Final Wave Model and Explanation Rubric

Rubric for **constructing explanations** as a primary practice and **developing and using models** as a secondary practice.

4	3	2	1
Model(s) in the response portray components accurately in a picture or diagram that relates to the claim in the explanation. Components are accurately labeled in the explanation.	Model(s) in the response portray components in a picture or diagram that relates to the claim in the explanation. Components are mostly labeled and accurate.	Model is incomplete (missing some components) or contains **minor** errors.	Model is missing, unclear, or contains major errors.
Relationships among those components are shown in the model AND described in the explanation.	Relationships among those components are shown in the model OR described in the explanation.	At least one relationship among those components is shown OR described.	No correct relationship(s) are identified.
The model can be used to provide an explanation AND a prediction related to the claim given that is grounded in science and includes meaningful limitations of the model.	The model can be used to provide an explanation OR a prediction related to the claim given that is grounded in science and includes meaningful limitations of the model.	The model can be used to provide an explanation and/or a prediction that demonstrates partial understanding of the science.	The model cannot be used to provide an explanation or a prediction.
The scientific reasoning **explicitly** uses the crosscutting concept of *cause and effect* as a **central frame** for the explanation.	The scientific reasoning **explicitly** uses the crosscutting concept of *cause and effect* in the explanation.	Appropriate crosscutting concept of *cause and effect* is **identified** in the explanation.	An appropriate crosscutting concept is not identified in the explanation.
The scientific reasoning is accurate, linking multiple lines of evidence to the foundational ideas in the science discipline(s).	The scientific reasoning is accurate, linking a few lines of evidence to the foundational ideas in the science discipline(s).	The scientific reasoning has minor errors. May or may not link the evidence to the foundational ideas in the science discipline(s).	The scientific reasoning has major errors or is missing.

Note: Final Wave Model and Explanation Rubric from NGSS Rollout #3. CA NGSS Collaborative, 2016. Adapted with permission.