Engaging in Argumentation from Evidence (Develop)

Using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural world. Engaging in argument from evidence in 9–12 builds on K–8 experiences and progresses to using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural and designed world(s). Arguments may also come from current scientific or historical episodes in science.

Concerns Areas for improvement	Criteria Standards for this performance	Advanced Evidence of exceeding standard
Supported claims		
	Students develop a claim that includes the relevant DCI that smaller mass = greater acceleration.	
Identifying scientific evidence		
	Students identify and describe evidence that supports the claim. Students use scientific knowledge, literature, student-generated data, simulations and/or other sources for evidence.	
Evaluation and critique		
	Students evaluate sufficiency to make and defend the claim. Students distinguish between causal and correlational relationships. Students 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. Students evaluate types and number of sources.	
Reasoning/synthesis		
	Students use reasoning to describe links between the evidence and claim.	

Inspired by: Jennifer Gonzalez & Del Lago Academy

	Students describe a chain of reasoning that includes the cause & effect. Students defend a claim against counter-claims and critique.	

Inspired by: Jennifer Gonzalez & Del Lago Academy