

Cognitive Demand Categories for Science

Level 1	Level II	Level III	Level IV	Level V
Memorize	Perform Procedures	Communicate Understanding	Analyze Information	Apply Concepts, Make Connections
Recite basic science facts	Make observations	Explain concepts	Classify and compare data	Apply and adapt science information to real-world situations
Recall science terms and definitions	Collect and record data	Observe and explain teacher/student demonstrations	Analyze data, recognize patterns	Apply science ideas outside the context of science
Recall scientific formula	Use appropriate tools	Explain procedures and methods of science and inquiry	Reason inductively or deductively	Build or revise theory/plan and design experiments
	Make measurements, do computations	Organize and display data in tables or charts	Draw conclusions	Synthesize content and ideas from several sources
	Organize and display data in tables or charts	Student presentations of science information	Identify faulty arguments or misrepresentations of data	Use and integrate science concepts