



Problem Solving (EPSI) Scoring

Scoring procedures are designed to record the degree to which the child solves problems that require reasoning about objects, concepts, and situations. Each key skill element used by a child to solve a problem is tallied. Scoring of key element behaviors includes: Looks, Explores, Functions, and Solutions.

Each key skill element is coded separately as it occurs. All key skills are coded using a frequency count. Each instance of a behavior is counted and recorded with a tally mark. Each 6 minute EPSI assessment requires three sets of toys, each toy set is used for 2 minutes. Coding forms have different sections for each key skill element and are separated into three 2-minute segments (one for each toy).

Looks (L):

A "Look" is coded when the infant/toddler looks at, faces, or moves his/her head towards a toy(s) that is placed near him or her. "Look" should be coded when the infants/toddlers appear to gaze at or stare at the toy(s) for any amount of time, or if their eyes or head move back and forth between the toys presented. However, if the child actually touches or manipulates the object, an "Explore" is coded.

A Look episode ends when the child looks away from the toy for **3 seconds or more**, or if another key skill element occurs. For example, if the child gazes at the toy (score one Look episode), then looks at her shoe for 2 seconds, and then immediately returns her gaze to the toy, do NOT score another episode of Look because she looked away for less than 3 seconds. If the child looked at her shoe for 4 seconds and then back to the toy, score 2 separate episodes of "Look."

Includes	Excludes
<ul style="list-style-type: none">Looking/gazing only at the toy set presented	<ul style="list-style-type: none">The child looks toward the adult or other toys or objects in the roomThe child is looking at his/her body or clothesIf the child is touching/manipulating the toy while looking at it

Explores (E):

The infant/toddler (a) touches or moves his/her fingers to manipulate the toy, (b) puts the toy in their mouth and bites or chews on the toy, (c) rubs fingers or another body part against the toy, (d) shakes the toy, (e) pushes a button or another part of the toy, (f) pulls the toy, (g) bangs against the toy with another toy or with the hand or foot, (h) throws the toy and watches the toy land (may repeat this), (i) listens to the toy(s), or (j) smells the toy(s) by putting it up to their nose. Explores must be separated by at least 1 second.

Includes	Excludes
<ul style="list-style-type: none"> ● Touching, moving, manipulating, shaking, smelling, etc. the toy ● Pushing the pop up pet/dino back down ● Banging stacking cups together ● Turning the dial on the face of the gumball machine ● Holding a stacking cup in one hand and picking up another with the other hand ● Holding a ball in each hand ● Touching buttons/manipulating the pop up toy ● Performing a function or solution with one hand while exploring with the other 	<ul style="list-style-type: none"> ● Just looking/gazing at the toy ● Performing a function with the toy ● Performing a solution for the toy

Functions (F):

The infant/toddler moves one or more toy parts by manipulating the toy with their fingers by pushing, pulling, moving, stacking, or tapping to make the toy perform a function or to create an effect (e.g., one part of toy popping up, putting a ball into toy). Performing a function is using the toy in a manner in which it was intended but does not require that the child complete all of the functions of the toy that result in a solution (see below for definition of a solution). Score a function each time it occurs, even if that function results in a solution.

Includes	Excludes
<ul style="list-style-type: none"> ● Child pushes button/turns dial, etc. to make one dinosaur pop up ● Child puts one cup inside a larger cup (does not have to be in correct color order); each cup that nests is a function ● Child stacks cups on top of one another (does not have to be in correct color order); each cup that is stacked is a function ● Child puts ball into the pound a ball or gumball machine ● Child hits ball with hammer to make it go through the toy ● Child pushes lever on the gumball machine to make ball come out ● Child pushes lever on the gumball machine (whether or not ball is in and whether or not ball comes out) 	<ul style="list-style-type: none"> ● Child is looking or gazing at toy only ● Child is manipulating toy while not making it perform intended effect



Solutions (S):

The child uses all of a toy's functions (see above) to solve a problem (e.g., manipulate the pop-up toy so that all dinosaurs pop up, puts three balls into the gumball machine and pushes the lever so that all of them come out). When counting a solution, make sure that you have scored/given credit for the last function the child performed to make that solution possible (i.e., dinos 1-4 have been popped up once, and the child pops up the 5th; they get credit for both the function of popping it up as well as the solution for it being the final one needed.) The child may get more than one solution per toy in a 2 minute period.

Solutions for each toy:

- Pop-Up Pets/Dinos: ALL of the pets/dinosaurs have been popped up during the 2 minute play session. (They do not have to all be up at the same time, and they do not have to have been popped up in order.) As long as each pet/dinosaur is popped up at one time during the 2 minutes, a child gets credit for a solution.
- Gumball Machine/Pound a Ball: 3 balls into the toy and back out of the toy count as 1 solution. They do not all 3 have to be in the toy at one time, nor does it have to be 3 different balls. (It can be the same ball in and out 3 times).
- Stacking Cups: All 4 or 5 of the cups stacked or nested in the correct order at the same time.

Inclusions	Exclusions
<ul style="list-style-type: none"> ● Each of the pop up animals are popped up at some point during the 2 minute session (does not have to be all at once, and does not have to be in order) ● Three balls into and back out of the pound a ball or gumball machine. (Does not have to be three different balls; can be the same ball three times) ● All cups nested or stacked in the correct order; must be at the same time. 	<ul style="list-style-type: none"> ● Not all of the pop ups open at some point during 2 minutes ● Stacking cups are all nested or stacked, but not in the correct order ● Taking balls out of the top of the gumball machine (must use the lever to get the balls out)