**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 |
|  |