

Curiosity: Predictions Need Boundaries

Curiosity Reading | CheAI Research Inc.

Packet ID: g09_u04_w16

Connection: data science and materials

Reading time: 4 minutes

The periodic table is powerful because patterns repeat, but a pattern is not a promise that every comparison will be identical. A three-point graph may suggest a trend; it does not settle mechanism, safety, or behavior in every compound. Strong claims name the measured range, cite data, and state what could change the conclusion. This is the difference between using a model and repeating a slogan.

Think like a chemist

1. What is one reason to retain an outlier?
2. What makes a prediction an extrapolation?
3. What data would strengthen a family claim?

Word	Meaning	Packet
extrapolation	prediction beyond data range	7–8
outlier	value needing investigation	10, 18
evidence	observations/data supporting claim	throughout