

# MODULE 6

## Structures / System Integration



50 mins



### OVERVIEW

In this module, students will build a Foam Core structure with insulation. They will then integrate electronics, power, and thermal systems in preparation for final testing.

### MATERIALS

- All completed parts so far
  - Balloon shield with arduino
  - Power switch
- SD card
- Structure kit
- Foam core
- Insulation
- 
- Flight tube
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- Battery
- Glue gun
- Insulation template
- Foam Core template
- Cutting board/surface
- Straight edge/ruler
- Scissors
- Tape

### PREREQUISITES

- The [Sensors Part 2](#) module must be completed prior to this module
- [Foam Core Construction Doc](#) for additional information if needed.

Complete Prerequisites and have all Materials before continuing to activity

#### 1 Cutting

- How to cut open a Balloon Payload
- How to properly cut Foam Core
- How to properly cut insulation
- Using the templates

#### 2 Construction

- Learn about the best adhesives
- Learn how to construct the Balloon Payload box
- Begin building your Balloon Payload box

#### 3 Building

- Integrate your arduino board into the box
- Add the flight tube into the Balloon payload
- Complete Balloon Payload build

### Module Video: [Structure](#)



### NEXT STEPS

This is the last module in the sequenced module set. If you haven't completed the stand alone modules, these would be a good next step