



## Challenges 3 & 4 Reference Sheet

### Catch Up Responses

**Due Tuesday, May 12**

*Reference Sheets offer help in areas in Solar Cup Challenges that might have been hard to understand. Our goal is to offer a few answers or hints with these reference sheets so students have a better understanding of the Challenge and want to submit a response.*

#### **Challenge #3**

- A solenoid has many loops of wire with a current in the wire
- Right hand rule - there is a nice picture in chapter 19
- Motor = generator in reverse
- There are lots of pictures in chapter 19 to help out.
- If you can't make a sketch, copy and paste a drawing from the Internet.

#### **Challenge #4**

- The fuse blows
- There is a fire
- Check the resistance of the dog
- Check the resistance of the bulbs too.
- Hooking up batteries in series doubles the voltage.