



Coding Guide & Task Instructions

Coding Guide

- I. Scoring*
- II. Types of Problems*
- III. Detailed Answer Coding*

I. Scoring:

(“_score” column)

The child’s response for each problem is in the “_**pattern**” column, and the header of the column includes the target model pattern (e.g., “_AABB_”).

- If child’s response meets criteria, score as 1 (correct).
- If child’s response does not meet criteria, score as 0 (incorrect).

Scoring accuracy depends on the type of problem the child is asked to do.

II. Types of Problems:

Copy Problems:

- Blocks A and B correspond to blocks A and B in model pattern.
- Must contain at least one full unit of model pattern.
- May contain partial unit at beginning and/or end.
- May not contain any deviation from model pattern.

Extend Problems:

- Blocks A and B correspond to blocks A and B in model pattern.
- Must contain at least one full unit of model pattern.
- May not contain partial units at beginning of pattern.
- May end in a partial unit.

- May not contain any deviation from model pattern.

Abstract Problems:

- Blocks A and B correspond to which block child used first and not necessarily blocks A and B of model pattern. May be reversed when scoring (ABBA may be transferred to BAAB).
- Must contain at least one full unit of model pattern.
- May not contain any deviation from the model pattern.
- May contain partial units at beginning and/or end of pattern.

Memory Problem

- **Must be ABBABB EXACTLY**
- Blocks A and B correspond to blocks A and B in model pattern.
- Must contain exactly 2 units of ABB pattern
- May not begin or end in a partial unit
- May not contain any deviations from model pattern.

Smallest Tower:

- **Tower must be AAB EXACTLY**
- Blocks A and B correspond to blocks A and B in model pattern.
- Child must create a tower with exactly one AAB sequence
- May not contain any partial units or deviations from AAB pattern.

III. Detailed Answer Coding

("_strat" column)

Only code items if they are answered incorrectly. Coding only applies to items 1-8. Please don't put spaces between words in the codes (use as written below).

PartialCorrect: contains one full unit of the modal pattern, but includes errors as well; the full unit of the modal pattern can be at the beginning or end of the pattern.

Examples: Abstract to Color AAB: AABABABBAB

Abstract to Shape AABB: AABBBABB

Extend ABB- **AABB**

WrongPatternAB: Contains at least 3 consecutive units of an AB pattern where AB is not the proper pattern to be used for the task. Not this can also be a BA pattern. Errors can be made either before and/or after the consecutive units of AB (or BA).

Examples: Abstract to Shape AABB- ABABABABAB

Extend AABB- ABABA

Abstract ABB- **ABABABABBA**

WrongPatternOther: uses a different pattern than the one required for the task, with the exception of an AB pattern (use WrongPatternAB). Contains at least two consecutive units of a proper pattern, where the pattern used is not the correct pattern for the task. Errors can be made to the pattern either before and/or after the consecutive units.

Examples: Abstract to Shape AABB- ABABABABAB

Extend AABB- ABABA

Extend AABB- AABAAB

Extend AABB-ABBABB

Abstract to color ABB- **ABBBBAABAA**

Abstract to Shape AABB- **ABBAABAABB**

RandomOrder: Makes linear sequences of blocks in random order.

Examples: Abstract to Shape AAB- ABBBAA

Abstract to Color AABB- ABABBAA

OffTask: child is off task, using blocks but not in a way that shows they are trying to solve the pattern task; did not put blocks in a linear sequence

Examples: Extend AABB- BBBBABA (underneath-AAA)

Abstract to color ABB- made a tower

Task Instructions

To help us both get a sense of tasks you would be doing in the lab, I would like you to complete two tasks. Please feel free to ask questions if you have them! Your responses don't have to be perfect and please don't let yourself spend many hours on this – I'd say no more than 2 hours, including reading the article. Doing these tasks will help you see how much you like doing these things and give me a sense for your skills in doing these things.

1. **Summarizing a research article.** Please read the article on emerging understanding of patterning in 4-year-olds (Rittle-Johnson et al., 2013), which is one core study motivating the new research I will be doing. I would like you to write two summaries of the article, which serve different purposes:
 - a. Write a summary for me (a researcher). I'll need someone to read and summarize past work in the area to help guide the development of an intervention. I'd like you to write a summary of the article which highlights 1) background and research questions, 2) method, particularly the assessment and task, 3) key results, and 4) conclusions. It should be no more than 2 double-spaced pages (shorter is fine).
 - b. Write a summary for a parent. We send home a summary of our study results to parents whose children participated in the research, so I need someone who can summarize findings for a non-research audience. This summary should be very brief – about a paragraph or two.
2. **Code children's explanations.** I would like you to code 5 children's answers to problems described in the paper you read. You will use the coding schemes described in the paper (under "Coding" and in Table 3) to

assign a code to the kids' responses. There is a more detailed coding scheme available above.

- a. Each kid has 10 columns with their responses in the excel file – one column for each problem they solved. Type your codes into the columns in the excel file for each item, one a 0/1 score for accuracy and one a more detailed coding of their response.
- b. PLEASE ASK if this doesn't make sense! As a note, coding kids' answers is hard, and sometimes you make judgment calls because what they say doesn't neatly fit into one of the categories. That's fine, especially given your limited experience with this. Please don't spend a long time on this – it definitely should not take more than an hour, and I'd target 30 minutes. Stop yourself from being obsessive about it!