* Engineering Design standards map well from ORSS to NGSS, however the instructional focus should be integrating these into curriculum rather than teaching as separate topics or PEs.
* NGSS PEs represent a band of standards that are to be achieved by the end of Grade 8.

| NGSS PE | ORSS | Content | Practice | CCC | Notes on Alignment |
| --- | --- | --- | --- | --- | --- |
| MS-ETS1 Engineering Design | | | | | |
| MS-ETS1-1.  *Define the criteria and constraints of a design problem* with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. | 6.4D.1  7.4D.1  8.4D.1 | P  P  P | S  S  S | N  N  N | ORSS standard is contained within NGSS, but NGSS PE takes it further.  ORSS does not specifically address environmental impacts (but adding 8.4D.3 to 8.4D.1 would be a strong match). |
| MS-ETS1-2.  *Evaluate competing design solutions* using a systematic process to determine how well they meet the criteria and constraints of the problem. | 6.4D.2  7.4D.2  8.4D.2 | P  P  P | P  P  P | N/A  N/A  N/A | Omits criteria and constraints.  Evaluation implies the collection and use of evidence, which makes a stronger correlation.  Omits criteria.  Oregon scoring guide for ED includes evaluating competing solutions, but text of ORSS does not.  ORSS contains more details on how to evaluate. |
| MS-ETS1-3.  *Analyze data from tests* to determine similarities and differences among several design solutions to *identify the best characteristics* of each that can be combined into a new solution to better meet the criteria for success. | 6.4D.2  7.4D.2  8.4D.2 | P-LC  P-LC  P-LC | N  P  P | N/A  N/A  N/A | NGSS PE = optimization |
| MS-ETS1-4.  *Develop a model* to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved. | 8.4D.2 | P-LC | N | N/A |  |
|  | | | | | |
| The following ORSS are not aligned to any NGSS: | | | | | |
| 6-8.D4.3 – These ORSS do not appear explicitly in NGSS PEs, but they do appear in Cross-Cutting Concepts. | | | | | |