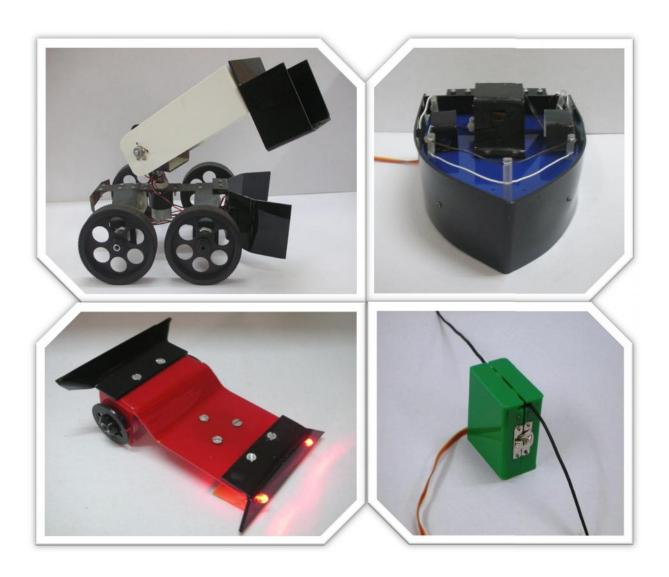
TECHNO
GRAVITY
SOLUTIONS

# BRIX



### A Description

Robo Junior is a Basic robotics course which includes Robot building and Robot designing. It introduces an individual to Robotics in the most interesting manner; combining robot building on wheels, on water and from waste materials.

Robot building helps in understanding how a robot design is planned, the basic parts and accessories, the mechanical structure and basic electronics. It involves basic science and technology concepts and helps one in understanding robotic machines in a broader way.

BRIX is one of the most comprehensive Courses in Robotics for every school student who is just putting their first step into this amazing field of science and technology.

#### **Course Details**

	Wheel Robotics	Aqua Robotics	Best from Waste	ASL
Robot Model	Myra	Aquana	Junk Funk	Hobby-kits
Batch Size	Maximum 10 students			
Duration	48 hours*			
Batch	12 days x 4 hrs. per day = 12 sessions in total			
Internship	3-6 hours at TGS office (*inclusive)			
Theory: Practical	30:70 (%)			

# Take-away

- 1. Immense practical knowledge.
- 2. Design & Data Diary.
- 3. Print-outs, Manuals & CD.
- 4. Certificate of course.
- 5. Development Kit
- 6. Tech-Mate card + vouchers.

GS

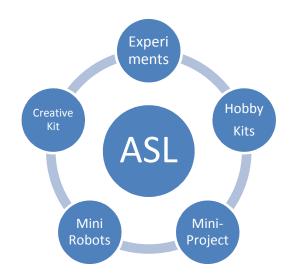
# ASL - Additional Smart Learning

Additional Smart Learning is an interesting feature of BRIX Course. It teaches the student about basic electronics that we interface in our daily life. ASL is more about experimenting in the real world electronics and relating it to Robotics. It simply aims at providing a larger experience & understanding about the basic components of electronics technology we use.

The student will design some, make some and learn some. We initiate the intent to think beyond and out of the box... and yet keep it simple and easy for them to grasp.

#### **Electronic experiments -**

- 1. Door-bell
- 2. Torch light
- 3. Car wiper
- 4. Traffic lights
- 5. Lamp
- 6. Mixer/grinder
- 7. Electronic fan
- 8. Electronic sliders
- 9. Mini water pumps



Additionally student will also learn to design a **Mini-Project** which the student has to initiate and complete once the course is finished.

Ex. - Electronic Switch board to control home appliances like light & fans.

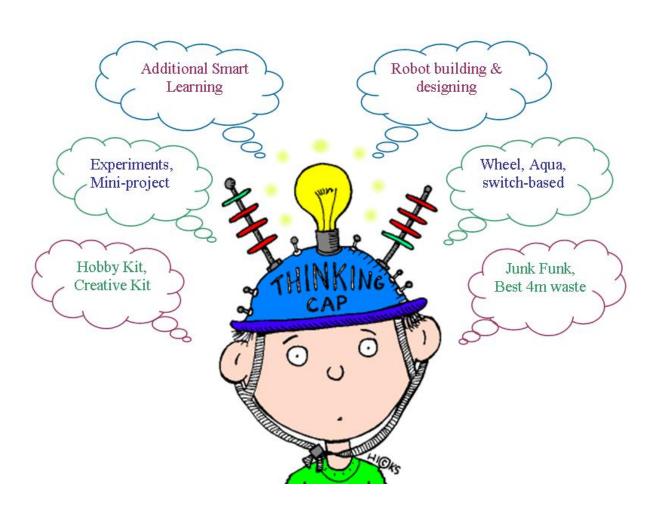
Hobby kits are electronic games and kits which a kid/teen normally plays with. We would like to add that "Development" curve to their fun i.e. Develop and play!

**Hobby Kit Ex. -** Electronic Quiz Game

Creative Kit Ex. - Electronic Lantern

Finally, some **Mini Robo-pets** that they will learn to develop. These are small size models of the Robots they will learn during the course; using "waste" for their "best".

- 1. Pico
- 2. Aqua





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# Summary of Syllabus

The Course content has been designed to suit a student of 10 yrs. and above. Although the concepts are beyond the academic curriculum, our methods ensure all the important aspects are covered and understood.

The syllabus covers various aspects of learning -

#### Theory: -

- 1. World of Robotics
- 2. Basic Control Systems
- 3. Locomotion & Mobility
- 4. Actuation & actuators
- 5. Motor Analysis
- 6. Driving Mechanisms
- 7. Remote Control Design
- 8. Electrical parts
- 9. Propellers
- 10. E-Waste utility
- 11. Robot Dynamics
- 12. Robot Designing

#### Practicals: -

- 1. Soldering
- 2. Drilling
- 3. Cutting
- 4. Folding
- 5. Insulating

#### Skills: -

- 1. Drawing
- 2. Presentation
- 3. Communication







#### Live-wire





Model - Myra

Live-wire is a remote controlled Manual robot with many features. It is a multi-utility, feature-rich, customizable device which is educational, operational and competitive.

Most of us played with remote controlled cars, but never made one. This workshop brings you closer to developing technology level products with the first step. You can play football, or use it as a Tanker, or race with other ones and many other exciting features.

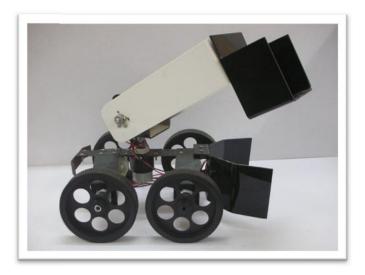
We have an electrical arm which can be customized for various applications. It has 2-axis movement along with LED night vision. (Oh my God) we have head-lights too!

Our design is unique and flexible. It is an exclusive design of Techno Gravity Solutions and copyrighted. This makes your Robot a distinctive among many.

#### **Features**



- Football player
- Bulldozer
- Pick up and place
- Sumo car fight
- Racing Car
- Rickshaw
- Tumble-topple
- Many more 😊



# Junk Funk & Aquana

# Junk Funk



As the name suggests, it is a conglomeration of electronics, e-waste & innovation. It is a unique Workshop, one of its kind in the world where students are taught to develop, or should we say *INNOVATE* using e-waste; basically components of CD/DVD players & cassette players. Some of its parts are used to develop electronic devices called Robots in common engineering terms.

<u>Zipper</u>: It is a unique device that runs on a wire. It is self-balanced and very quick; developed with a focus on future development of high-end robots for rescue operations, component transfers etc.

<u>Craz-e</u>: It is a small remote controlled car, which runs like mice. It runs in all 4 directions as per signals given & is very swift. It is smaller than the size of a palm with its LEDs in night vision.

This is an exclusive product from the Labs of TGS.

# **Aquana**



Model: Bomo

Aquana is an aqua-Bot i.e. it moves on water. Well it is just like a boat with an engine; although here we have motors with propellers (like we have in ships).

Aqua-Bot competitions have become a rage at many technical festivals. Additionally, it is one of the coolest products to have in our gadget bag; one that you can make yourself.

We at Techno Gravity Solutions teach you various ways to design an aqua-bot. Aqua-Bot is an exclusive workshop conducted by TGS.

Take it to a nearby swimming pool and hover it around . . . you sure will be having interesting glimpses at it!!

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