

Lecture 27, Nov 19, 2021

Gathering Data

1. Conduct research:
 - Selection-style embodiment design decisions (reference designs, key features)
 - Determining the feasibility and whether the technology exists already
 - Critical metrics from research:
 - Material properties (mechanical, chemical, etc)
 - Production cost
2. Perform calculations:
 - Decisions that you can answer with your civ or physics knowledge
 - Deformation, bending, loading, response
 - These things cannot be tested because we do not have access to the variables
3. Develop and test prototypes using protocols
 - Proxy testing!

Proxy Testing

- Make sure you have a consistent and repeatable test protocol
- Prototypes are the input to a measurement process that produces a measurement that can be used for comparison
- Conducting tests:
 1. Determine the characteristic you want to assess
 2. Look up standards about how to run these tests
 3. Develop a proxy test protocol that works for what you have
 4. Conduct your tests and gather comparable data
 - You don't need standard units, as long as the measurements enable comparison it's good enough