INVENT THE FUTURE CHALLENGE
SUGGESTED MATERIALS & VENDORS

This is a list of common materials that could be used in Invent the Future projects and prototypes, and links to vendors to purchase these items. Each team is limited to $60 for all materials used in their prototypes, and $30 per team is reimbursable by MCPS.

Please note the following:

- Save all receipts for reimbursement.
- Submit reimbursement requests ($30 per team) directly to Patrick O'Connor with the 280-48 form.
- Attach a list of the number of teams and respective team members that are represented on the reimbursement request.
- Multiple teams may be included on the same reimbursement form.

REMINDER: **Teams are not limited to the items on this list!** The list is for reference and guidance, but please feel free to purchase other items, identify different vendors, and use recycled materials.

For electronics based projects, there are many additional sensors and outputs that could be explored. Some common sensors include:

- PIR Motion Sensor
- Soil Moisture Sensor
- DHT Temperature/Humidity Sensor
- Hall Effect Sensor

There is a large open-source community around Arduino! If you are looking for tutorials, troubleshooting tips, or inspiration, you could explore some of these websites:

- www.arduino.cc
- www.sparkfun.com
- www.adafruit.com

Item	Vendor Options	Notes:
Arduino Uno Controller + Cable	Amazon	Many brands that are all powered by Arduino: SainSmart, Elegoo, Arduino, etc.
	Amazon	
BreadBoard 400 pt	Amazon	
	Amazon	
	SparkFun	
Jumper Wires for breadboards	Amazon	
Photoresistors	Amazon	
	SparkFun	
330 Ohm Resistor	SparkFun	
	Amazon	
10K Ohm Resistor	SparkFun	
LEDs various Colors	Amazon	3mm, 5mm, or 10mm depending on size preference
	SparkFun	
Piezo Buzzer	Amazon	
Push Button	Amazon	
	SparkFun	
UltraSonic Distance Sensor	Amazon	
Solar Panel	Amazon	
USB Wall Connector	Amazon	Any wall connector is helpful to power Arduino boards rather than relying on battery power.
Coin cell batteries, CR 2032	Amazon	
	SparkFun	
Coin cell battery packs	SparkFun	
AAA batteries	Amazon	
AAA battery packs	SparkFun	
DC motor	Amazon	Many options with slight variations
	SparkFun	
Vibration motor	Amazon	Many options with slight variations
	SparkFun	

Item	Vendor Options	Notes:
Wire	Amazon	
	SparkFun	
Heat shrink	Amazon	Various sizes depending on needs
	SparkFun	
Wire strippers	Amazon	
	SparkFun	
Copper tape	Amazon	
	SparkFun	
Assorted Buttons and Switches	SparkFun	
Low Temp Hot Glue Gun	Amazon	
Plastic wheels	Amazon	
	Amazon	
Propellor	Amazon	
	Amazon	
Cardboard saw	Amazon	
Craft sticks	Amazon	