Weekly Report #4

Team 6: Traumatic Brain Injury Reducing Army Combat Helmet
Kristin Ohanian
Jim Veronick
Damian Frankiewicz
Overall Design

- Chin Guard
- Neck Guard
- EPS layer
- Kevlar shell
Completed Work

- **Outer shell of triangles**
  - Added 4+ layers of triangles
  - More coverage around rim
- **Improved techniques**
  - Kevlar placement
  - Epoxy preparation
- **Removed shell from ACH**
Completed Work

- Cut triangles
  - Small
  - Large
Completed Work

- Researched molding techniques for chin and neck guards
  - Air-dry molding clay
- Purchase order from Dick Blick Art Supplies
  - Approximately $35
- Researched and Contacted Helmet Testing Laboratories
  - RIH Orthopaedic Foundation in Rhode Island
    - Drop testing
    - Environmental Chambers
    - Air cannons
    - Primarily a sports helmet testing facility
  - Need to decide if flammability and ballistic testing is important to this project
Project Review

- **Successes:**
  - Improved preparation and processing techniques
  - Completed Kevlar processing on first shell
  - Removed ACH
    - Ability to prepare for next mold and shell

- **Issues:**
  - Removing ACH without damage
  - Uneven layering of Kevlar
  - EPS Layer uncertainty
Future Work

- **Next week**
  - Finish 1st shell
  - Prepare 2nd mold
  - Cut Kevlar for pinwheel shell
  - Construct 2nd shell

- **2 Weeks**
  - Make chin guard mold
  - Order EPS
  - Make 3rd mold and shell

- **1 Month**
  - Have chin guard & neck guard made
  - Install EPS
Budget

- Estimated Total Cost ~$1200
- Spent so far:
  - $685 on Kevlar and supplies
  - $35 on recently ordered mold supplies
  - Total: $720
Hours Worked

- Jim – 10 hours
- Kristin – 9 hours
- Damian – 9 hours