Inspiratory and expiratory flow meter

Client: Christopher Green, M.D.

Team Members: Andrew Eley (Leader)
Sarah Offutt (Communicator)
Darshan Patel (BSAC)
Eric Bader (BWIG)

November 11 to November 17, 2005

Problem Statement
Our client desires a peak inspiratory and peak expiratory flow meter in a single device to monitor for symptoms of asthma and vocal cord dysfunction. It should measure flows up to about 700 liters per second for adults, be cheap, durable, and easy to use with clear measurement readings.

Last Week’s Goals
• Find parts either online, in hardware store, or other source.
• Start construction on our own design of flow meter

Summary of Accomplishments
• Our team met on Friday, we met with our advisor then walked to ECB and began construction on our flow meter
• We determined which parts we could use and ones we still needed.
• We met on Wednesday at 3:00 with Dr. Green

This Weeks Goals
• Finish flow meter construction and begin testing/calibrating.
• Finalize designs by setting proper spring tensions which will be determined from calibration, and find/build functional indicator arrows.

Difficulties
No major difficulties yet in construction. The springs will be the hardest to get right.

Activities
Team: 2.25 hours Team Meeting on Friday
Team: 1.0 hours Team meeting on Wednesday with Dr. Green
Sarah Offutt 0.50 hours Independent research, notebook
Andrew Eley 0.50 hours Independent research, notebook, wrote progress report
Darshan Patel 0.50 hours Independent research, notebook, attended BSAC
Eric Bader 0.50 hours Independent research, notebook, update website
## Project Timeline

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<th>September</th>
<th>October</th>
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### Preliminary Designs
- Meeting with client
- Design brainstorming
- Presentation preparation
- Mid semester Paper preparation
- Final Paper preparation
- Friday Team meetings

### Deliverables
- Progress Report
- Mid semester Presentation
- Mid semester paper
- End Semester Presentation
- End Semester Paper
- Web site
- Semester Wrap-up with Advisor

### Prototyping
- Accounting/budgeting
- Final design developments
- Rapid prototyping
- Analysis/testing
- Final prototype manufacturing
- Final Testing

### Expenses
none