KID TOOL

Anatomy of a Mathematical/Scientific Argument or Critique

OPINION/CLAIM/THESIS Attempts to answer a question, respond to a conjecture (Is this true all of the time? Do we need . . . ?)	The Question: My Claim:		
CONTEXT/GROUNDS: Why is this claim true or believable?	Stated: Implied?		
KEY REASONS or criteria used in support of claim (e.g., for stated conjecture, judgment, or policy impact). These are broad categories, supported by facts, evidence, and analysis or justification.	Strategy or approach to solve problem and connection to concept, theory, or law applied	Calculations, equations, measurements, formulas	Representations, models, diagrams, data, or observations
RELEVANT EVIDENCE: Backing—support using "hard evidence"—available facts, quotes, examples, data, observations, anecdotes, analyses of others—surveys/studies + evidence + SOURCE			
+ CLEAR REASONING: Analysis and elaboration of each set of evidence under the criterion, *providing justification* for the thesis or claim	Why did it work? How does it illustrate a concept/theory/law?	How do they support accuracy/precision?	Why/how do they represent quantitative relationships or concepts?
QUALIFIERS or COUNTER CLAIMS Evidence + SOURCE	Exceptions, conditions, counterclaims—Who might disagree and why? When might this not be true?		
CONCLUSIONS/CONNECTIONS: summarize, connect, extend, suggest consequences or new questions, or call to action	What is your main message? What have you learned or confirmed? What new questions might be raised? Can you make connections?		

online resources ▶ Available for download at **resources.corwin.com/HessToolkit**