaluation for feeding and jaundice. Breastfeeding infants should receive formal breastfeeding evaluation, and their mothers should receive encouragement and instruction, as recommended in the 2012 AAP statement "Breastfeeding and the Use of Human Milk" (http://pediatrics.aappublications.org/content/129/3/e827.full). Newborn infants discharged less than 48 hours after delivery must be examined within 48 hours of discharge, per the 2010 AAP statement "Hospital Stay for Healthy Term Newborns" (http://pediatrics.aappublications.org/content/125/2/405.full).
5. Screen, per the 2007 AAP statement "Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report" (http://pediatrics.aappublications.org/content/120/Supplement_4/S164.full).
6. Blood pressure measurement in infants and children with specific risk conditions should be performed at visits before age 3 years.
7. A visual acuity screen is recommended at ages 4 and 5 years, as well as in cooperative 3 year olds. Instrument based screening may be used to assess risk at ages 12 and 24 months, in addition to the well visits at 3 through 5 years of age. See 2016 AAP statement, "Visual System Assessment in Infants, Children, and Young Adults by Pediatricians" (http://pediatrics.aappublications.org/content/137/1/1.51) and "Procedures for Evaluation of the Visual System by Pediatricians" (http://pediatrics.aappublications.org/content/137/1/1.52).
8. All newborns should be screened, per the AAP statement "Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs" (http://pediatrics.aappublications.org/content/120/4/898.full).
9. See 2006 AAP statement "Identifying Infants and Young Children With Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening" (http://pediatrics.aappublications.org/content/118/1/405.full).
10. Screening should occur per the 2007 AAP statement "Identification and Evaluation of Children with Autism Spectrum Disorders" (http://pediatrics.aappublications.org/content/120/5/1183.full).
11. A recommended screening tool is available at http://www.ceasar-boston.org/CRAFFT/index.php.
12. Recommended screening using the Patient Health Questionnaire (PHQ)-2 or other tools available in the GLAD-PC toolkit and at http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Mental-Health/Documents/MH_ScreeningChart.pdf.
13. At each visit, age-appropriate physical examination is essential, with infant totally unclothed and older children undressed and suitably draped. See 2011 AAP statement "Use of Chaperones During the Physical Examination of the Pediatric Patient" (http://pediatrics.aappublications.org/content/127/5/991.full).
14. These may be modified, depending on entry point into schedule and individual need.
15. The Recommended Uniform Newborn Screening Panel (http://www.hrsa.gov/advisorycommittees/mchbadvisory/heritabledisorders/recommendedpanel/uniformscreeningpanel.pdf), as determined by The Secretary's Advisory Committee on Heritable Disorders in Newborns and Children, and state newborn screening laws/regulations (http://genes-r-us.uthscsa.edu/sites/genes-r-us/files/nbsdisorders.pdf), establish the criteria for and coverage of newborn screening procedures and programs. Follow-up must be provided, as appropriate, by the pediatrician.
16. Screening for critical congenital heart disease using pulse oximetry should be performed in newborns, after 24 hours of age, before discharge from the hospital, per the 2011 AAP statement "Endorsement of Health and Human Services Recommendation for Pulse Oximetry Screening for Critical Congenital Heart Disease" (http://pediatrics.aappublications.org/content/129/1/190.full).
17. Schedules, per the AAP Committee on Infectious Diseases, are available at: http://aapredbook.aappublications.org/site/resources/izschedules.xhtml. Every visit should be an opportunity to update and complete a child's immunizations.
18. See 2010 AAP statement "Diagnosis and Prevention of Iron Deficiency and Iron Deficiency Anemia in Infants and Young Children (0-3 Years of Age)" (http://pediatrics.aappublications.org/content/126/5/1040.full).
19. For children at risk of lead exposure, see the 2012 CDC Advisory Committee on Childhood Lead Poisoning Prevention statement "Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention" (http://www.cdc.gov/nceh/lead/ACCLPP/Final_Document_030712.pdf).
20. Perform risk assessments or screenings as appropriate, based on universal screening requirements for patients with Medicaid or in high prevalence areas.
21. Tuberculosis testing per recommendations of the Committee on Infectious Diseases, published in the current edition of *AAP Red Book: Report of the Committee on Infectious Diseases*. Testing should be performed on recognition of high-risk factors.
22. See AAP-endorsed 2011 guidelines from the National Heart Blood and Lung Institute, "Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents" (http://www.nhlbi.nih.gov/guidelines/cvd_ped/index.htm).
23. Adolescents should be screened for sexually transmitted infections (STIs) per recommendations in the current edition of the *AAP Red Book: Report of the Committee on Infectious Diseases*. Additionally, all adolescents should be screened for HIV according to the AAP statement (http://pediatrics.aappublications.org/content/128/5/1023.full) once between the ages of 16 and 18, making every effort to preserve confidentiality of the adolescent. Those at increased risk of HIV infection, including those who are sexually active, participate in injection drug use, or are being tested for other STIs, should be tested for HIV and reassessed annually.
24. See USPSTF recommendations (http://www.uspreventiveservicestaskforce.org/uspstf/uspscerv.htm). Indications for pelvic examinations prior to age 21 are noted in the 2010 AAP statement "Gynecologic Examination for Adolescents in the Pediatric Office Setting" (http://pediatrics.aappublications.org/content/126/3/583.full).
25. Assess if the child has a dental home. If no dental home is identified, perform a risk assessment (http://www2.aap.org/oralhealth/docs/RiskAssessmentTool.pdf) and refer to a dental home. If primary water source is deficient in fluoride, consider oral fluoride supplementation. Recommend brushing with fluoride toothpaste in the proper dosage for age. See 2009 AAP statement "Oral Health Risk Assessment Timing and Establishment of the Dental Home" (http://pediatrics.aappublications.org/content/111/5/1113.full), 2014 clinical report "Fluoride Use in Caries Prevention in the Primary Care Setting" (http://pediatrics.aappublications.org/content/134/3/626), and 2014 AAP statement "Maintaining and Improving the Oral Health of Young Children (http://pediatrics.aappublications.org/content/134/6/1224.full)."
26. See USPSTF recommendations (http://www.uspreventiveservicestaskforce.org/uspstf/uspsdnch.htm). Once teeth are present, fluoride varnish may be applied to all children every 3-6 months in the primary care or dental office. Indications for fluoride use are noted in the 2014 AAP clinical report "Fluoride Use in Caries Prevention in the Primary Care Setting" (http://pediatrics.aappublications.org/content/134/3/626).

KEY ● = to be performed ★ = risk assessment to be performed with appropriate action to follow, if positive ← ● → = range during which a service may be provided

Summary of changes made to the
Bright Futures/AAP Recommendations for Preventive Pediatric Health Care

(Periodicity Schedule)

This Schedule reflects changes approved in October 2015 and published in January 2016. For updates, visit www.aap.org/periodicityschedule.

Changes made October 2015

- **Vision Screening**- The routine screening at age 18 has been changed to a risk assessment.
- Footnote 7 has been updated to read, "A visual acuity screen is recommended at ages 4 and 5 years, as well as in cooperative 3 year olds. Instrument based screening may be used to assess risk at ages 12 and 24 months, in addition to the well visits at 3 through 5 years of age. See 2016 AAP statement, "Visual System Assessment in Infants, Children, and Young Adults by Pediatricians (http://pediatrics.aappublications.org/content/137/1/1.51) and "Procedures for Evaluation of the Visual System by Pediatricians" (http://pediatrics.aappublications.org/content/137/1/1.52).

Changes made May 2015

- **Oral Health**- A subheading has been added for fluoride varnish, with a recommendation from 6 months through 5 years.
- Footnote 25 wording has been edited and also includes reference to the 2014 clinical report, "Fluoride Use in Caries Prevention in the Primary Care Setting" (http://pediatrics.aappublications.org/content/134/3/626) and 2014 policy statement, "Maintaining and Improving the Oral Health of Young Children" (http://pediatrics.aappublications.org/content/134/6/1224.full).
- Footnote 26 has been added to the new fluoride varnish subheading: See USPSTF recommendations (http://www.uspreventiveservicestaskforce.org/uspstf/uspsdnch.htm). Once teeth are present, fluoride varnish may be applied to all children every 3-6 months in the primary care or dental office. Indications for fluoride use are noted in the 2014 AAP clinical report "Fluoride Use in Caries Prevention in the Primary Care Setting" (http://pediatrics.aappublications.org/content/134/3/626).

Changes made March 2014

Changes to Developmental/Behavioral Assessment

- **Alcohol and Drug Use Assessment**- Information regarding a recommended screening tool (CRAFFT) was added.
- **Depression**- Screening for depression at ages 11 through 21 has been added, along with suggested screening tools.

Changes to Procedures

- **Dyslipidemia screening**- An additional screening between 9 and 11 years of age has been added. The reference has been updated to the AAP-endorsed National Heart Blood and Lung Institute policy (http://www.nhlbi.nih.gov/guidelines/cvd_ped/index.htm).
- **Hematocrit or hemoglobin**- A risk assessment has been added at 15 and 30 months. The reference has been updated to the current AAP policy (http://pediatrics.aappublications.org/content/126/5/1040.full).
- **STI/HIV screening**- A screen for HIV has been added between 16 and 18 years. Information on screening adolescents for HIV has been added in the footnotes. STI screening now references recommendations made in the AAP Red Book. This category was previously titled "STI Screening."
- **Cervical dysplasia**- Adolescents should no longer be routinely screened for cervical dysplasia until age 21. Indications for pelvic exams prior to age 21 are noted in the 2010 AAP statement "Gynecologic Examination for Adolescents in the Pediatric Office Setting" (http://pediatrics.aappublications.org/content/126/3/583.full).
- **Critical Congenital Heart Disease-** Screening for critical congenital heart disease using pulse oximetry should be performed in newborns, after 24 hours of age, before discharge from the hospital, per the 2011 AAP statement, "Endorsement of Health and Human Services Recommendation for Pulse Oximetry Screening for Critical Congenital Heart Disease" (http://pediatrics.aappublications.org/content/129/1/190.full).

See www.aap.org/periodicityschedule for additional updates made to footnotes and references in March 2014.

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

(M-CHAT-R/F)™

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

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

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

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:

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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 unusual 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)™

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.

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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.

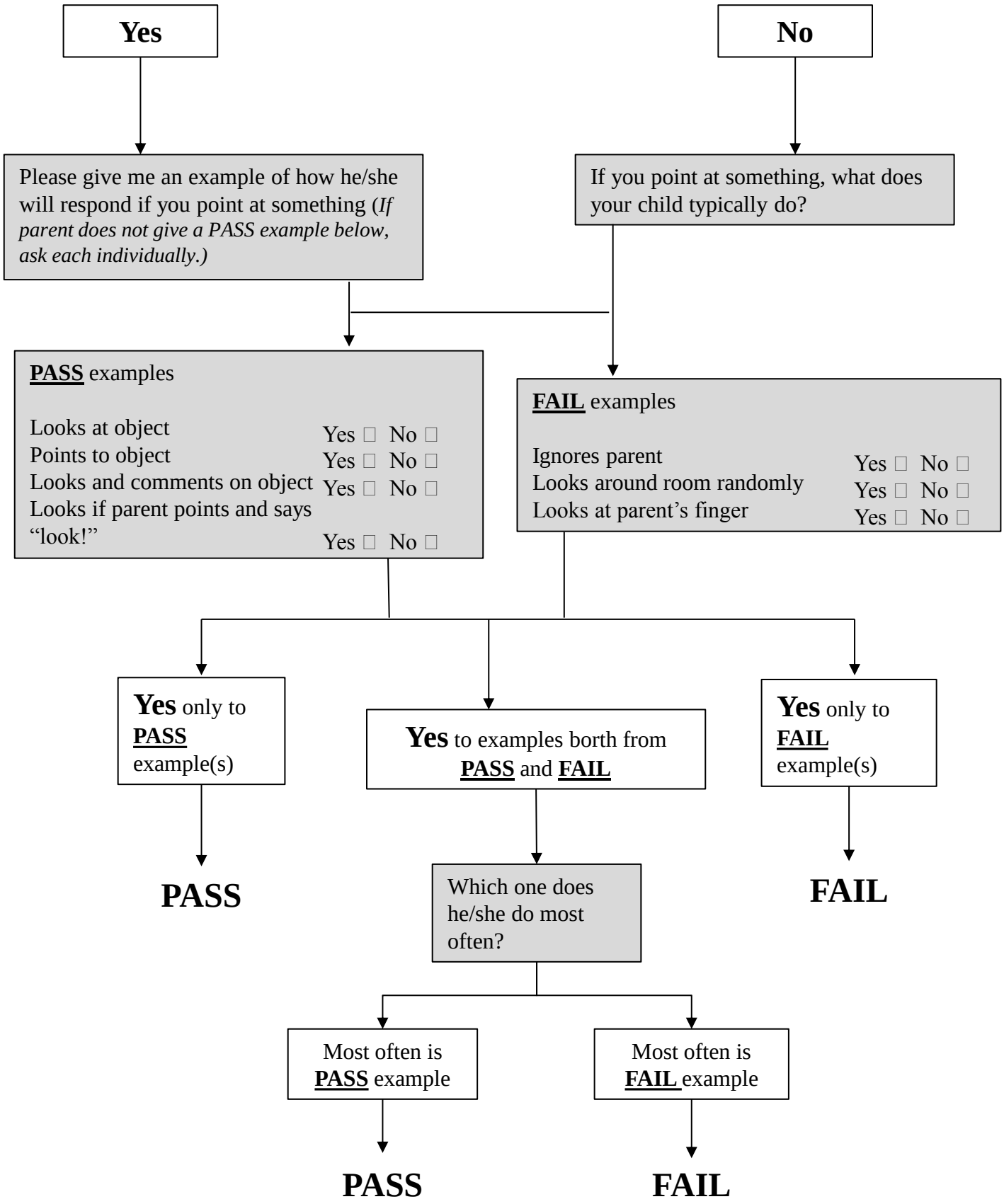
M-CHAT-R Follow-Up™ Scoring Sheet

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

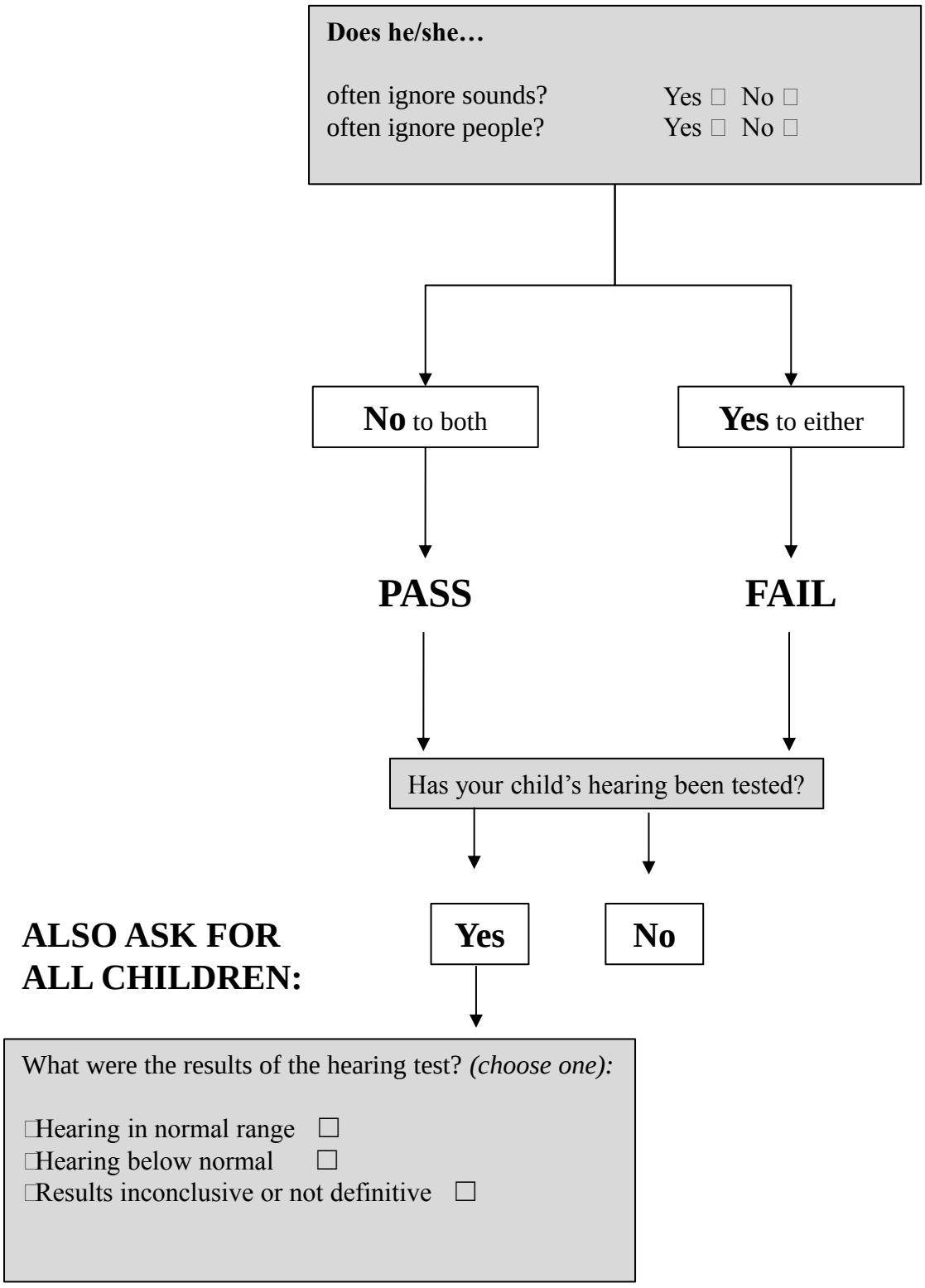
1.	If you point at something across the room, does your child look at it? (**FOR EXAMPLE**, if you point at a toy or an animal, does your child look at the toy or animal?)	Pass	Fail
2.	Have you ever wondered if your child might be deaf?	Pass	Fail
3.	Does your child play pretend or make-believe? (**FOR 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 unusual 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: _____

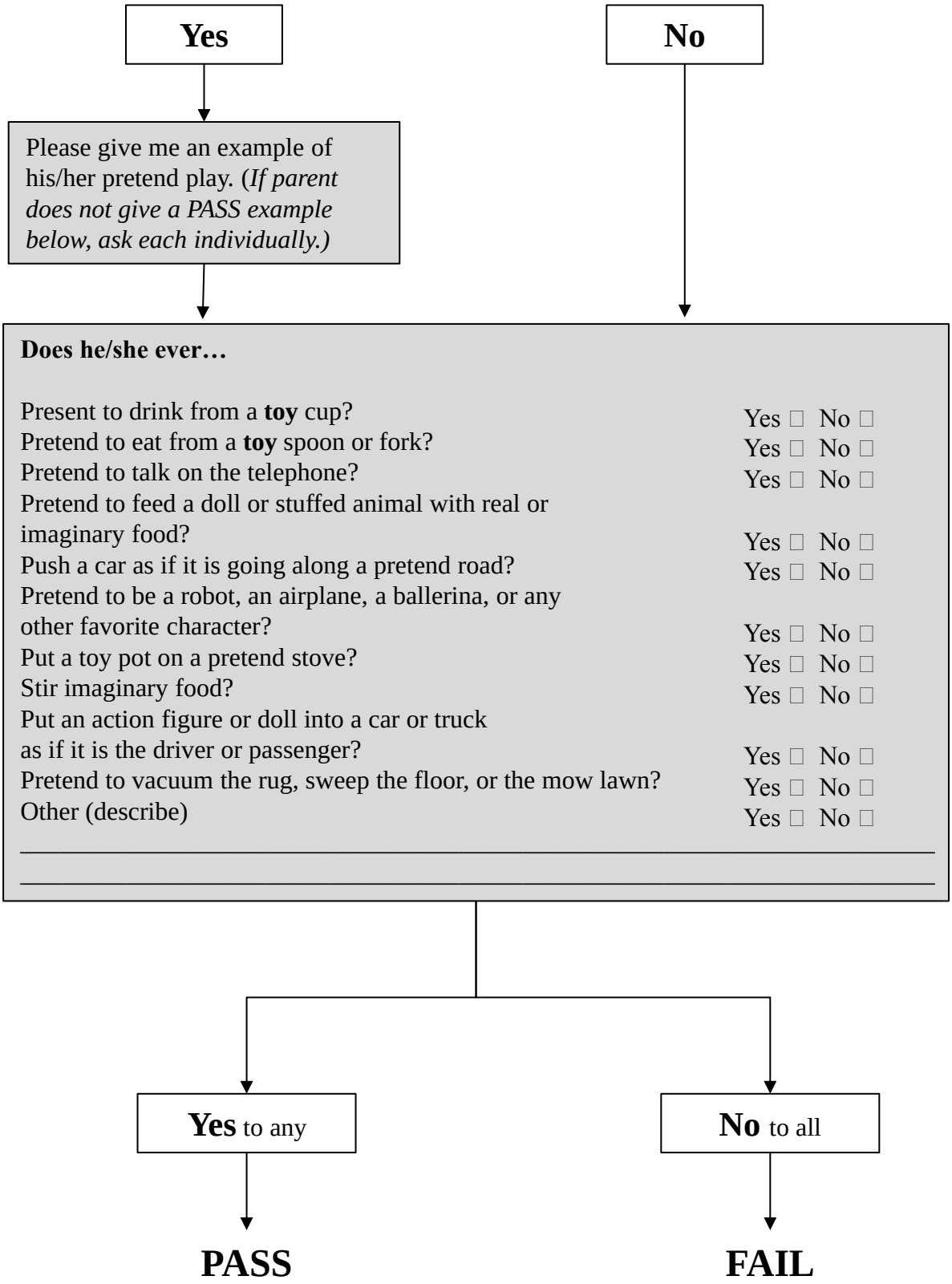
1. If you point at something across the room, does _____ look at it?



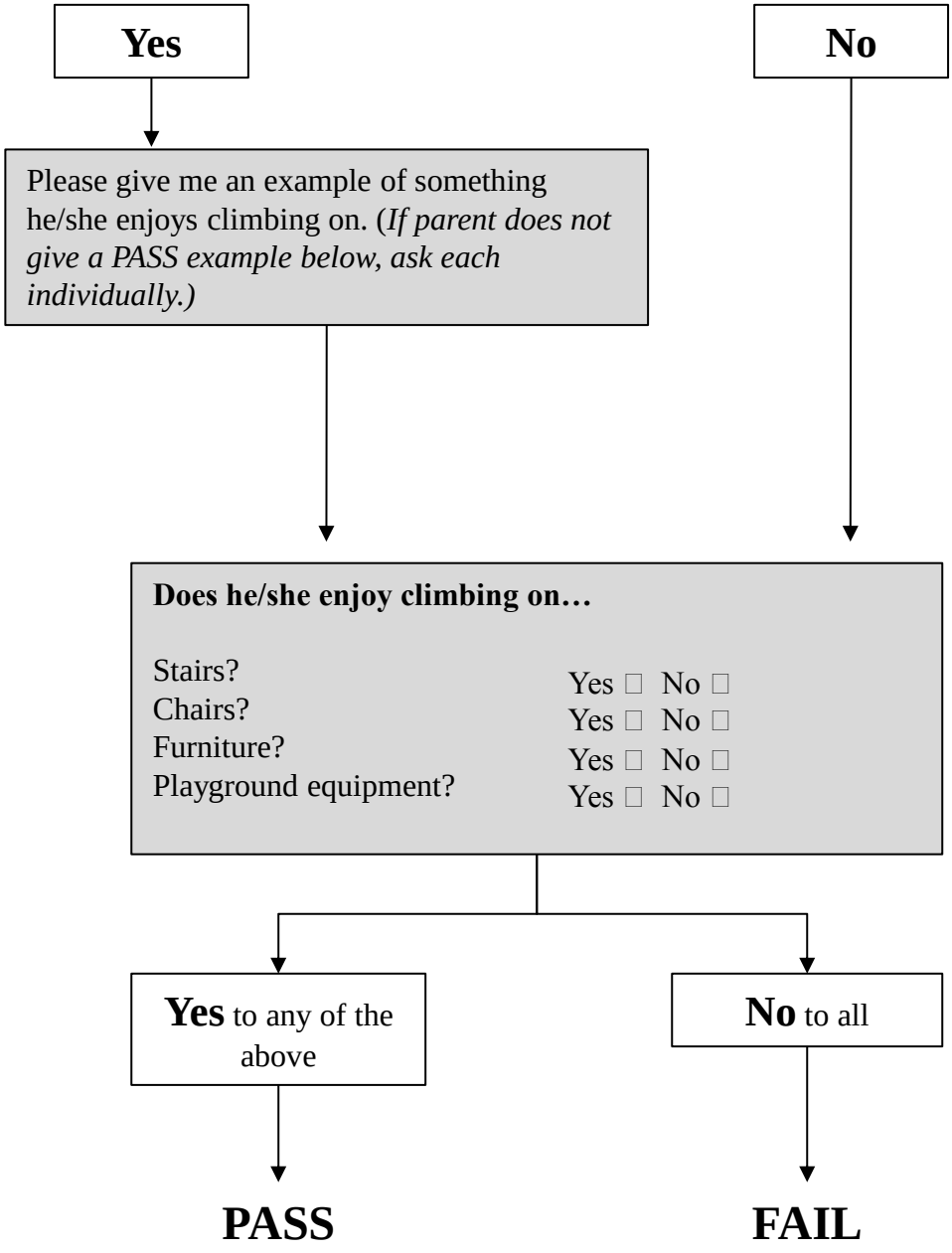
2. You reported that you have wondered if you child is deaf. What led you to wonder that?



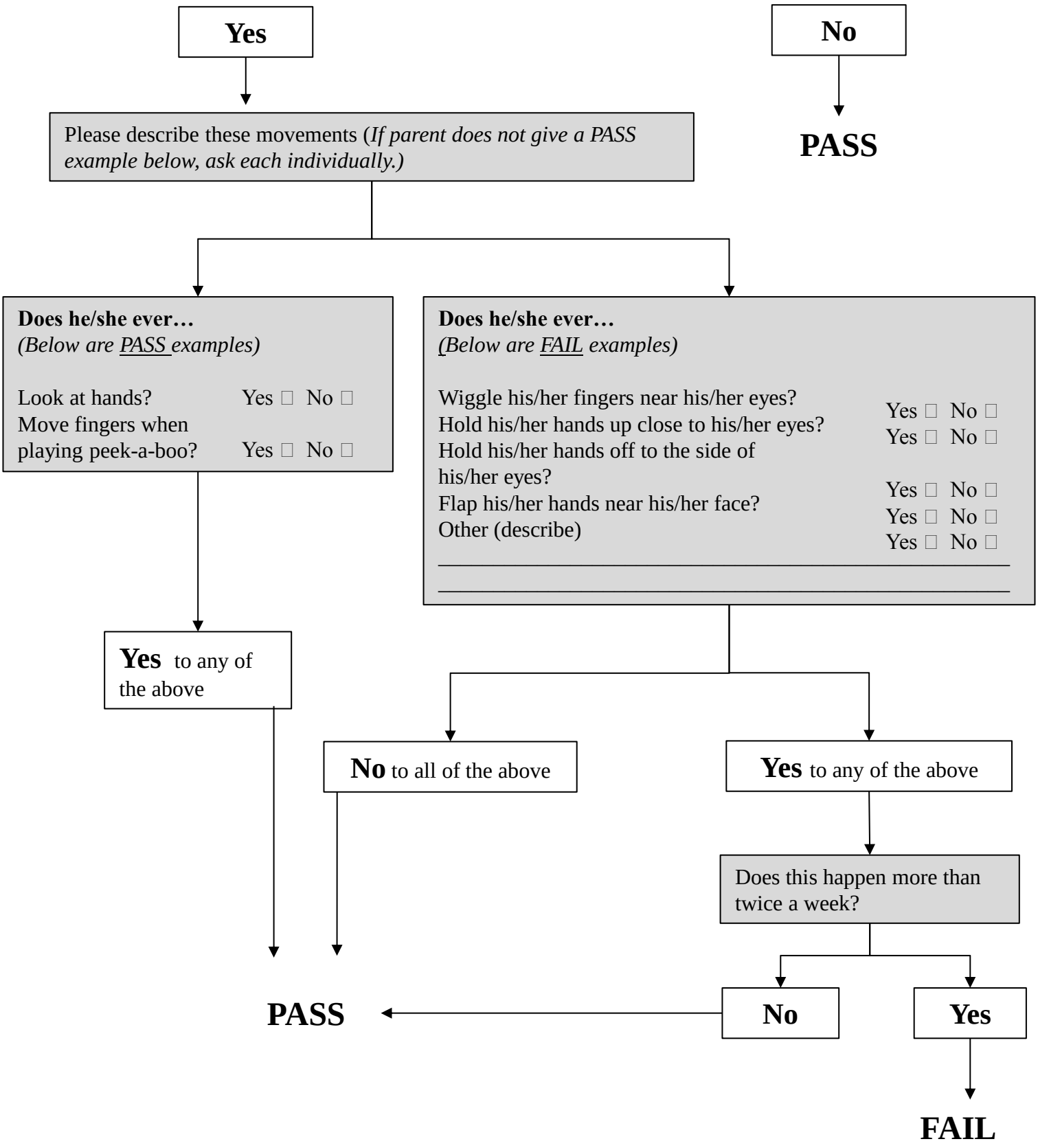
3. Does _____ play pretend or make- believe



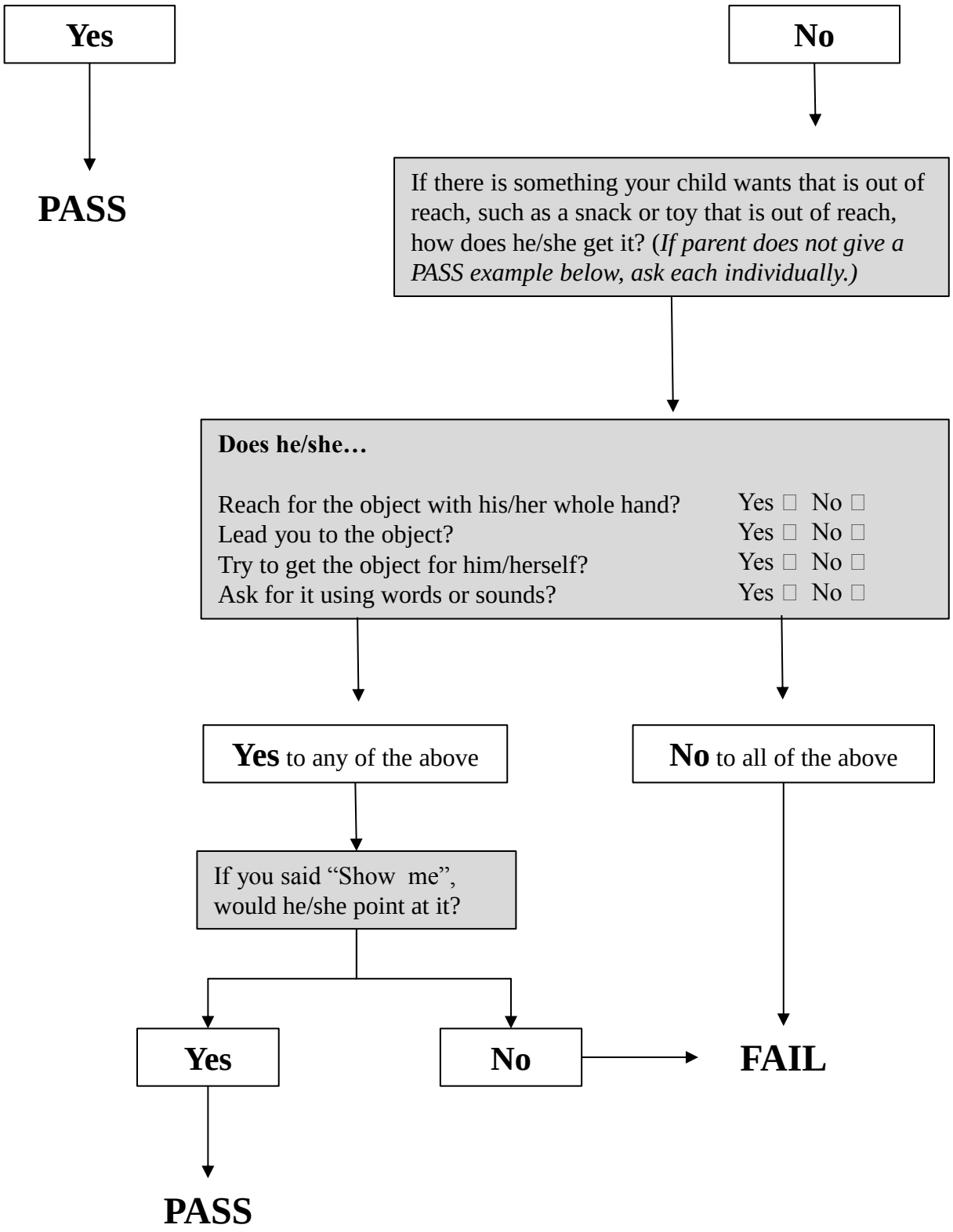
4. Does _____ like climbing on things?



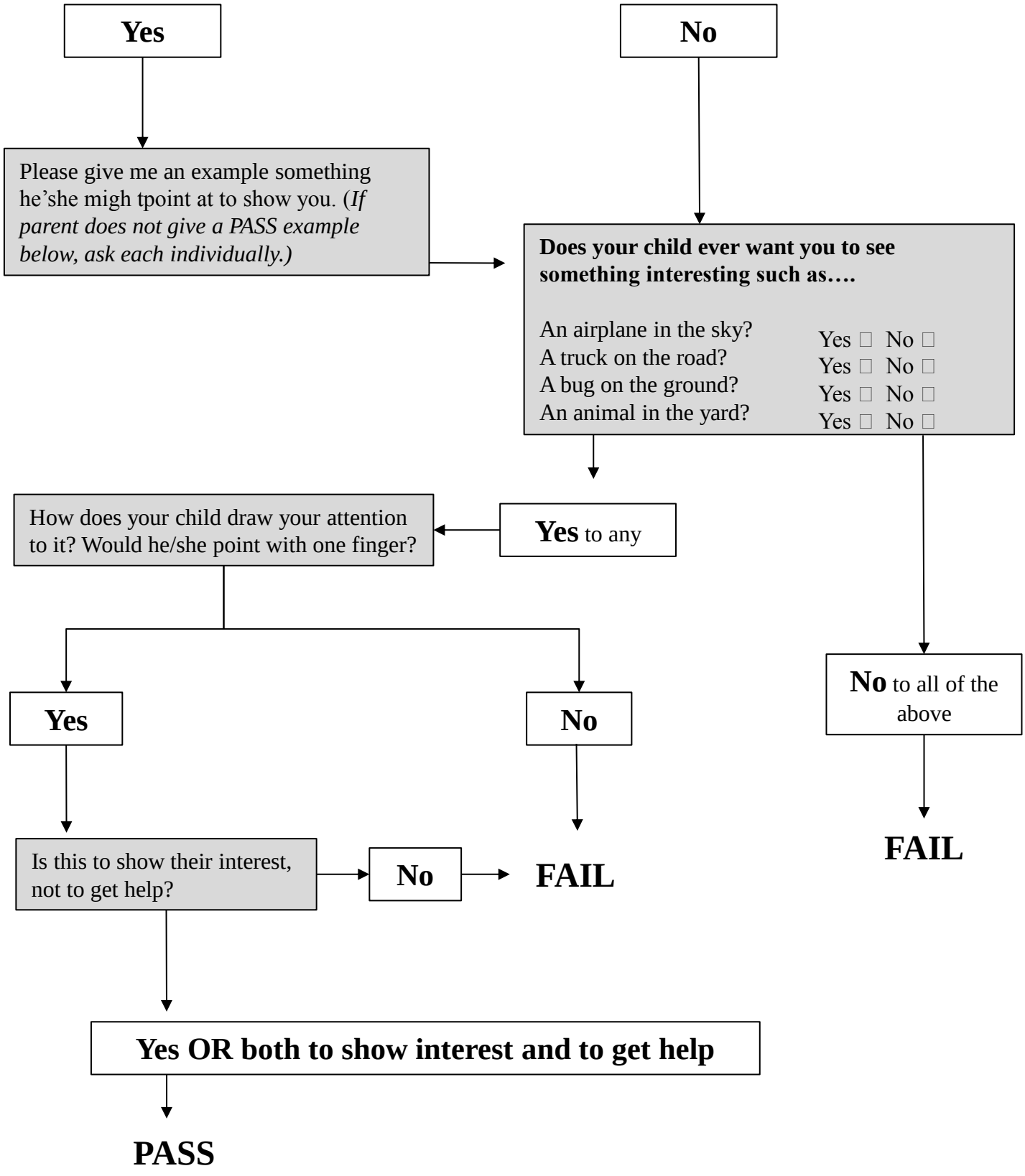
5. Does _____ make unusual finger movements near his/her eyes?



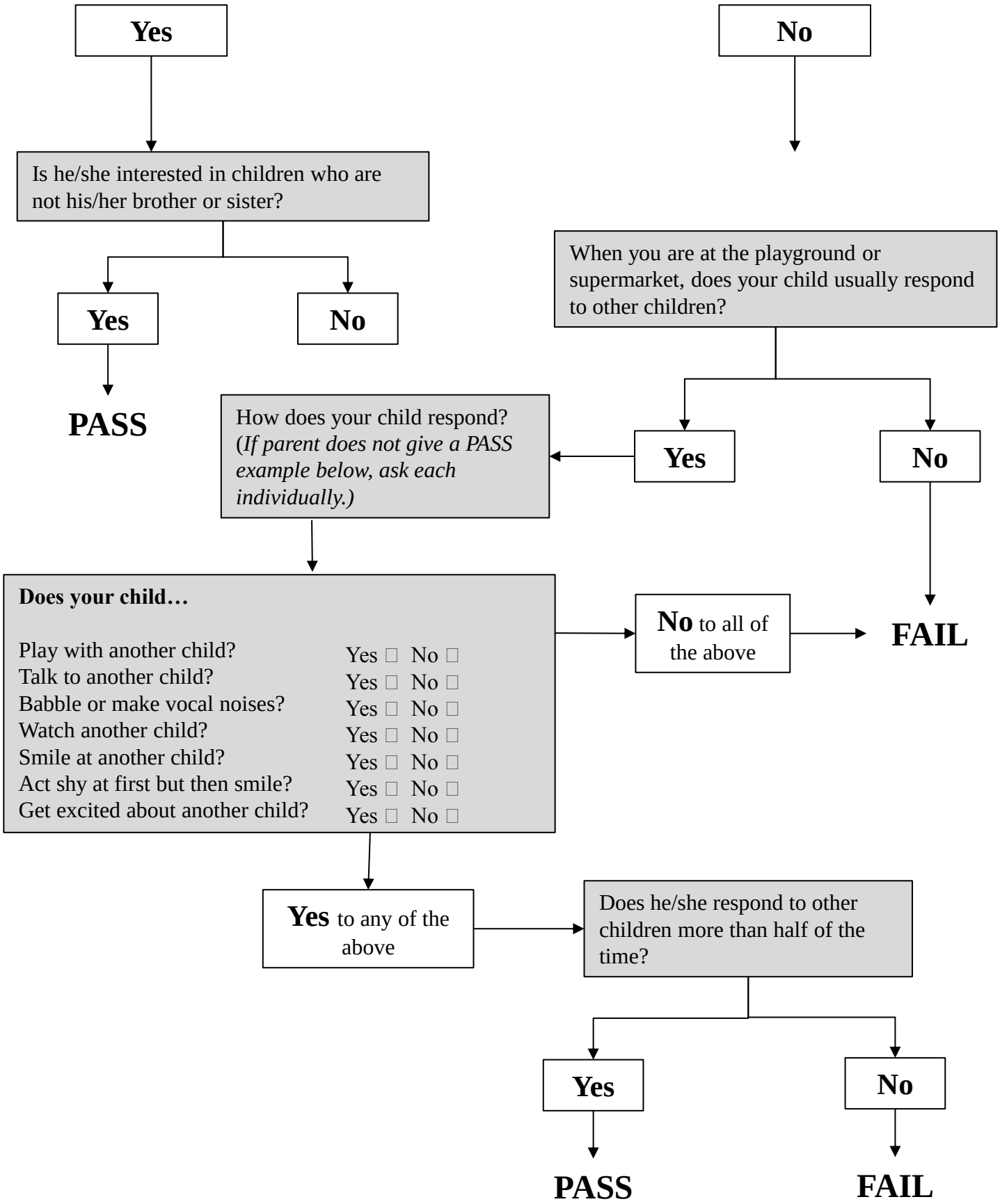
6. Does your child point with one finger to ask for something or to get help?



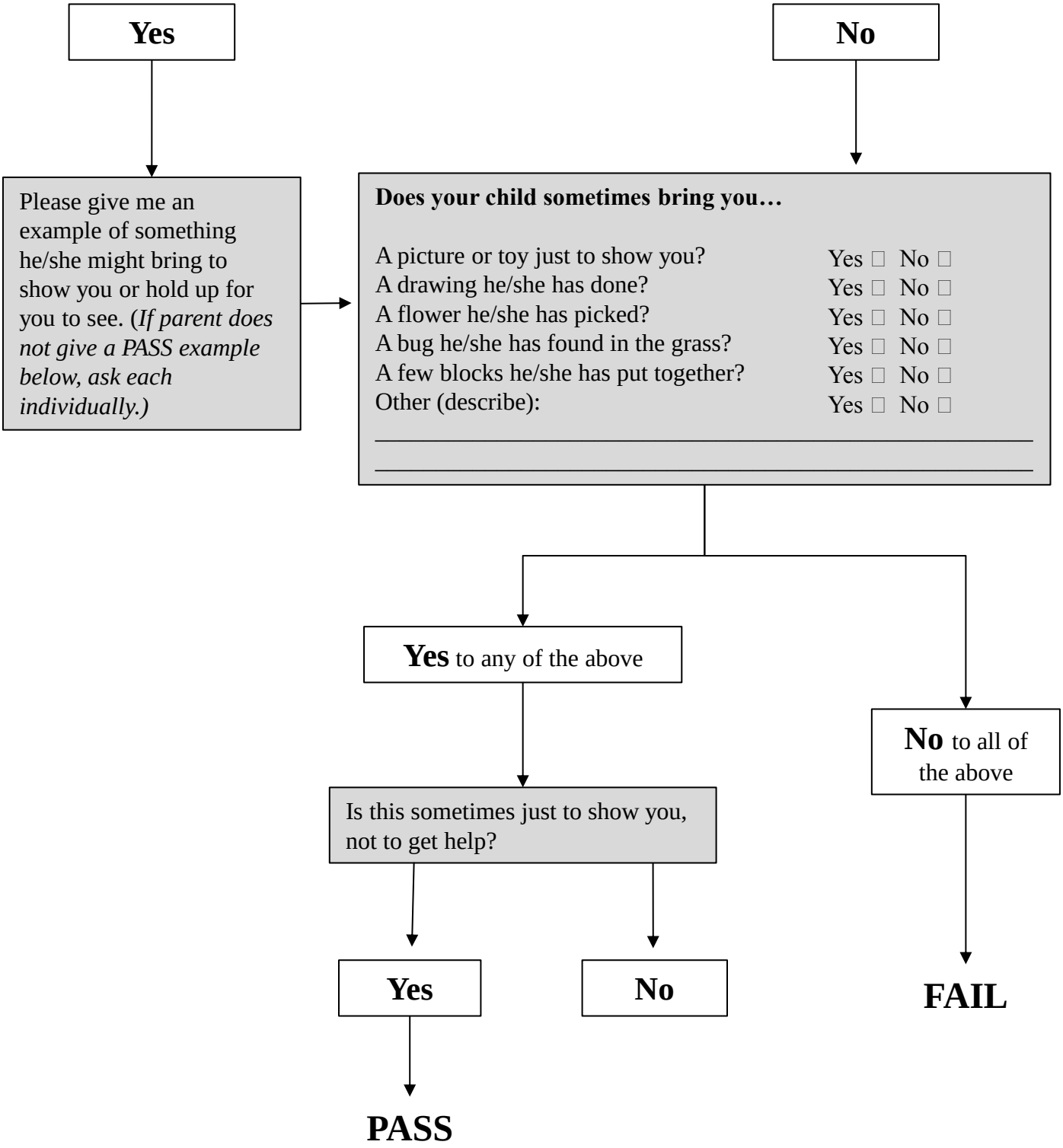
7. * **If the interviewer just asked #6, begin here: We just talked about pointing to *ask* for something, ASK ALL → Does your child point with one finger just to show you something interesting?**



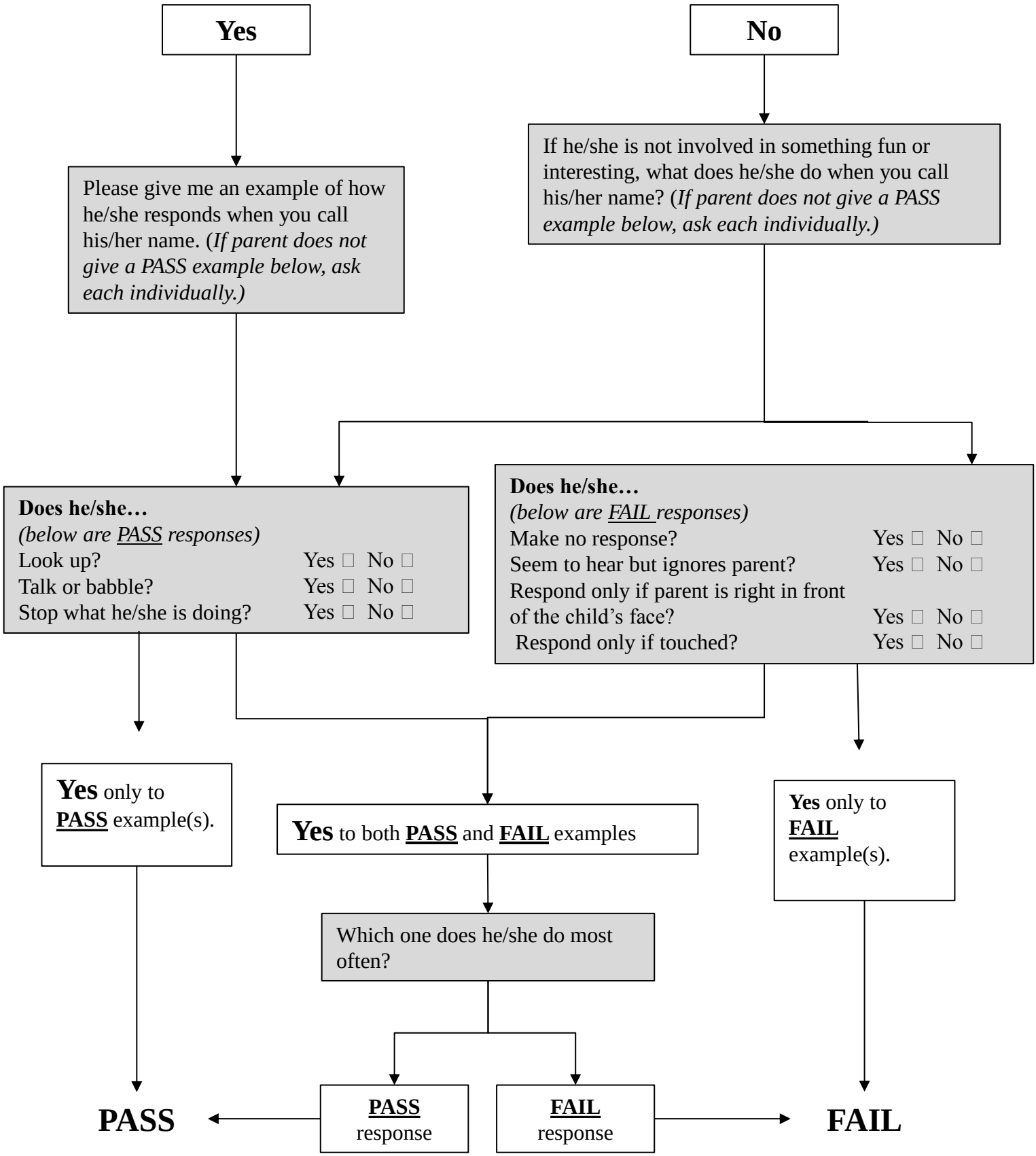
8. Is _____ interested in other children?



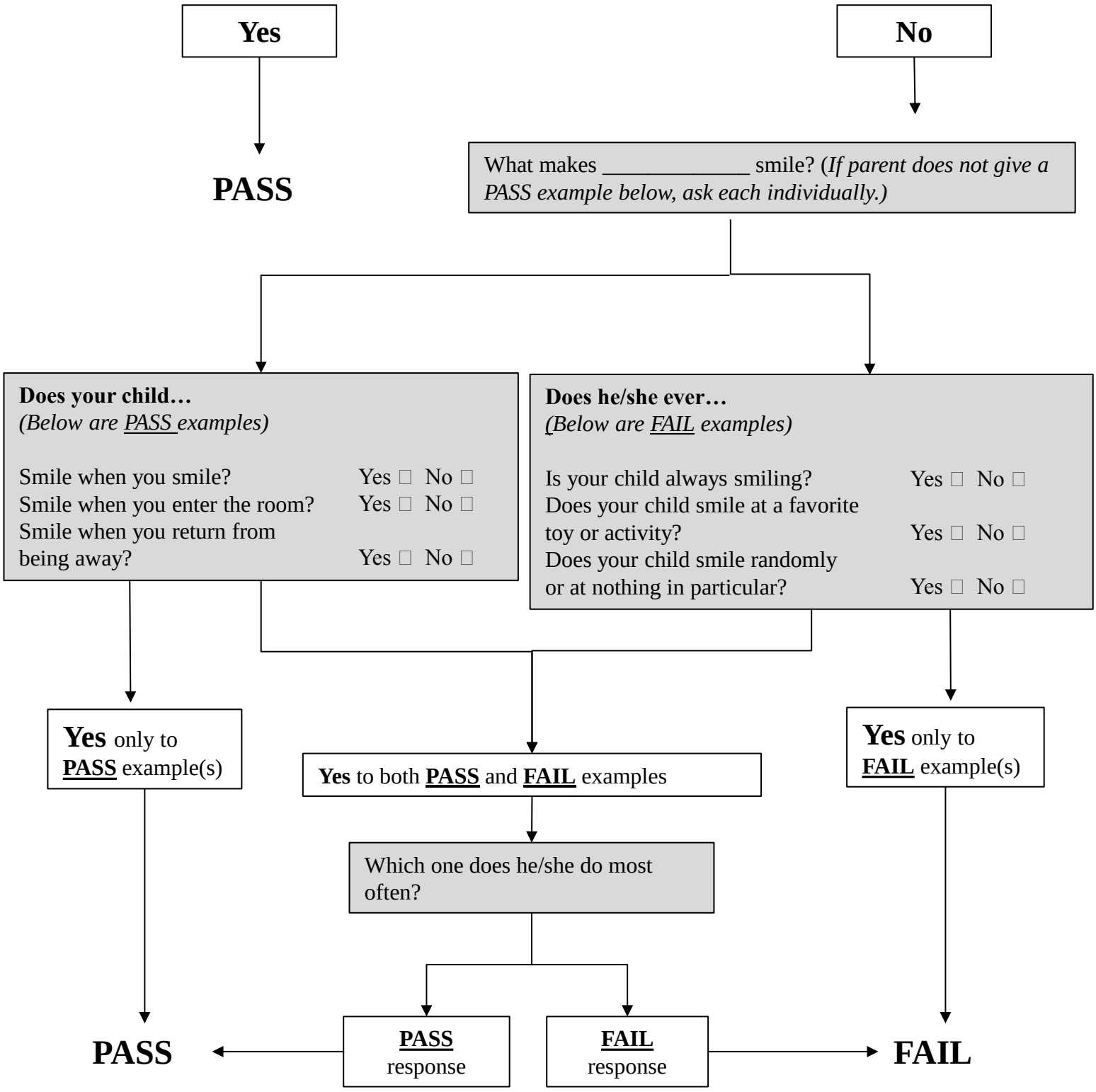
9. Does _____ show you things by bringing them to you or holding them up for you to see? Not just to get help, but to share?



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

PASS

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

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

_____

_____

Yes to two or more

How does your child react 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 ☐ No ☐
Tell you that he/she does not like the noise?	Yes ☐ No ☐

Does your child…
(Below are FAIL responses)

Scream?	Yes ☐ No ☐
Cry?	Yes ☐ No ☐
Cover his/her ears while upset?	Yes ☐ No ☐

Yes only to **PASS** example(s)

Yes to both **PASS** and **FAIL**

Yes only to **FAIL** example(s)

Which one does he/she do most often?

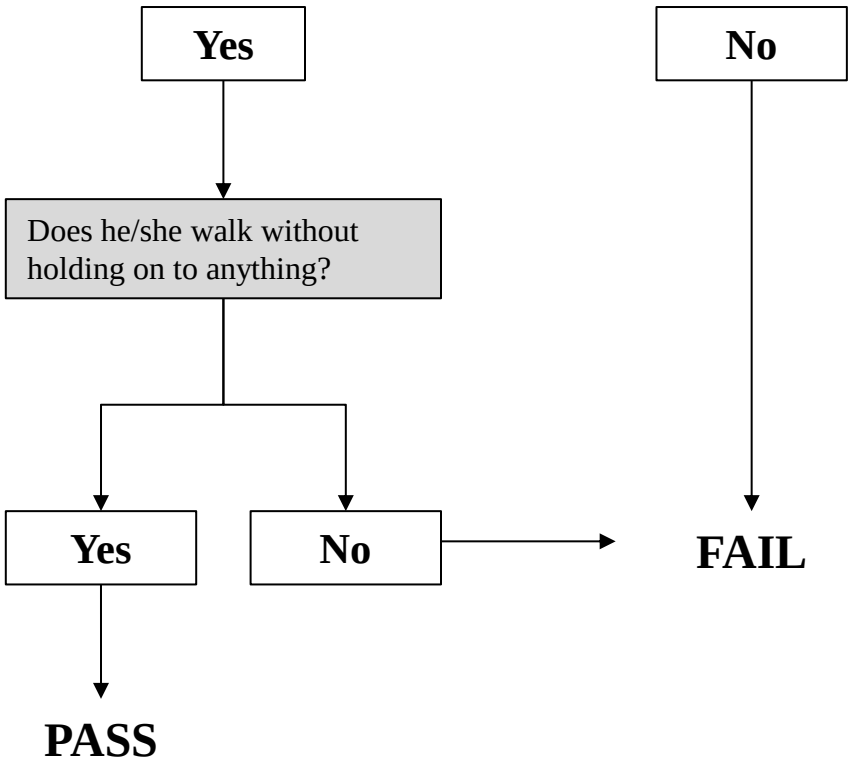
PASS

PASS response

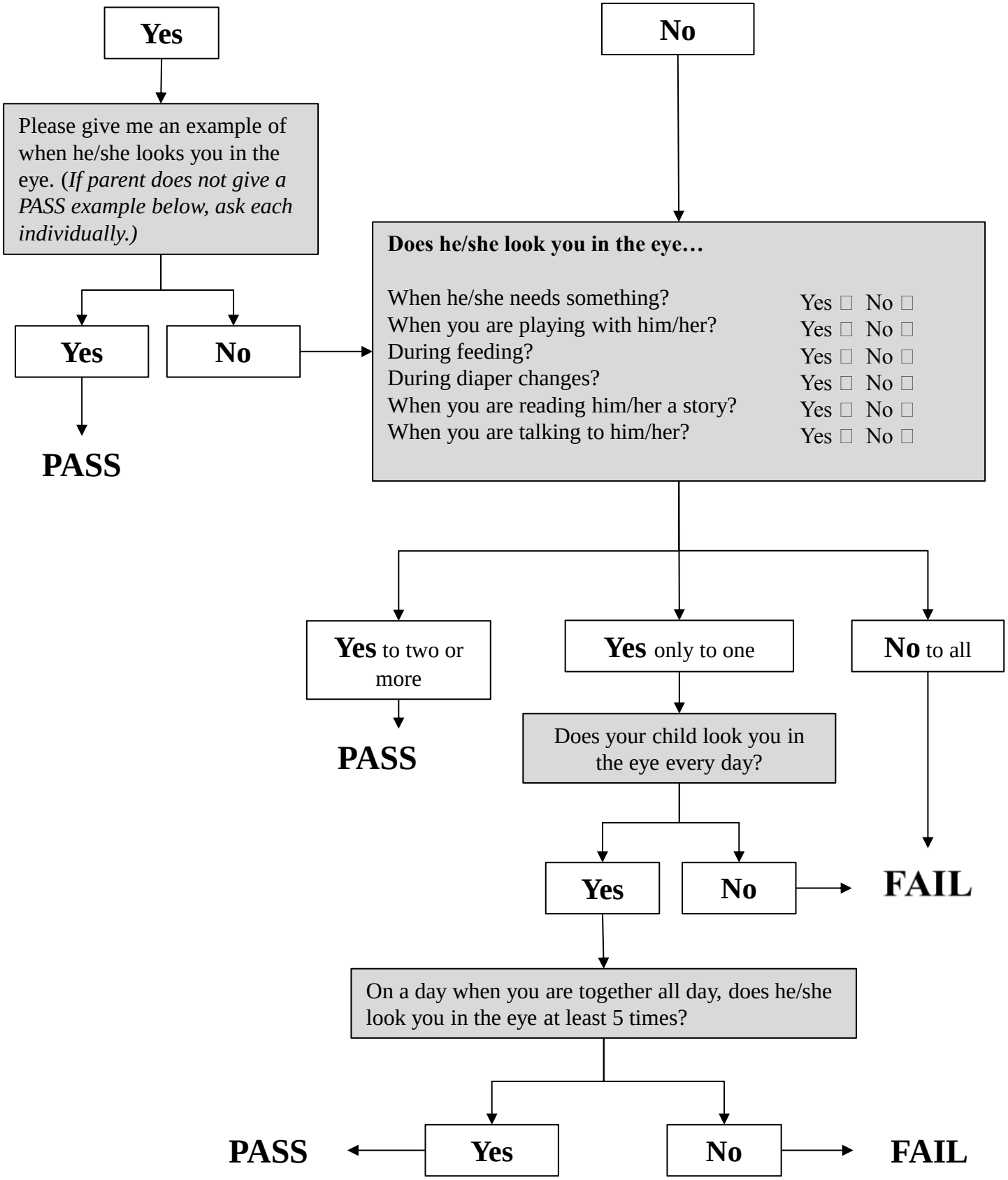
FAIL response

FAIL

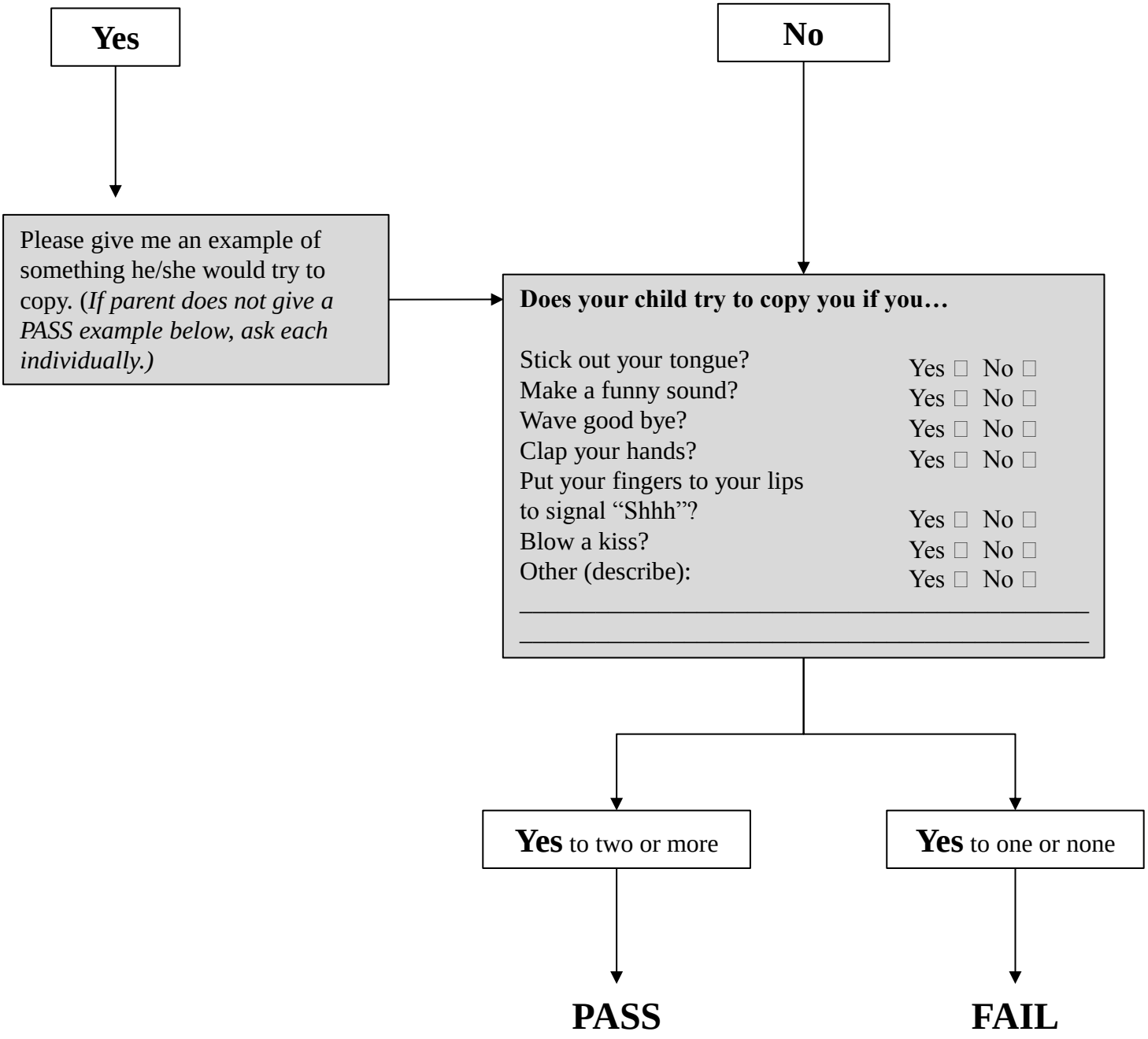
13. Does _____ walk?



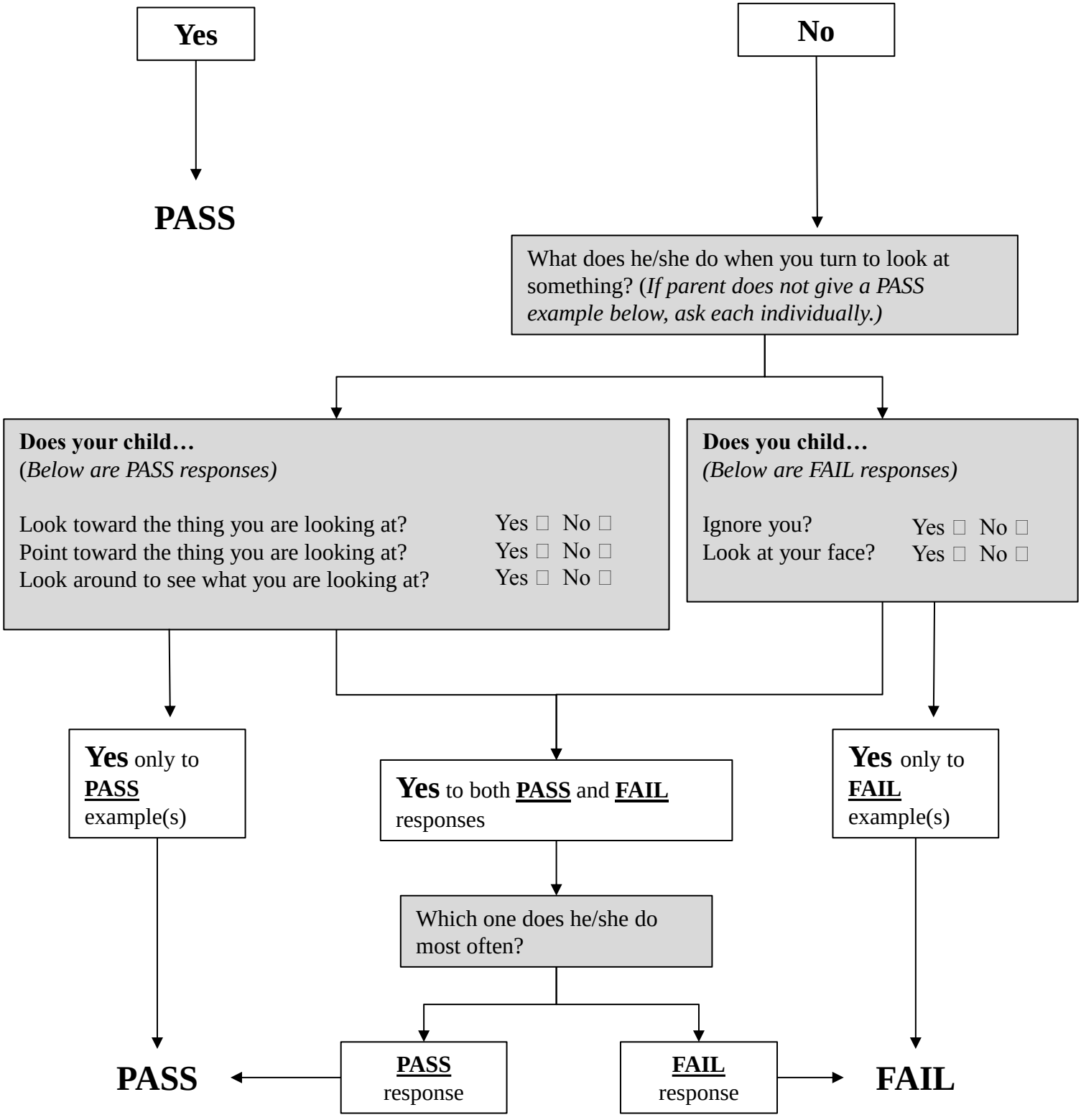
14. Does _____ look you in the eye when you are talking to him/her, playing with him/her, or changing him/her?



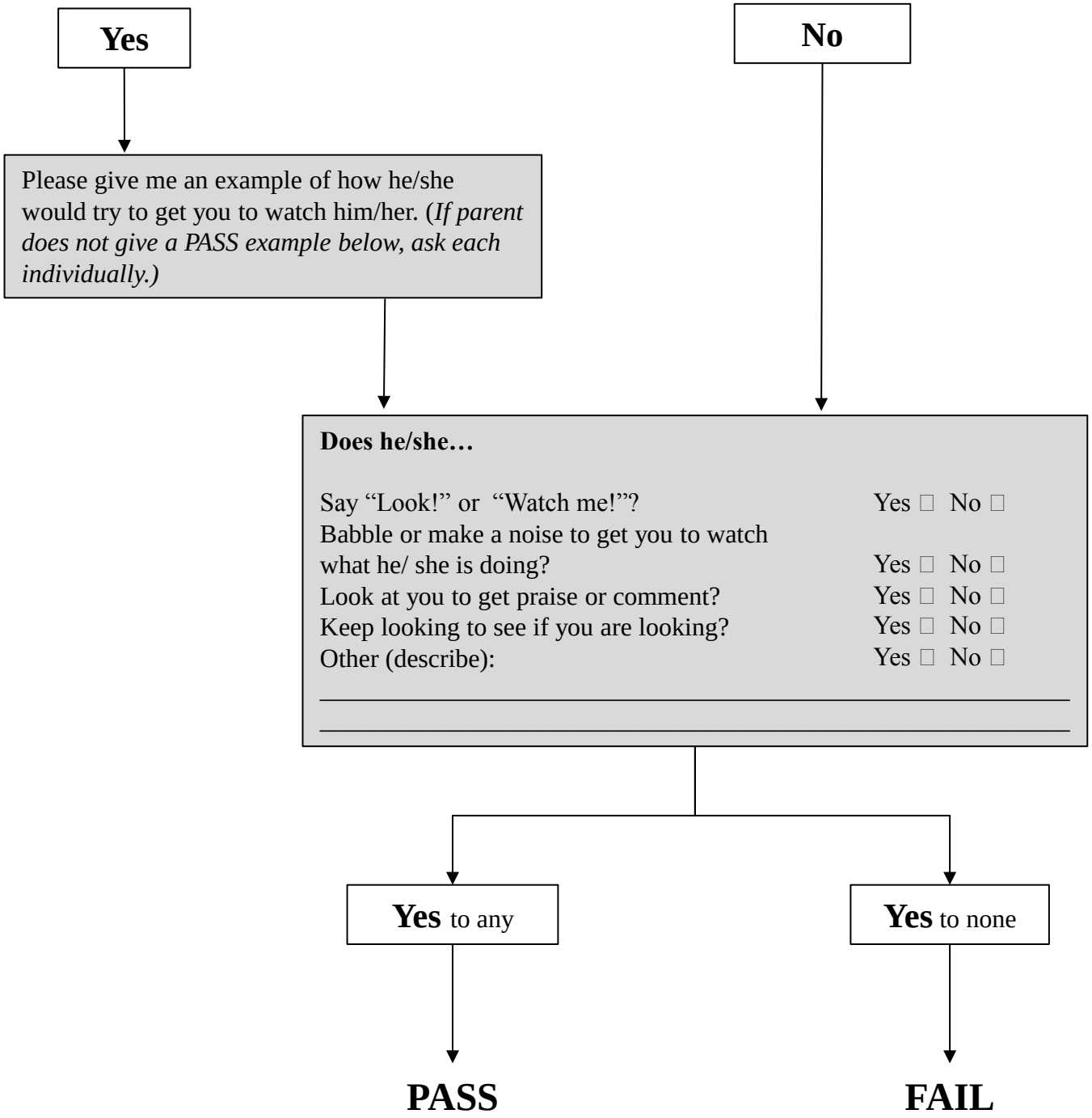
15. Does _____ try to copy what you do?



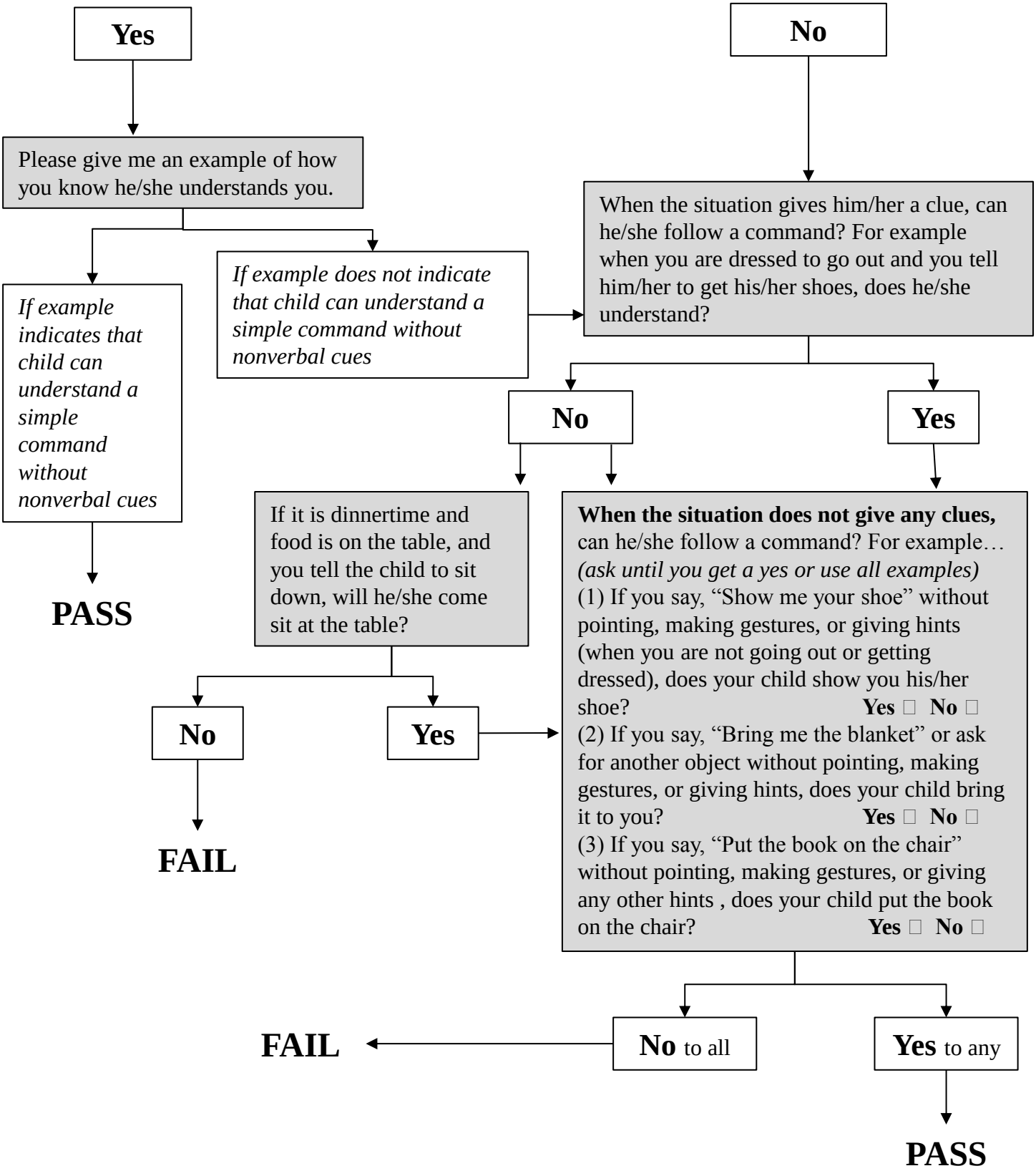
16. If you turn your head to look at something, does _____ look around to see what you are looking at?



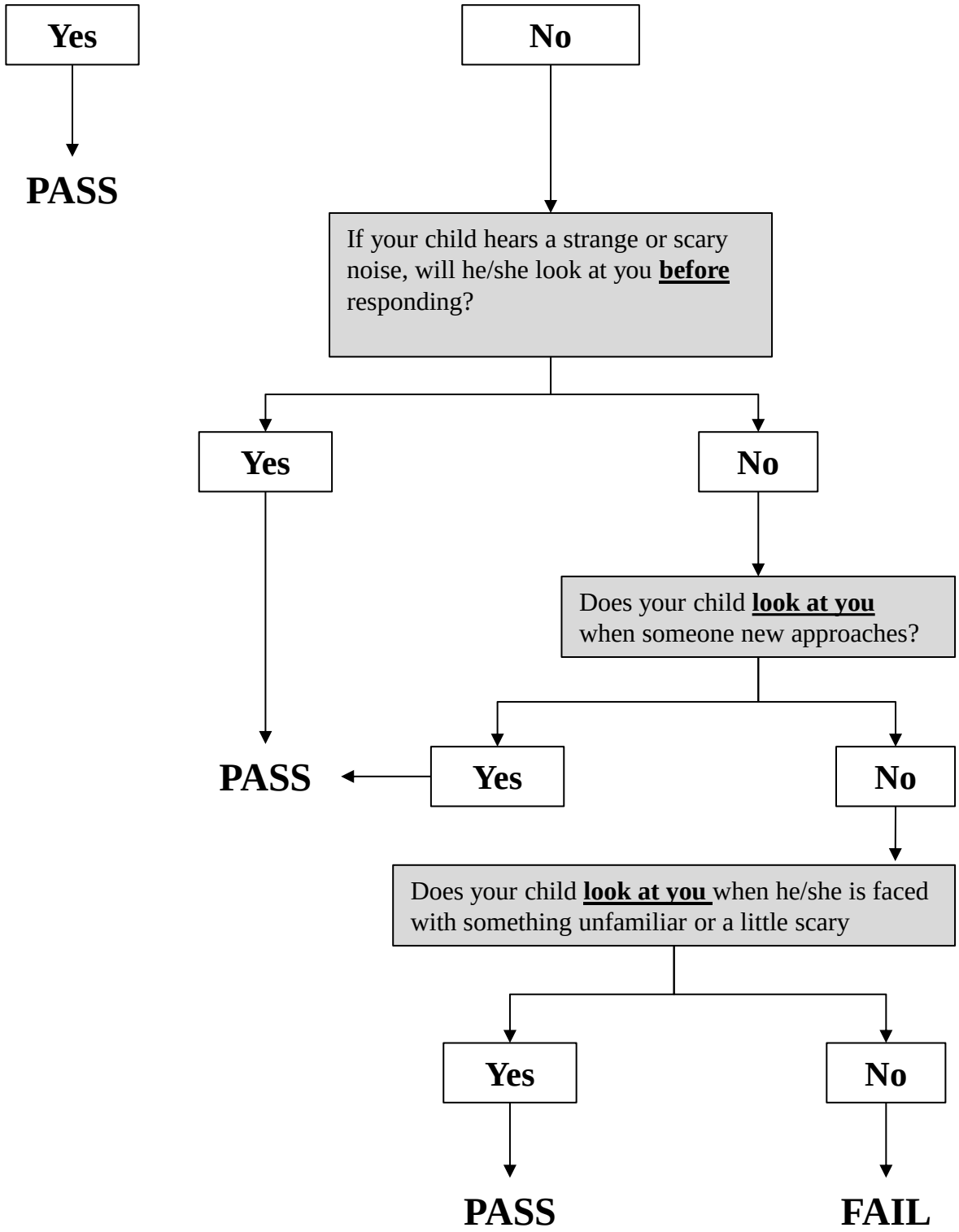
17. Does _____ try to get you to watch him/her?



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?