RABVIK
INNOVATIONS

TINKER TIMES

APRIL 2021

REFLECT.
TINKER.
GROW.

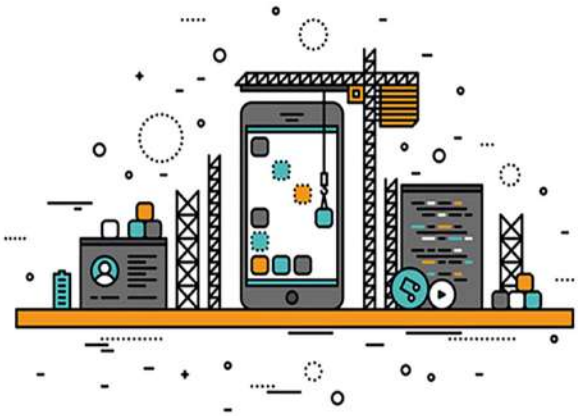
On its journey towards Innovations, Sri Sri Academy, Kolkata, creativity and tinkering in collaboration with Rabvik Innovations, has added a feather on its cap by securing the second position in the national competition Shishir Utsav 2020.

The Atal Tinkering Lab, which was previously operational with class 6,7 and 8th standard, has now expanded to classes 9th and 10th standard as well. Post successful completion of Hackathon, students are now being encouraged for publishing their projects so that it eventually helps them for the student-entrepreneurship with their own patents for their projects. Students need to prepare themselves for the new academic year; a few new events apart from the existing ones will start, like Ideathon, Toyhackathon, and a few more.

-Sri Sri Academy, Kolkata.

HAPPENINGS @SSA

Exams are over for the Srians and now it's time for them to tinker. The entire month of March the Srians learnt many new elements of the app making platform. They have used their creativity to develop different apps on diverse topics.



TECH FACTS

5G TECHNOLOGY

You all must have heard of the 5G Technology that is going to be implemented in India very soon. Already it has been into use in some of the countries.

Let's check out some of the benefits that we can enjoy from this advanced technology-

- The speed will be as high as up to 20Gbps (Gigabytes per second).
- You will be able to control your PCs by your handsets.
- Education will become easier as a student in any remote part of the world can attend the class.
- This will also benefit the medical sector as any doctor can communicate with patients even in the remote part of the world.
- The monitoring systems will improve and will help to reduce the crime rates.
- It will be even possible to locate and search a missing person
- The natural calamities like tsunami, earthquakes, storms can be detected more faster than ever.

But every technology has it's cons too. Let's have a look at 5G's cons:

- Old devices will not be compatible to 5G hence complete replacement will be required.
- Developing infrastructure requires high cost.
- Security and privacy issue needs to be solved more effectively.

DO IT YOURSELF

In this edition, we will make a toy car using the scrap materials available to us.

WE WILL NEED:

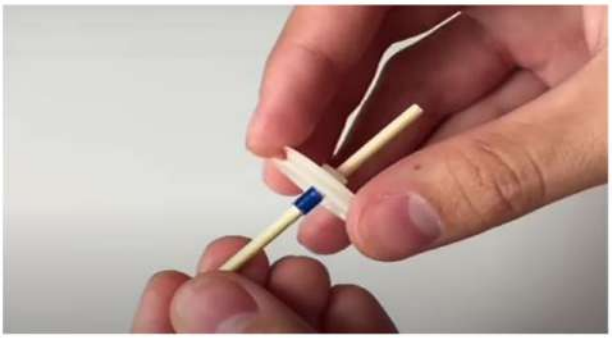
A match box, four bottle caps, wheel spun of threads, 3V DC motor, rubber band, skewers, glue-gun or double tape.

STEPS TO MAKE IT:

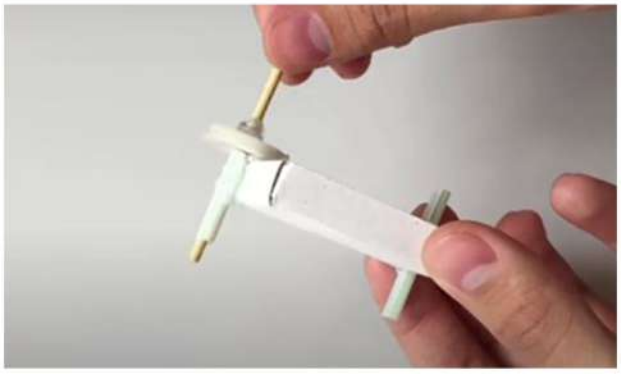
Step 1: Make hole in the bottle caps right in the centre.

Step 2: Now attach small pieces of straw at the four edges of the match box.

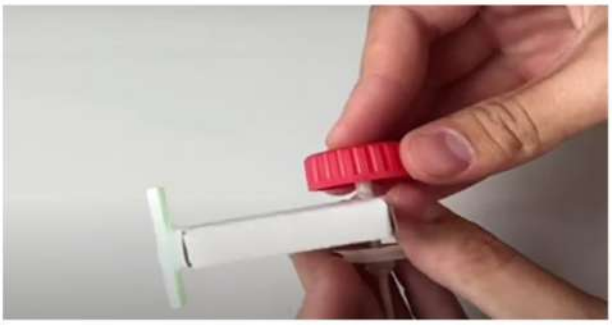
Step 3: Then insert the skewer through the wheel spun like this.



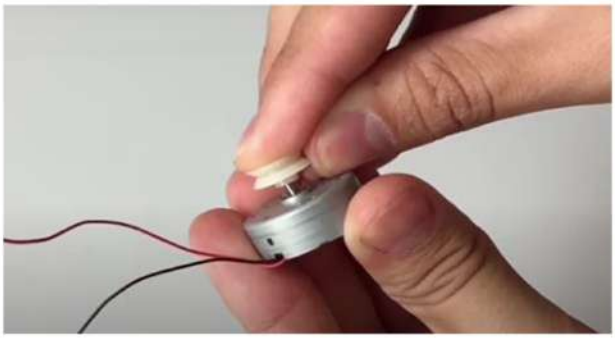
Step 4: Now attach this setup through the straw of the match box like this.



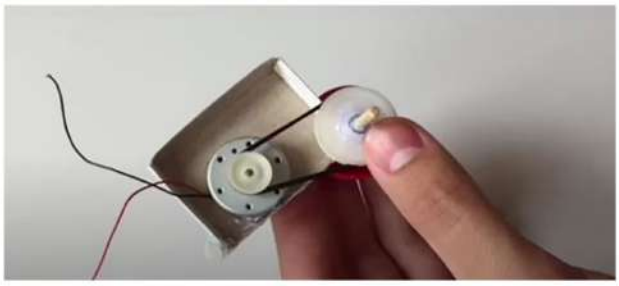
Step 5: Then attach the bottle cap which serves as wheel of the toy car.



Step 6: Attach another wheel spun to the shaft of the motor which rotates.



Step 7: Now attach the arrangement inside the match box and put the rubber band across the two-wheel spuns.



Step 8: Attach the bottle caps to the skewers.

Step 9: Attach the wires of the motor to a battery and switch using solder iron or glue gun or double tape.

Step 10: Fix the setup (battery) inside the match box and attach the switch on top.

Step 11: The model car is now ready for trial everywhere.

Isn't that fun making your own toy car that too from the scraps available at home? So why pay hundreds of rupees when you can actually make it at home for just rupees 50!

KNOWLEDGE TESTING TIME!

1. What is the name of the latest version of Andriod OS?

2. What is the maximum download/upload speed that can be achieved in the 5G Technology?

3. Atal Community Day is celebrated every year in your school's ATL lab. Whom do you think is it dedicated to?

4. When the red wire and black wire of the motor is connected to the positive and negative terminal of the battery it rotates clockwise. If the connections are reversed, what will happen?

5. Two round magnets are placed on a paper side by side. The third magnet when placed in between them on top, it floats. Why do you think this happens?

6. The pencil we use to write/draw when it's lead of both ends are connected to a battery and bulb, the bulb starts glowing. Why do you think this happens?

7. Roll a copper wire in the form of a spring coil of a certain length. Put a pencil battery inside and you'll find it travelling instantly from one end to the other. How does it happen?

8. IBM has recently developed a robot using Artificial Intelligence. Can you tell the name?

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ABOUT US

Rabvik Innovations aims to train and prepare the next generation of robotics, scientists, and engineers innovative enough to push the envelope and becreative enough to achieve the impossible. Rabvik Labs prepare the students for a toe-dip in the pool which will become an ocean in a few years and will also allow them to get real-life experience in the world of robotics, automation, AI and IoT.

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