

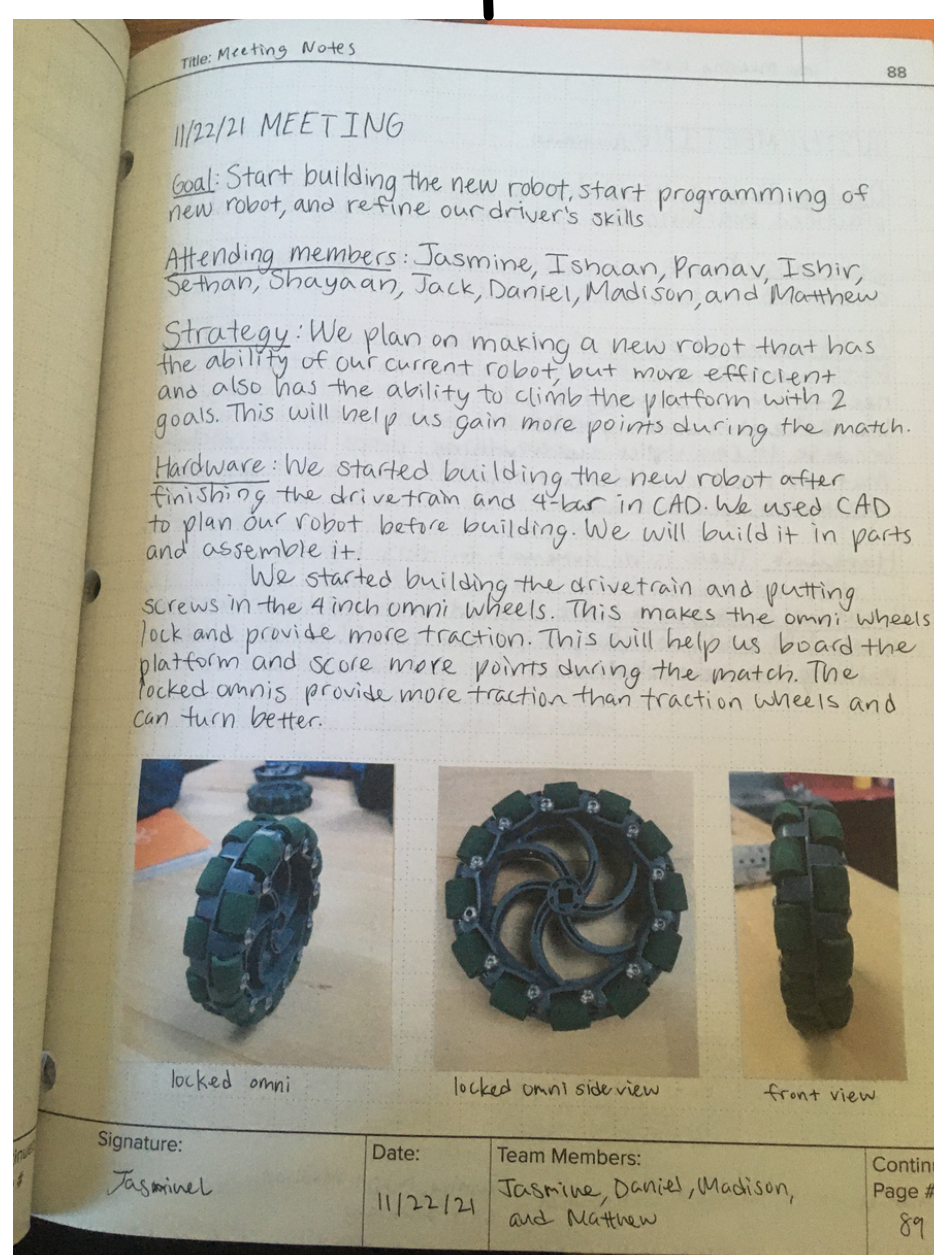
# JOIN VEX ROBOTICS

- Build and program robots for competitions
- Work with other people as a team
- Strengthen building, programming, and journaling skills
- Learn about electronics, CAD models, and calculations
- Promotes leadership, teamwork, problem-solving, and creativity

**VEX**  
ROBOTICS  
COMPETITION



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ROBOTICS  
COMPETITION



```
24 void limitCases(){
25     if(fabs(out) > maxLim) out = getSign(out) * maxLim;
26     if(fabs(out) < minLim) out = getSign(out) * minLim;
27     if(fabs(integral) > iLim) integral = getSign(integral) * iLim;
28 }
29 double calculateOut(){
30     out = KP * error + KI * integral + KD * derivative;
31     limitCases();
32     if(withinTarget()){
33         out = 0;
34     }
35     return out;
36 }
```