**Appendix**

**Table**

*The PhBL concluding table for designing a phenomenon-based lesson plan by the participants, adapted and modified from Trauth and Mulvena (2021)*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Introducing the phenomenon | | | | | |
|  | | | | | |
| Anticipated phenomenon question | | | | | |
|  | | | | | |
| Anticipated student questions | | | Anticipated student ideas/observations | | |
|  | | |  | | |
| Devise a model for the phenomenon | | | | | |
| Initial Model | First Revision | | | | Second Revision |
|  |  | | | |  |
| NGSS PEs aligned with this phenomenon | | | | | |
|  | | | | | |
| NGSS Dimensions of Learning covered in this phenomenon-based education | | | | | |
| Disciplinary Core Ideas (DCI) | | Scientific and Engineering Practices (SEP) | | Crosscutting Concepts (CCC) | |
|  | |  | |  | |
| Nature of Science (NOS) elements covered in this phenomenon-based education | | | | | |
|  | | | | | |