

NAT

Naturalistic Action Test

Scoring sheet: Comprehensive Error Score

Subject and test details

Name

Date of birth

Age

Gender

Male Female

Today's date

Diagnosis

Notes

- You may photocopy this scoring sheet.
- CES coding must be completed by referring to a video film record of the subject's performance.

Score summary

Error type	Number of errors					Total	Standardized Error Rate
	Toast	Coffee	Present	Lunchbox	Schoolbag		
Step omission	<input type="checkbox"/> /5	<input type="checkbox"/> /3	<input type="checkbox"/> /7	<input type="checkbox"/> /12	<input type="checkbox"/> /8	<input type="checkbox"/> /35 x 100 =	<input type="checkbox"/>
Anticipation/omission	<input type="checkbox"/> /7	<input type="checkbox"/> /2	<input type="checkbox"/> /7	<input type="checkbox"/> /11	<input type="checkbox"/> /6	<input type="checkbox"/> /33 x 100 =	<input type="checkbox"/>
Perseveration	<input type="checkbox"/> /5	<input type="checkbox"/> /2	<input type="checkbox"/> /2	<input type="checkbox"/> /7		<input type="checkbox"/> /16 x 100 =	<input type="checkbox"/>
Reversal	<input type="checkbox"/> /5	<input type="checkbox"/> /1	<input type="checkbox"/> /6	<input type="checkbox"/> /4	<input type="checkbox"/> /1	<input type="checkbox"/> /17 x 100 =	<input type="checkbox"/>
Substitution	<input type="checkbox"/> /4	<input type="checkbox"/> /4	<input type="checkbox"/> /6	<input type="checkbox"/> /10	<input type="checkbox"/> /3	<input type="checkbox"/> /27 x 100 =	<input type="checkbox"/>
Gesture	<input type="checkbox"/> /4	<input type="checkbox"/> /3	<input type="checkbox"/> /4	<input type="checkbox"/> /5		<input type="checkbox"/> /16 x 100 =	<input type="checkbox"/>
Spatial estimation			<input type="checkbox"/> /1	<input type="checkbox"/> /3		<input type="checkbox"/> /4 x 100 =	<input type="checkbox"/>
Tool/implement omission	<input type="checkbox"/> /3	<input type="checkbox"/> /3	<input type="checkbox"/> /1	<input type="checkbox"/> /3		<input type="checkbox"/> /10 x 100 =	<input type="checkbox"/>
Action addition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> total =	<input type="checkbox"/>
Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> total =	<input type="checkbox"/>

Error definitions

Step omission

This category refers mostly to isolated step omissions that come at the end of sequence or when a longer sequence is omitted. In the latter case (e.g., omission of an entire subtask), multiple step omissions are coded.

Anticipation/omission

This category is used mostly for omissions that come in the middle of a strong sequence, where an upcoming step is performed in advance of an intervening one. The error stands whether or not the omitted step is eventually performed.

Perseveration

Performs an act for an extended period of time (e.g., stirring); duplicates a step or materials involved (e.g., two slices of bread for toast task); iterates repetitively (e.g., taping package).

Reversal

Performs steps or subtasks in reverse order.

Substitution

Substitutes a related object (usually a designated distractor) for the target object. Bizarre substitutions are coded as action additions, rather than substitutions.

Gesture

Uses correct object but with wrong gesture; mis-orientes object relative to the hand or to another (reference) object.

Spatial estimation

Grossly mis-estimates the quantity of material needed to cover, wrap, etc.

Tool/implement omission

Performs action without tool/implement.

Action addition

Performs an action not readily interpretable as a step in the task or as one of the other error categories (e.g., object substitution). Includes utilization behavior (both typical and atypical object use) and off-task behaviors which interrupt the flow of the task. (Note: 'Other task' behaviors such as tying shoes, cleaning up, etc. are not coded as errors.)

Quality

Too much, too little, or inexact performance.

Task 1: Toast and Coffee

Task	Occurrences
Toast task	
Step Omission	
Toast bread: Omit remove bread slice	<input type="checkbox"/>
Omit put bread into toaster	<input type="checkbox"/>
Omit turn toaster on	<input type="checkbox"/>
Apply butter: Omit apply butter	<input type="checkbox"/>
Apply jelly/jam: Omit apply jelly	<input type="checkbox"/>
Anticipation/omission	
Toast bread: Attempt bread out without open bread bag	<input type="checkbox"/>
Toaster on without bread in	<input type="checkbox"/>
Apply butter: Attempt butter on without open dish	<input type="checkbox"/>
Butter on without toast bread	<input type="checkbox"/>
Apply jelly/jam: Attempt jelly on without open jar	<input type="checkbox"/>
Jelly on without butter on	<input type="checkbox"/>
Jelly on without toast bread	<input type="checkbox"/>
Perseveration	
Toast bread: Extract more than one piece of bread	<input type="checkbox"/>
Toast more than 1 slice of bread	<input type="checkbox"/>
Operate toaster repeatedly	<input type="checkbox"/>
Apply butter: Apply butter perseveratively	<input type="checkbox"/>
Apply jelly/jam: Apply jelly perseveratively	<input type="checkbox"/>
Reversal	
Toast bread: Toaster on, then bread in	<input type="checkbox"/>
Bread out, then toaster on	<input type="checkbox"/>
Apply butter: Apply butter, then toast bread	<input type="checkbox"/>
Apply jelly/jam: Apply jelly, then butter	<input type="checkbox"/>
Apply jelly, then toast bread	<input type="checkbox"/>
Substitution	
Apply butter: Butter into mug (target=toast)	<input type="checkbox"/>
Spread butter with spoon (t=knife)	<input type="checkbox"/>
Apply jelly/jam: Jelly into mug (t=toast)	<input type="checkbox"/>
Spread jelly with spoon (t=knife)	<input type="checkbox"/>
Gesture	
Apply butter: Grasp knife incorrectly	<input type="checkbox"/>
Mis-orient knife with respect to butter/bread/hand	<input type="checkbox"/>
Apply jelly/jam: Grasp knife incorrectly	<input type="checkbox"/>
Mis-orient knife with respect to jelly/jam/bread/hand	<input type="checkbox"/>
Tool/implement omission	
Apply butter: Apply butter with finger	<input type="checkbox"/>
Apply jelly/jam: Apply jelly with finger	<input type="checkbox"/>
Pour jelly	<input type="checkbox"/>
Action addition	
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
Quality	
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>

Coffee task

Task	Occurrences
Step Omission	
Coffee: Omit add coffee	<input type="checkbox"/>
Sugar: Omit add sugar	<input type="checkbox"/>
Cream: Omit add cream	<input type="checkbox"/>
Anticipation/omission	
Grinds: Add grinds without open coffee jar	<input type="checkbox"/>
Stir mug without add grinds	<input type="checkbox"/>
Perseveration	
Coffee: Add grinds perseveratively	<input type="checkbox"/>
Stir perseveratively	<input type="checkbox"/>
Reversal	
Coffee: Stir mug, then add grinds	<input type="checkbox"/>
Substitution	
Coffee: Coffee into (sugar bowl, pitcher/jug, toast) (t=mug)	<input type="checkbox"/>
Stir mug with knife (t=spoon)	<input type="checkbox"/>
Sugar: Sugar into (sugar bowl, pitcher/jug, toast) (t=mug)	<input type="checkbox"/>
Cream/milk: Cream into (sugar bowl, pitcher/jug, toast) (t=mug)	<input type="checkbox"/>
Gesture	
Coffee: Pour from spoon prematurely (before reaching mug)	<input type="checkbox"/>
Cream/milk: Pour from side, rather than spout, of pitcher	<input type="checkbox"/>
Pour from pitcher prematurely (before reaching mug)	<input type="checkbox"/>
Tool/implement omission	
Coffee: Pour grinds from jar	<input type="checkbox"/>
Coffee: Stir mug with finger	<input type="checkbox"/>
Sugar: Pour sugar from jar	<input type="checkbox"/>
Action addition	
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
Quality (examples)	
Too much coffee (> 2 spoons)	<input type="checkbox"/>
Too much sugar (> 4 spoons)	<input type="checkbox"/>
Too much cream/milk (overflows)	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/>

Task 2: Present

Task	Occurrences
Present task	
Step Omission	
Prepare box: Omit put gift into box	<input type="checkbox"/>
Omit close box lid	<input type="checkbox"/>
Wrap present: Omit cut wrapping paper	<input type="checkbox"/>
Omit apply paper around box	<input type="checkbox"/>
Omit tape seam	<input type="checkbox"/>
Add bow: Omit remove bow backing	<input type="checkbox"/>
Omit apply bow	<input type="checkbox"/>
Anticipation/omission	
Prepare box: Close flaps without gift into box	<input type="checkbox"/>
Close box lid without inserting flaps	<input type="checkbox"/>
Wrap present: Paper around box without closing lid	<input type="checkbox"/>
Tape paper without tear tape	<input type="checkbox"/>
Apply bow without remove backing	<input type="checkbox"/>
Apply bow without apply paper around box	<input type="checkbox"/>
Apply bow without tape seam	<input type="checkbox"/>

Perseveration

Wrap present: Apply paper perseveratively
Apply tape perseveratively

Reversal

Prepare box: Close flap, then gift into box
Close lid, then insert flaps

Wrap present: Cut paper, then unroll
Tape paper, then tear tape

Add bow: Back off bow, then bow out of bag
Bow on paper or box, then wrap gift

Substitution

Wrap present: Wrap with tissue paper (t=wrapping paper)
Seal paper seam with bow (t=tape)
Wrap with tissue paper; paper bag (t=wrapping paper)
Seal paper seam with bow; el. tape, staples (t=tape)
Gift into paper bag (t=box)
Cut paper with snippers (t=scissors)

Gesture

Wrap present: Grasp scissors incorrectly
Misorient scissors with respect to paper/hand/body
Misorient paper with respect to box
Add bow: Lick bow after removing bow back

Spatial estimation

Wrap present: Paper too small

Tool/implement omission

Wrap present: Rip paper (no scissors used)

Action addition

e.g. Fold wrapping paper
Inappropriate use of bow
Put wrapped gift into box

Four empty rectangular boxes for notes.

Quality (examples)

Close box with tissue paper/gift protruding
Cut too big a piece of paper
Highly inept wrap

Four empty rectangular boxes for notes.

Task 3: Lunchbox and Schoolbag

Lunchbox task

Step Omission

Occurrences

Wrap & pack cookies/biscuits: Omit use cookies/biscuits
Omit wrap cookies/biscuits
Omit pack cookies/biscuits
Make sandwich: Omit put bologna/cheese slices on bread
Omit close/fold sandwich
Wrap & pack sandwich: Omit wrap sandwich
Omit pack sandwich
Fill thermos: Omit fill thermos
Seal & pack thermos: Omit seal with lid
Omit seal with cap
Omit pack thermos
Close lunchbox: Omit close lunchbox

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Anticipation/omission

Wrap & pack cookies/biscuits: Pack without wrap
Make sandwich: Extract bread without open bread bag
Attempt knife into jar/butter tub without open jar/tub
Close sandwich without apply bologna/cheese slices
Wrap & pack sandwich: Pack without wrap sandwich
Fill thermos: Attempt to pour juice without open juice jar
Seal & pack thermos: Seal thermos with lid without fill thermos
Apply thermos cap without apply lid
Pack thermos without fill thermos (no lids on)
Pack thermos without apply cap
Close lunchbox: Close lunchbox prematurely

Perseveration

Wrap & pack cookies/biscuits: Tear foil perseveratively (for cookies/biscuits)
Extract cookies/biscuits perseveratively
Pack cookies/biscuits perseveratively
Make sandwich: Extract bread from bag perseveratively
Close/fold sandwich perseveratively
Wrap & pack sandwich: Tear foil perseveratively (for sandwich)
Wrap sandwich perseveratively

Reversal

Wrap & pack cookies/biscuits: Cookies/biscuits on foil before tear foil
Pack cookies/biscuits before wrap (wrap in lunchbox)
Sandwich on foil before tear foil
Pack sandwich before wrap sandwich (wrap in lunchbox)

Substitution

Wrap & pack cookies/biscuits: into paper towel (t=foil)
Cookies/biscuits into lunchbox lid (t=lunchbox interior)
Make sandwich: Wrong lid onto mustard jar/butter tub
Wrap & pack sandwich: Wrap sandwich in paper towel (t=foil)
Pack sandwich into lunchbox lid (t=lunchbox interior)
Fill thermos: Pour juice into thermos cup (t=thermos)
Seal & pack thermos: Put wrong lid on thermos
Put wrong lid onto sealed thermos (t=cap)
Pack juice bottle into lunchbox (t=thermos)
Pack thermos into lunchbox lid (t=lunchbox interior)

Gesture

Make sandwich: Turn mustard cap back and forth to seal
Grasp knife incorrectly
Orient knife incorrectly with respect to body or bread
Seal & pack thermos: Place lid with press rather than screw motion
Turn thermos lid back and forth to seal

Spatial estimation

Wrap & pack cookies/biscuits: Foil too small
Wrap & pack sandwich: Foil too small for sandwich
Packing: Force lunchbox closed (items sticking up)

Tool/implement omission

Make sandwich: Dip bread into mustard jar/butter tub
Pour/spread mustard/butter onto bread
Use finger with mustard/butter

Action addition (examples)

Flip bologna/cheese slice with knife
Eat bologna/cheese slices
Put juice bottle in lunchbox lid

Vertical column of checkboxes for the right side of the page.

Wrap cookies/biscuits with sandwich

Fold and crumple paper towel

Action addition (example)

Pack lunchbox in schoolbag

Quality

e.g. Too many cookies/biscuits (>8); not perseverative

Inadequate wrap of cookies/biscuits

Too much mustard/butter (grossly excessive)

Too many bologna/cheese slices (> six slices)

Inadequate wrap of sandwich

Too much juice (overflows)

Quality

Schoolbag task

Step Omission **Occurrences**

Binder: Omit insert paper

 Omit pack binder

Pencil case: Omit fill pencil case

 Omit pack pencil case

Markers etc.: Omit pack markers

 Omit pack *all* of following: protractor, pencil sharpener, eraser, unpacked pens, pencils, ruler

Close: Omit zip school bag

 Omit zip school bag pocket (required only if filled)

Anticipation/omission

Binder: Insert paper without open rings

 Close rings without insert paper

 Pack without close rings

 Pack without insert paper

Pencil case: Close pencil case without fill pencil case

 Pack pencil case without close pencil case

Reversal

Pencil case: Pack pencil case, then zip closed

Substitution

Binder: Pack paper into lunchbox, pencil case, or marker case or drawer (t=binder or schoolbag)

Pencil case: Pack pencils into lunchbox, binder pocket or marker case, or drawer (t=pencil case)

Markers: Pack markers into LB or binder pocket or drawer (t=marker case)