* 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  | PPP | SSS | NNN | 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  | PPP | PPP | N/AN/AN/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-LCP-LCP-LC | NPP | N/AN/AN/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. |