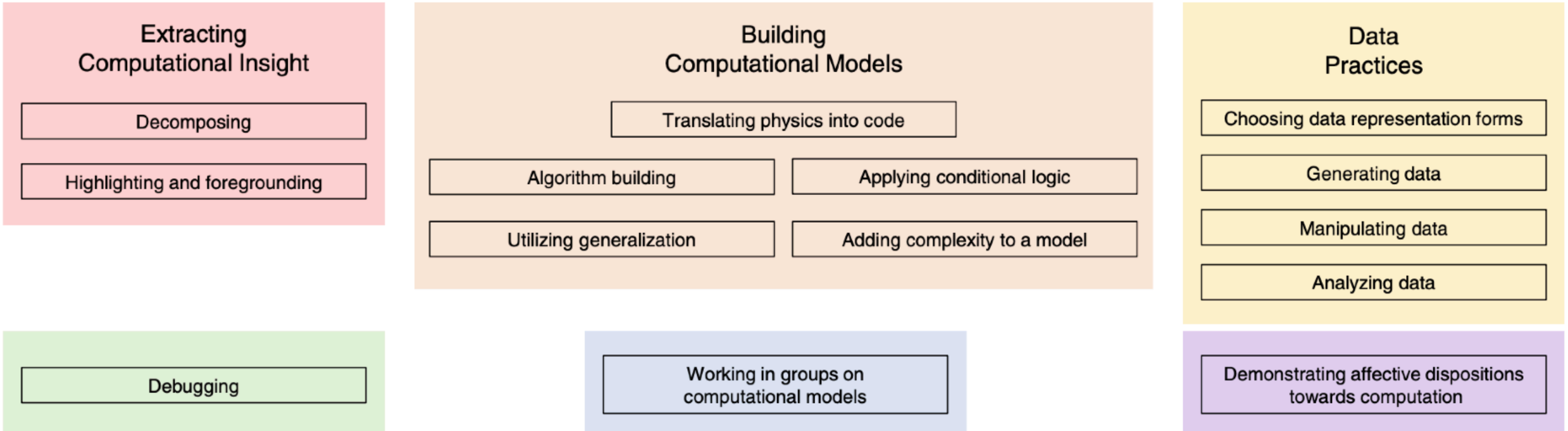
Extracting Computational Insight
Decomposing
Highlighting and foregrounding
Building Computational Models
Translating physics into code
Algorithm building
Applying conditional logic
Utilizing generalization
Adding complexity to a model
Data Practices
Choosing data representation forms
Generating data
Manipulating data
Analyzing data
Debugging
Working in groups on computational models
Demonstrating affective dispositions towards computation

TABLE XVI. Summary of codes emerging in the analysis of Michael's classroom.[a]

Practice	**P1**	**P2**	**R1**	**R2**	**S1**	**S2**
Decomposing			2	1	2	1
Highlighting and foregrounding			2	3	5	4
Translating physics into code			2		6	4
Algorithm building	2		5	3	1	
Applying conditional logic	1	1	1	1	2	
Utilizing generalization					1	2
Adding complexity to a model					2	
Debugging	2	3	4	6	8	6
Intentionally generating data					1	
Choosing data representation form					2	
Manipulating data					2	
Analyzing data	1	1			7	
Demonstrating constructive dispositions	2			2		
Working in groups		1		1	1	

[a] P1=Projectile activity, group 1; P2=Projectile activity, group 2; R1=River crossing activity, group 1; R2=River crossing activity, group 2; S1=Spring energy activity, group 1; S2=Spring energy activity, group 2.

Analysis Framework for Computing Practices


NSF

Weller, Bott, et al, Phys Rev PER, 2022

Analysis Framework for Computing Practices

TABLE XVI. Summary of codes emerging in the analysis of Michael's classroom.[a]

Practice	P1	P2	R1	R2	S1	S2
Decomposing			2	1	2	1
Highlighting and foregrounding			2	3	5	4
Translating physics into code			2		6	4
Algorithm building	2		5	3	1	
Applying conditional logic	1	1	1	1	2	
Utilizing generalization					1	2
Adding complexity to a model					2	
Debugging	2	3	4	6	8	6
Intentionally generating data					1	
Choosing data representation form					2	
Manipulating data					2	
Analyzing data	1	1			7	
Demonstrating constructive dispositions	2			2		
Working in groups		1		1	1	

[a] P1=Projectile activity, group 1; P2=Projectile activity, group 2; R1=River crossing activity, group 1; R2=River crossing activity, group 2; S1=Spring energy activity, group 1; S2=Spring energy activity, group 2.

Weller, Bott, et al, Phys Rev PER, 2022

Open Questions