List of Data Literacy Skills: Early Warning Indicator Scenario

Skill/Knowledge/Disposition	Tapped in Scenario
IDENTIFY PROBLEMS/FRAME QUESTIONS	4/5
Articulate the problem/frame question	Y
Understand contextual issues - student	Y
Understand contextual issues - school	Y
Involve other participants	Y
Understand student privacy	N
USE DATA	18/27
Understand assessment	Y
Develop sound assessment design and implementation	N
Understand data properties	N
Use qualitative and quantitative data	Y
Understand the specificity of data to problem/question	Y
Understand statistics and psychometrics	N
Identify possible data sources	Y
Understand the purposes of different data sources	Y
Use multiple measures/sources of data	Y
Understand how to generate data	N
Understand how to analyze data	Y
Understand how to prioritize data	Y
Understand how to integrate data	Y
Understand how to examine data	Y
Understand how to manipulate data	Y
Understand how to organize data	Y
Understand how to manage data	Y
Understand how to drill down into data	N
Understand how to aggregate data	Y
Understand how to disaggregate data	Y
Use formative and summative assessments	Y
Understand aspects of data quality	N
Understand data accuracy, appropriateness, and completeness	N
Understand the appropriate level of data	Y
Understand how to access data	Y
Find, locate, retrieve data	N
Use technologies to support data use	N

Skill/Knowledge/Disposition	Tapped in Scenario
TRANSFORM DATA INTO INFORMATION	8/11
Consider impact and consequences (intended or unintended)	Y
Test assumptions	Y
Generate hypothetical connections to instruction	Y
Understand how to interpret data	Y
Predict possible or likely consequences	Y
Understand and use data displays and representations	Y
Assess patterns and trends	Y
Summarize data	N
Synthesize diverse data	Y
Probe for causality	N
Use statistics	N
TRANSFORM INFORMATION INTO A DECISION	3/5
Apply understanding of context for the decision	Y
Determine next instructional steps	N
Monitor student performance	Y
Diagnose what students need	Y
Make instructional adjustments	N
EVALUATE OUTCOMES	2/5
Consider need for iterative decision cycle	N
Re-analyze original question or decision	N
Compare data pre- and post-decisions	N
Monitor for student changes	Y
Monitor for classroom practice changes	Y
DISPOSITIONS AND HABITS OF MIND	4/5
Belief in data/think critically	Y
Belief in improvement in education requires a continuous iterative cycle	Y
Ethical use of data	N
Collaboration	Y
Communication	Y