EM Demos

1) Draw the magnetic field lines
   - S N S N S N

2) Sketch domains
   - Magnets
   - Magnetize the iron
   - After Stroked
   - How to demagnetize?

3) Demo Ampere's Law. Sketch ±V, I, B
   - mA

4) Create an electromagnet. Sketch ±V, I, B, N-S
   - Illustration

5) Demo Lorentz Force
   Sketch ±, I, B, \(\vec{F}_B\), N-S, \(\vec{F}_B\)
   - a) Pull wire up
   - b) Pull wire down
   - mA

6) Demo Faraday's Law
   - mA

7) Demo Motor
   - a) Draw
   - b) \(\rightarrow\) energy
   - How does it work?

8) Build your own DC motor
   - a) Sketch ±V, I, B, \(\vec{F}_B\), rotation, N-S (Lorentz force explanation)
   - b) Ampere's Law Reasoning:
   - c) How did you know what to sand off?