

Engaging in Argumentation from Evidence

Elements of Student Performance

High School



[Science & Engineering Practice 7](#)

Observable features of the student performance by the end of grade 12:	
Developing of Identifying the Claim	
Develop	Develop a claim that includes the relevant disciplinary core idea.
Evaluate	Identify a given explanation that includes the relevant disciplinary core idea. Identify the given evidence to be evaluated.
Identifying Scientific Evidence	
Develop	Identify and describe evidence that supports the claim. Use scientific knowledge, literature, student-generated data, simulations and/or other sources for evidence.
Evaluate	Identify and describe additional evidence that was not provided but is relevant to the claims and to evaluate the given evidence.
Evaluating and Critiquing the Evidence	
Develop	Evaluate sufficiency to make and defend the claim. Distinguish between causal and correlational relationships. Evaluate how variation or uncertainty in the data (e.g. limitations, low signal-to-noise ratio, collection bias, etc.) may affect the usefulness of the data as a source of evidence. Evaluate types and number of sources.
Evaluate	Use additional evidence to assess and evaluate the validity of the given evidence. Evaluate the reliability, strengths and weaknesses of the given evidence along with its ability to support logical and reasonable arguments.
Reasoning and Synthesis	
Develop	Use reasoning to describe links between the evidence and claim. Describe a chain of reasoning that includes the relevant crosscutting concept. Defend a claim against counter-claims and critique.
Evaluate	Describe a chain of reasoning that includes the relevant crosscutting concept. Synthesize the relevant data to describe links between the evidence and claim.

[HS-PS4-3](#) / [HS-LS2-6](#) / [HS-LS2-8](#) / [HS-LS3-2](#) / [HS-LS4-5](#) / [HS-ESS1-5](#) / [HS-ESS2-7](#) / [HS-ESS3-2](#)

Next Generation Science Standards is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards were involved in the production of this product, and do not endorse it. [Visit the official NGSS website.](#)

