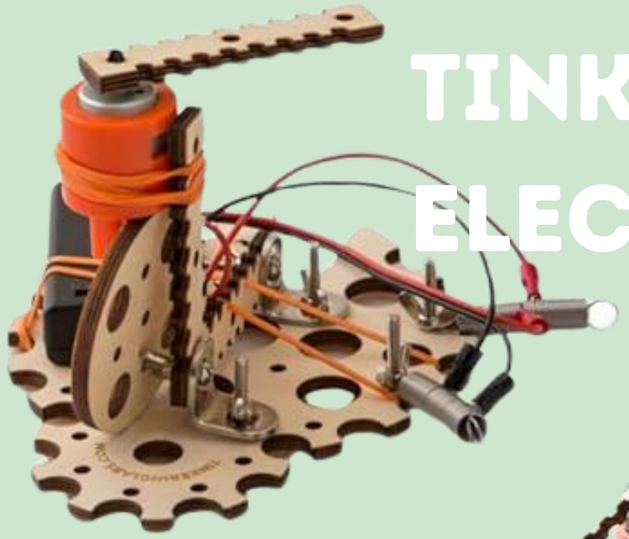
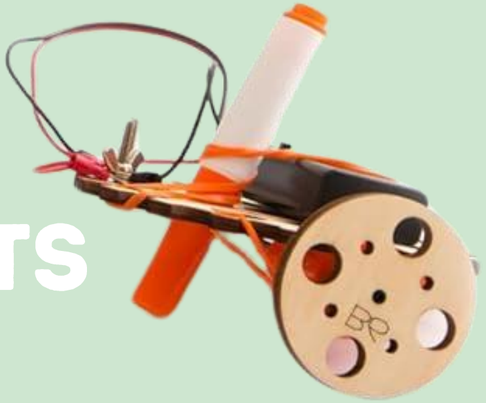
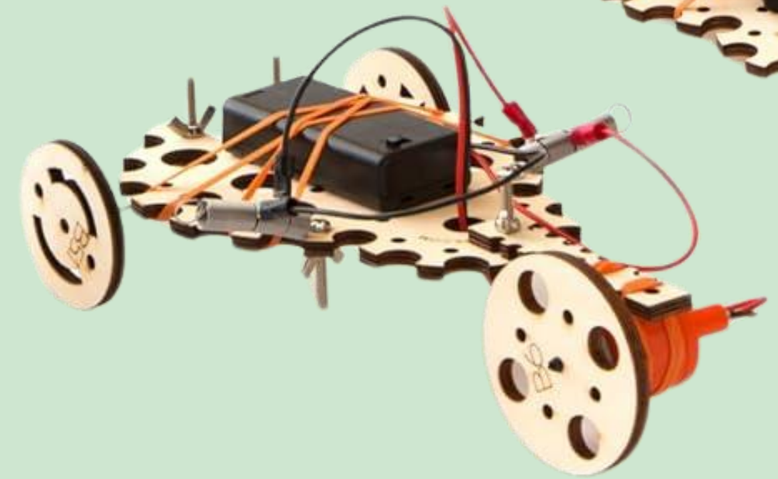
TINKERING LABS:
ELECTRIC MOTORS CATALYST KITS







WHAT ARE THEY?

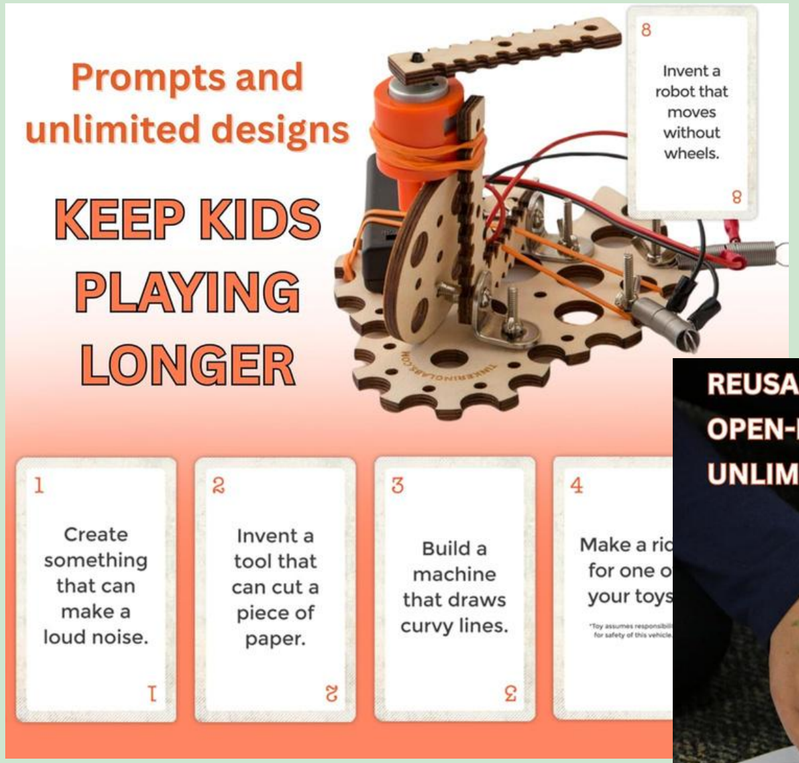
https://tinkeringlabs.com/catalyst/

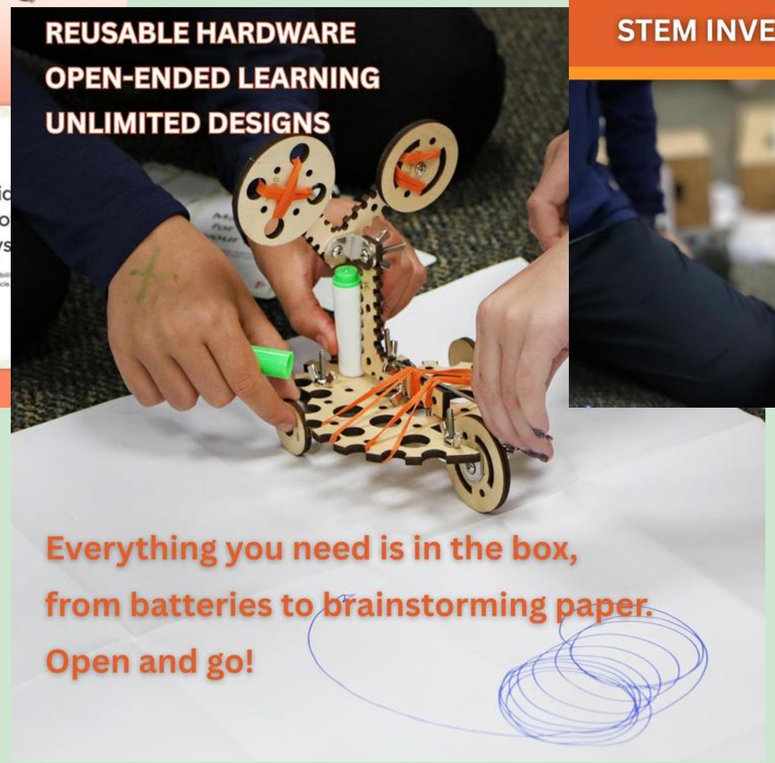
2 electric motors with detachable wires
1 battery pack with switch
2AA batteries
1 wooden chassis
12 wooden wheels in 6 sizes
6 wooden connectors in 3 shapes
2 metal axles (metal rods)
1 hardware tin containing:
4 metal L-brackets
10 small bolts
10 wing nuts
2 metal springs
12 black plastic bushings
10 orange rubber bands
1 pair of child-sized safety glasses
3 washable markers
1 large sheet of paper for coloring
1 full-sized Phillips screwdriver
10 challenge cards in a clear plastic sleeve
1 draw string parts bag
1 “Electric Motors Catalyst” booklet

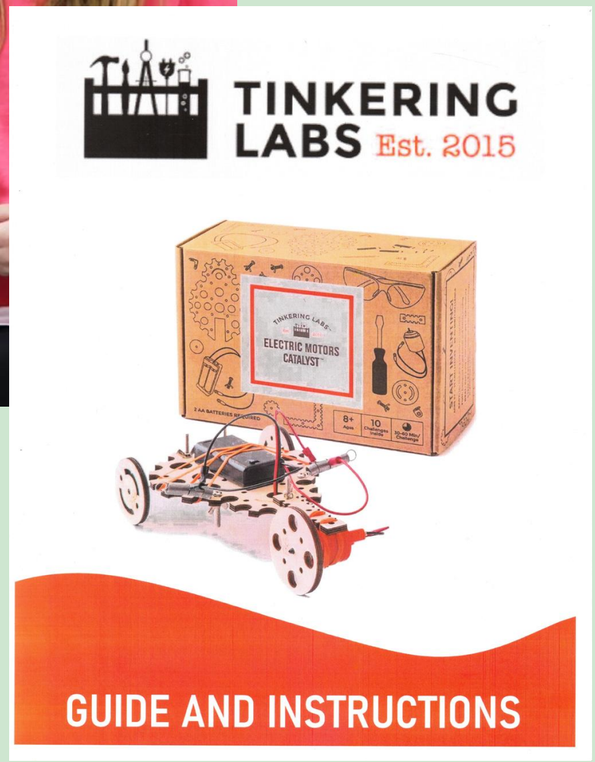
HOW WE GOT THEM

- 2020 contacted by local manufacturing company wanted to donate for STEM items at the library.
- Several staff from that business showed up for one of the December Maker Camp session after we received them to assist.
- 2021, we added to our LoT items and are available for check out.

HOW THEY WORK







BASICS IN SAFETY

- Use the springs or wingnut and bolt to connect wires from the battery packs to the motors.
  - Always RED to RED or BLACK to BLACK. Cross connections will get hot and cause damage.
- There are safety glasses in each box for a reason. Unexpected things can happen on a challenge.
- Markers are for paper, not tables or wood pieces.

https://tinkeringlabs.com/catalyst/

YOUR TURN!

- Pair up
- Pick a “Challenge Card”
- Work together to come up with a solution
- Have fun!

PROS

- Great customer service. Sent extra parts when we contacted them about the motor issue originally.
- All things in one small kit.
- Encourages creativity with no set step-by-step or having only one solution.
- Adults can help but constant supervision is not necassary.
- Extra information/resources available on their website.
  - https://tinkeringlabs.com/
- Extra/replacement pieces available through their Amazon store.

CONS

- Not all the motors worked originally.
  - Some motors had the plastic too tight. Once loosened, motors worked fine.
- Ends of wires will get damaged but a simple electrical kit will fix all the ends easily.
  - Kids can pull too hard on things that aren’t disconnected. It just happens.
- Wood pieces will get colored on.
- AA batteries will melt plastic pieces if not stored properly.
  - + and - contacts can cause a short and heat up pieces.

THANK YOU

Questions or comments:

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