



*Design and Discovery*

## Making, Modeling, and Materializing

These sessions prepare students for making a model of their design idea. In *Session 10: Bicycle Breakdown: Systems, Components, and Parts*, the bicycle is used as an example for helping students think about the systems in a product and how to identify the systems, components, and parts of their own project ideas. In *Session 11: Design Requirements and Drawings*, students develop design requirements for their projects and draw their ideas in order to help them plan their models. *Session 12: Planning for Models and Tests*, further prepares students for building their models as they think through materials and consider the principles of collapsibility. *Session 13: Making It! Models, Trials, and Tests* is a model-making working session.