



# RoboThink @ Home Programme





# INSPIRING AND NURTURING **THE NEXT GENERATION OF STEM LEADERS**



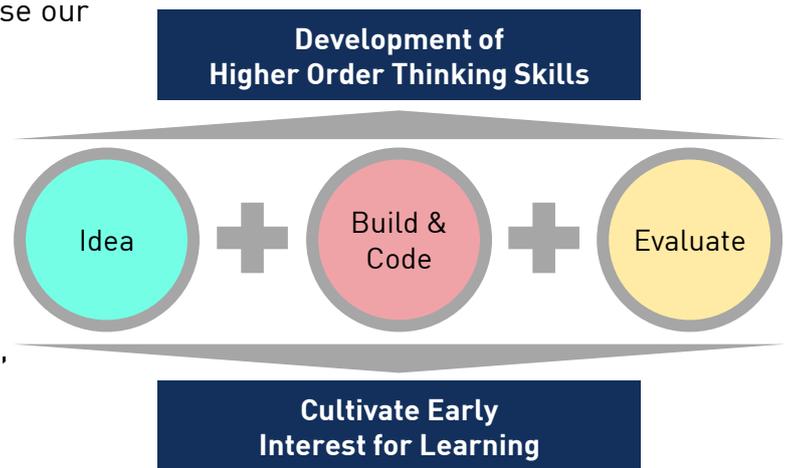
At RoboThink, we look to impact every child's life positively through our engaging STEM programmes. Call us today to find out more about how we inspire the children to learn about STEM.

## Introduction

RoboThink is an edu-tainment program offering fun and exciting robotics and coding programmes where young engineers, tinkerers and builders can explore the exciting world of Science, Technology, Engineering & Mathematics (STEM). The RoboThink Programmes are hands-on learning experiences where students can use our robotics kit to design and build robots of all shapes, sizes and functions.

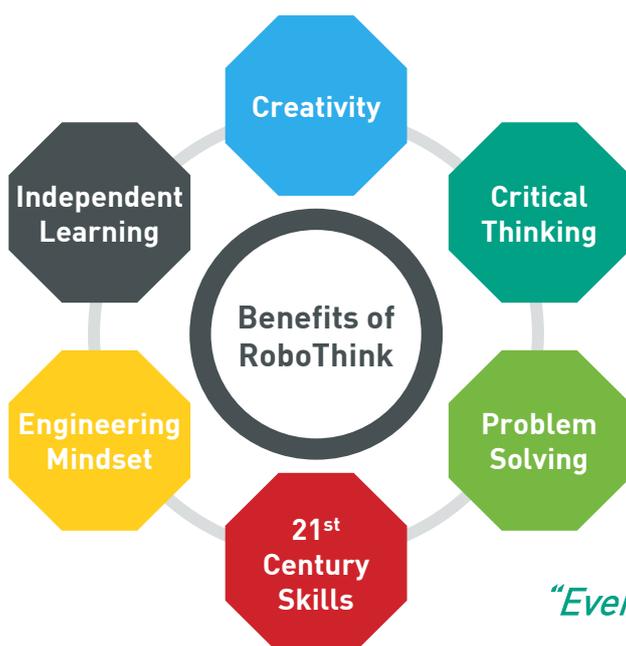
For the child, it's fun play. For the parent, it's a great educational tool! RoboThink's products, programmes and curriculum are designed by teachers and engineers to maximise academic benefits for students.

RoboThink Programmes cultivate creativity, problem-solving capabilities and an interest for learning through project-based robotics, coding and engineering activities.



## Why Learn Robotics & Coding?

Robotics and coding are important skills for the future. Robotics together with coding brings something tangible for students to learn through. Children learn better applying what they learn to practice, which is why we approach things through a hands-on approach.



## Benefits of RoboThink's Programmes

Our programmes are designed for students to learn independently – using their thinking skills and creativity to solve problems they encounter. Our trained instructors provide guidance but leave the heavy lifting to the students to maximize self-discovery and self-learning.

Why? It is simply because students should be encouraged to learn independently, develop critical thinking and practice problem solving skills. These skills are pivotal to any workplace (or even being an entrepreneur) in the future!

*“Everybody in this country should learn to program a computer, because it teaches you how to think”*

– Steve Jobs

## Our Range of Programmes

RoboThink's programmes are available to you via a multitude of delivery channels – both physical & online channels are available!.

Levelled program,  
individualized approach  
to learning



Classroom-based  
levelled program,  
delivered in your school



Short programmes  
through themed  
Camps & Workshops



Customised games &  
activities for children

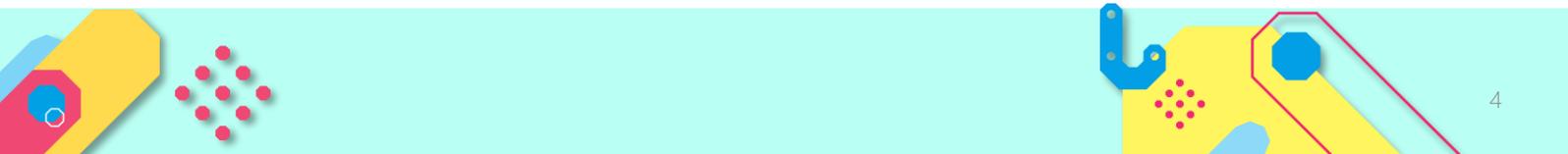
Delivery with  
Instructor  
through our  
Virtual STEM  
Classrooms



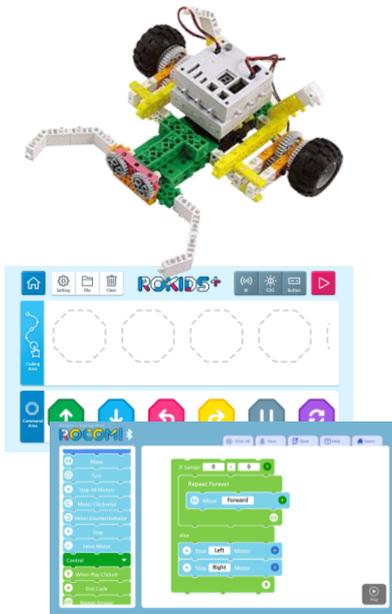
RoboThink Learning  
Centre programmes,  
delivered in the comfort  
of your home



Short Online  
classroom-based  
themed programmes



## What makes RoboThink different?



### Our Hardware & Software

RoboThink's unique Robotics Kits are designed to stimulate problem solving and thinking skills. They are proprietary line of STEM products – meaning no other provider has this unique kit.

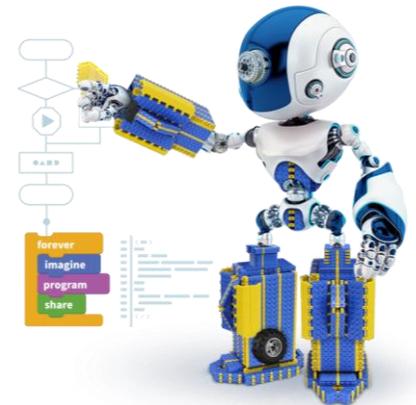
In the design process, every minute detail is considered and our products are manufactured to exact specifications. We use only the best quality plastics and tooling machines in the manufacturing process.

Our software is an excellent tool to introduce students to the world of computer programming. Our software engineers breakdown and simplify coding concepts and tools into visual figures and processes to make it easy for students to understand these topics.

### Our Curriculum

The best method to learning is a step-by-step approach. By breaking down concepts into manageable chunks, students progress at a comfortable pace while developing self-confidence.

Our staff of engineers and teachers are constantly updating the curriculum with new and innovative ways to make learning about STEM easier and more fun.



### The RoboThink Method

We believe that learning happens best through self-discovery and exploration. In our programmes, students are encouraged to build but make modifications or re-design as they see fit.

During this crucial time, there is an explosion of brain activity as students must imagine how a re-designed model works and what process they should come up with to complete the re-design.

# RoboThink Learning Centre Programmes

RoboThink @ Centre and RoboThink @ Home runs the same Learning Centre programmes. They only differ in their delivery methods. RoboThink @ Home takes our popular RoboThink Learning Centre programmes and brings them into your homes!

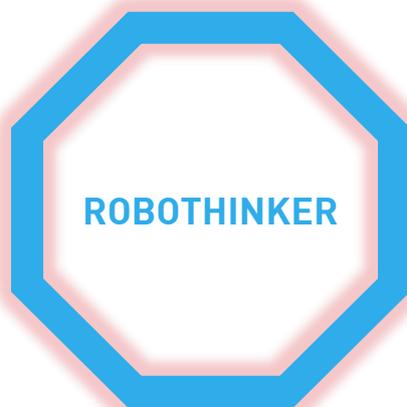
## Our RoboThink Learning Centre Programmes

There are 2 programmes to choose from for RoboThink @ Home:



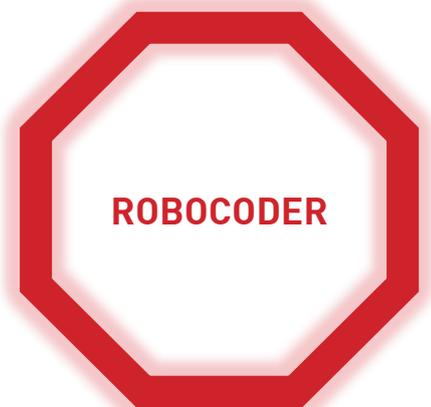
Ideal for 5 to 7 year olds

Combines Robotics & Coding  
Max. class size: 8 students



Ideal for 8 to 15 year olds

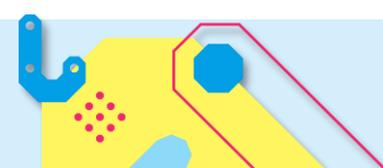
Robotics + Coding  
(focus on Robotics)  
Max. class size: 10 students



Ideal for 9 to 15 year olds

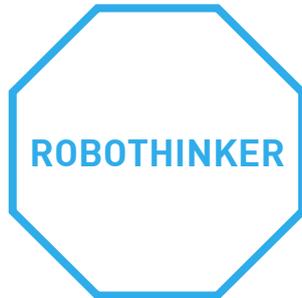
Coding + Robotics  
(focus on Coding)  
Max. class size: 10 students

Comparison between Delivery Methods	RoboThink @ Centre	RoboThink @ Home
Programmes Available	RoboThinker Junior RoboThinker RoboCoder	RoboThinker RoboCoder
Delivery Method	Students attend weekly 1¼ (Jr) to 1½ hour classes in one of our Learning Centres.	Students attends weekly 1 ½ hour classes in the comfort of their own homes.
Resources Available	<input type="checkbox"/> RoboThink Kits will be available at the Learning Centres <input type="checkbox"/> Instructor to help trouble-shoot in class.	<input type="checkbox"/> RoboThink Kits will be delivered to your home <input type="checkbox"/> Online trouble-shooting videos also accessible at convenience.



# RoboThink @ Home Programme

## Programme Progression



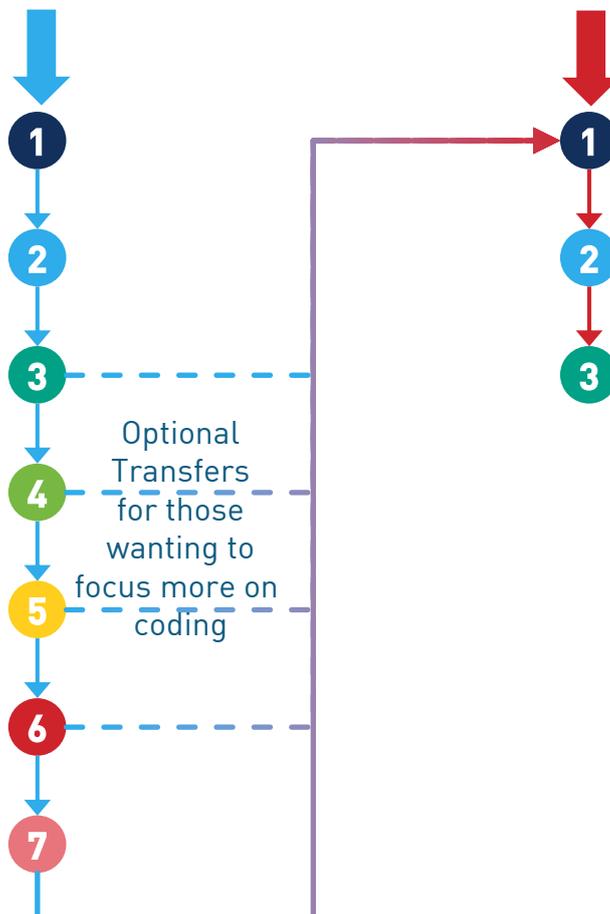
7 Levels  
12 Lessons per Level  
1½ hours class/week



3 Levels  
12 Lessons per Level  
1½ hours class/week

New Students  
8 to 15 year olds

New Students  
9 to 15 year olds  
(with robotics &  
engineering knowledge)

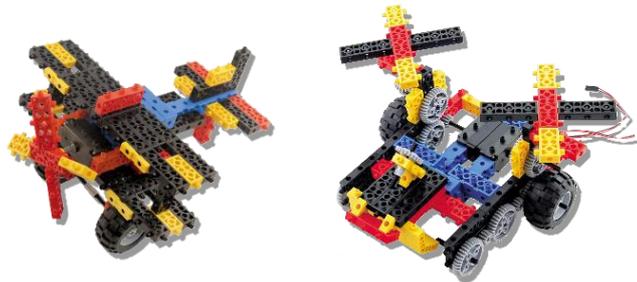


# The RoboThinker

Available on **RoboThink @ Centre** & **RoboThink @ Home**

## Introduction

The RoboThinker Programmes is a structured and curriculum-based engineering program where students from 8 to 15 years old build dynamic robotics models.



## Academic Benefits

- ✓ Encourages self-motivated and exploratory learning
- ✓ Nurtures process-oriented thinking
- ✓ Nurtures creativity and creative problem solving
- ✓ Develops critical thinking and problem-solving skills

## Instructions

The RoboThinker programme's lesson plans make it easy and fun for students to learn how to build robotics models of all shapes, sizes and functions!

**Level 1 - Lesson 8: Building Forward - A Build Activity (Motor & Switch)**

This "Building Forward" will expand the ideas from the previous lesson about the switch, battery and wires. Here you will continue mastering the system for future lessons.

**Part 1: Mars Rover**

On August 6, 2012, the Mars rover, which was named the "Curiosity" rover by a 6<sup>th</sup> grade student, landed on the surface of Mars and has currently been studying the mysterious planet. A rover is defined as "one who spends their time wandering", which is almost exactly what the real life Curiosity rover is doing right now!



Follow the instructions for the 2-12 Mars Rover. After building and playing with the rover, be ready to discuss the following questions.

Where did you insert the motor wire on the switch? What happens when it is located somewhere else? What if the wire was turned around?

Explain how the antenna on top is able to spin.

Copyright © RoboThink, LLC. All Rights Reserved. Level 1 - Lesson 8 1

**Mars Rover**

This model is designed to mirror the Mars Rover, and is able to move forward, backward and rotate its antenna.



**Parts List**

1x1	1x2	1x3	1x4	1x5	1x6	1x7	1x8	1x9	1x10	1x11	1x12	1x13	1x14	1x15	1x16	1x17	1x18	1x19	1x20	1x21	1x22	1x23	1x24	1x25	1x26	1x27	1x28	1x29	1x30	1x31	1x32	1x33	1x34	1x35	1x36	1x37	1x38	1x39	1x40	1x41	1x42	1x43	1x44	1x45	1x46	1x47	1x48	1x49	1x50	1x51	1x52	1x53	1x54	1x55	1x56	1x57	1x58	1x59	1x60	1x61	1x62	1x63	1x64	1x65	1x66	1x67	1x68	1x69	1x70	1x71	1x72	1x73	1x74	1x75	1x76	1x77	1x78	1x79	1x80	1x81	1x82	1x83	1x84	1x85	1x86	1x87	1x88	1x89	1x90	1x91	1x92	1x93	1x94	1x95	1x96	1x97	1x98	1x99	1x100	1x101	1x102	1x103	1x104	1x105	1x106	1x107	1x108	1x109	1x110	1x111	1x112	1x113	1x114	1x115	1x116	1x117	1x118	1x119	1x120	1x121	1x122	1x123	1x124	1x125	1x126	1x127	1x128	1x129	1x130	1x131	1x132	1x133	1x134	1x135	1x136	1x137	1x138	1x139	1x140	1x141	1x142	1x143	1x144	1x145	1x146	1x147	1x148	1x149	1x150	1x151	1x152	1x153	1x154	1x155	1x156	1x157	1x158	1x159	1x160	1x161	1x162	1x163	1x164	1x165	1x166	1x167	1x168	1x169	1x170	1x171	1x172	1x173	1x174	1x175	1x176	1x177	1x178	1x179	1x180	1x181	1x182	1x183	1x184	1x185	1x186	1x187	1x188	1x189	1x190	1x191	1x192	1x193	1x194	1x195	1x196	1x197	1x198	1x199	1x200	1x201	1x202	1x203	1x204	1x205	1x206	1x207	1x208	1x209	1x210	1x211	1x212	1x213	1x214	1x215	1x216	1x217	1x218	1x219	1x220	1x221	1x222	1x223	1x224	1x225	1x226	1x227	1x228	1x229	1x230	1x231	1x232	1x233	1x234	1x235	1x236	1x237	1x238	1x239	1x240	1x241	1x242	1x243	1x244	1x245	1x246	1x247	1x248	1x249	1x250	1x251	1x252	1x253	1x254	1x255	1x256	1x257	1x258	1x259	1x260	1x261	1x262	1x263	1x264	1x265	1x266	1x267	1x268	1x269	1x270	1x271	1x272	1x273	1x274	1x275	1x276	1x277	1x278	1x279	1x280	1x281	1x282	1x283	1x284	1x285	1x286	1x287	1x288	1x289	1x290	1x291	1x292	1x293	1x294	1x295	1x296	1x297	1x298	1x299	1x300	1x301	1x302	1x303	1x304	1x305	1x306	1x307	1x308	1x309	1x310	1x311	1x312	1x313	1x314	1x315	1x316	1x317	1x318	1x319	1x320	1x321	1x322	1x323	1x324	1x325	1x326	1x327	1x328	1x329	1x330	1x331	1x332	1x333	1x334	1x335	1x336	1x337	1x338	1x339	1x340	1x341	1x342	1x343	1x344	1x345	1x346	1x347	1x348	1x349	1x350	1x351	1x352	1x353	1x354	1x355	1x356	1x357	1x358	1x359	1x360	1x361	1x362	1x363	1x364	1x365	1x366	1x367	1x368	1x369	1x370	1x371	1x372	1x373	1x374	1x375	1x376	1x377	1x378	1x379	1x380	1x381	1x382	1x383	1x384	1x385	1x386	1x387	1x388	1x389	1x390	1x391	1x392	1x393	1x394	1x395	1x396	1x397	1x398	1x399	1x400	1x401	1x402	1x403	1x404	1x405	1x406	1x407	1x408	1x409	1x410	1x411	1x412	1x413	1x414	1x415	1x416	1x417	1x418	1x419	1x420	1x421	1x422	1x423	1x424	1x425	1x426	1x427	1x428	1x429	1x430	1x431	1x432	1x433	1x434	1x435	1x436	1x437	1x438	1x439	1x440	1x441	1x442	1x443	1x444	1x445	1x446	1x447	1x448	1x449	1x450	1x451	1x452	1x453	1x454	1x455	1x456	1x457	1x458	1x459	1x460	1x461	1x462	1x463	1x464	1x465	1x466	1x467	1x468	1x469	1x470	1x471	1x472	1x473	1x474	1x475	1x476	1x477	1x478	1x479	1x480	1x481	1x482	1x483	1x484	1x485	1x486	1x487	1x488	1x489	1x490	1x491	1x492	1x493	1x494	1x495	1x496	1x497	1x498	1x499	1x500	1x501	1x502	1x503	1x504	1x505	1x506	1x507	1x508	1x509	1x510	1x511	1x512	1x513	1x514	1x515	1x516	1x517	1x518	1x519	1x520	1x521	1x522	1x523	1x524	1x525	1x526	1x527	1x528	1x529	1x530	1x531	1x532	1x533	1x534	1x535	1x536	1x537	1x538	1x539	1x540	1x541	1x542	1x543	1x544	1x545	1x546	1x547	1x548	1x549	1x550	1x551	1x552	1x553	1x554	1x555	1x556	1x557	1x558	1x559	1x560	1x561	1x562	1x563	1x564	1x565	1x566	1x567	1x568	1x569	1x570	1x571	1x572	1x573	1x574	1x575	1x576	1x577	1x578	1x579	1x580	1x581	1x582	1x583	1x584	1x585	1x586	1x587	1x588	1x589	1x590	1x591	1x592	1x593	1x594	1x595	1x596	1x597	1x598	1x599	1x600	1x601	1x602	1x603	1x604	1x605	1x606	1x607	1x608	1x609	1x610	1x611	1x612	1x613	1x614	1x615	1x616	1x617	1x618	1x619	1x620	1x621	1x622	1x623	1x624	1x625	1x626	1x627	1x628	1x629	1x630	1x631	1x632	1x633	1x634	1x635	1x636	1x637	1x638	1x639	1x640	1x641	1x642	1x643	1x644	1x645	1x646	1x647	1x648	1x649	1x650	1x651	1x652	1x653	1x654	1x655	1x656	1x657	1x658	1x659	1x660	1x661	1x662	1x663	1x664	1x665	1x666	1x667	1x668	1x669	1x670	1x671	1x672	1x673	1x674	1x675	1x676	1x677	1x678	1x679	1x680	1x681	1x682	1x683	1x684	1x685	1x686	1x687	1x688	1x689	1x690	1x691	1x692	1x693	1x694	1x695	1x696	1x697	1x698	1x699	1x700	1x701	1x702	1x703	1x704	1x705	1x706	1x707	1x708	1x709	1x710	1x711	1x712	1x713	1x714	1x715	1x716	1x717	1x718	1x719	1x720	1x721	1x722	1x723	1x724	1x725	1x726	1x727	1x728	1x729	1x730	1x731	1x732	1x733	1x734	1x735	1x736	1x737	1x738	1x739	1x740	1x741	1x742	1x743	1x744	1x745	1x746	1x747	1x748	1x749	1x750	1x751	1x752	1x753	1x754	1x755	1x756	1x757	1x758	1x759	1x760	1x761	1x762	1x763	1x764	1x765	1x766	1x767	1x768	1x769	1x770	1x771	1x772	1x773	1x774	1x775	1x776	1x777	1x778	1x779	1x780	1x781	1x782	1x783	1x784	1x785	1x786	1x787	1x788	1x789	1x790	1x791	1x792	1x793	1x794	1x795	1x796	1x797	1x798	1x799	1x800	1x801	1x802	1x803	1x804	1x805	1x806	1x807	1x808	1x809	1x810	1x811	1x812	1x813	1x814	1x815	1x816	1x817	1x818	1x819	1x820	1x821	1x822	1x823	1x824	1x825	1x826	1x827	1x828	1x829	1x830	1x831	1x832	1x833	1x834	1x835	1x836	1x837	1x838	1x839	1x840	1x841	1x842	1x843	1x844	1x845	1x846	1x847	1x848	1x849	1x850	1x851	1x852	1x853	1x854	1x855	1x856	1x857	1x858	1x859	1x860	1x861	1x862	1x863	1x864	1x865	1x866	1x867	1x868	1x869	1x870	1x871	1x872	1x873	1x874	1x875	1x876	1x877	1x878	1x879	1x880	1x881	1x882	1x883	1x884	1x885	1x886	1x887	1x888	1x889	1x890	1x891	1x892	1x893	1x894	1x895	1x896	1x897	1x898	1x899	1x900	1x901	1x902	1x903	1x904	1x905	1x906	1x907	1x908	1x909	1x910	1x911	1x912	1x913	1x914	1x915	1x916	1x917	1x918	1x919	1x920	1x921	1x922	1x923	1x924	1x925	1x926	1x927	1x928	1x929	1x930	1x931	1x932	1x933	1x934	1x935	1x936	1x937	1x938	1x939	1x940	1x941	1x942	1x943	1x944	1x945	1x946	1x947	1x948	1x949	1x950	1x951	1x952	1x953	1x954	1x955	1x956	1x957	1x958	1x959	1x960	1x961	1x962	1x963	1x964	1x965	1x966	1x967	1x968	1x969	1x970	1x971	1x972	1x973	1x974	1x975	1x976	1x977	1x978	1x979	1x980	1x981	1x982	1x983	1x984	1x985	1x986	1x987	1x988	1x989	1x990	1x991	1x992	1x993	1x994	1x995	1x996	1x997	1x998	1x999	1x1000	1x1001	1x1002	1x1003	1x1004	1x1005	1x1006	1x1007	1x1008	1x1009	1x1010	1x1011	1x1012	1x1013	1x1014	1x1015	1x1016	1x1017	1x1018	1x1019	1x1020	1x1021	1x1022	1x1023	1x1024	1x1025	1x1026	1x1027	1x1028	1x1029	1x1030	1x1031	1x1032	1x1033	1x1034	1x1035	1x1036	1x1037	1x1038	1x1039	1x1040	1x1041	1x1042	1x1043	1x1044	1x1045	1x1046	1x1047	1x1048	1x1049	1x1050	1x1051	1x1052	1x1053	1x1054	1x1055	1x1056	1x1057	1x1058	1x1059	1x1060	1x1061	1x1062	1x1063	1x1064	1x1065	1x1066	1x1067	1x1068	1x1069	1x1070	1x1071	1x1072	1x1073	1x1074	1x1075	1x1076	1x1077	1x1078	1x1079	1x1080	1x1081	1x1082	1x1083	1x1084	1x1085	1x1086	1x1087	1x1088	1x1089	1x1090	1x1091	1x1092	1x1093	1x1094	1x1095	1x1096	1x1097	1x1098	1x1099	1x1100	1x1101	1x1102	1x1103	1x1104	1x1105	1x1106	1x1107	1x1108	1x1109	1x1110	1x1111	1x1112	1x1113	1x1114	1x1115	1x1116	1x1117	1x1118	1x1119	1x1120	1x1121	1x1122	1x1123	1x
-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	----

## Curriculum

The RoboThinker Programme covers robotics, engineering and coding concepts comprehensively. The RoboThinker Programme covers 5 basic aspects of robotics. The 5 aspects are covered through our levelled curriculum to help students progress through the concepts easily.

### 5 Aspects of Robotics Covered

- 1 Blocks**  
Introduction to RoboThink blocks and building basic block-based models.
- 2 Gears & DC Motors**  
Introduction to various gears and axles as well as the DC Motor. Study of transforming and transferring motion.
- 3 Mainboard & Wired Remote**  
Introduction to intermediate level electronics. Study of robots that move and are controllable.
- 4 Sensors**  
Introduction to various types of sensors. Study of autonomous robots and understanding sensor electronics.
- 5 Wireless Remote & Servo Motor**  
Introduction to advanced electronics. Study of using high precision parts and application of all parts to build advanced designs.

### 7 Levels of RoboThinker Programme

- 1 Mechanical Systems & Switch**
- 2 Advanced Mechanical Systems**
- 3 Core Electronic Components**
- 4 Advanced Electronic Components**
- 5 Servo Motors**
- 6 Coding using RoCoMi**
- 7 Advanced Coding using RoCoMi**

## Format

### Weekly Classes

The RoboThinker Programme covers robotics, engineering and coding concepts comprehensively. Every week, students build models and complete fun robotics projects.

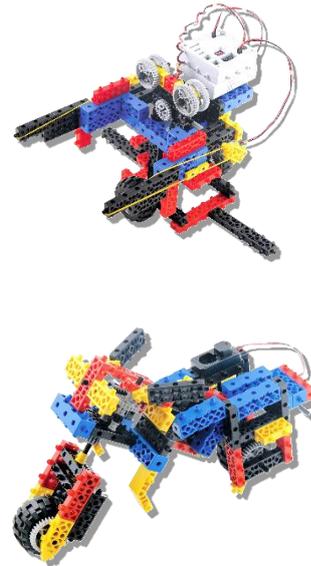


# The RoboCoder

Available on **RoboThink @ Centre** & **RoboThink @ Home**

## Introduction

The RoboCoder is a combination of coding and robotics. Students learn the principles of coding through our coding software RoCode and, in some lessons, given challenges to code robots that they design and build to achieve the required objectives.

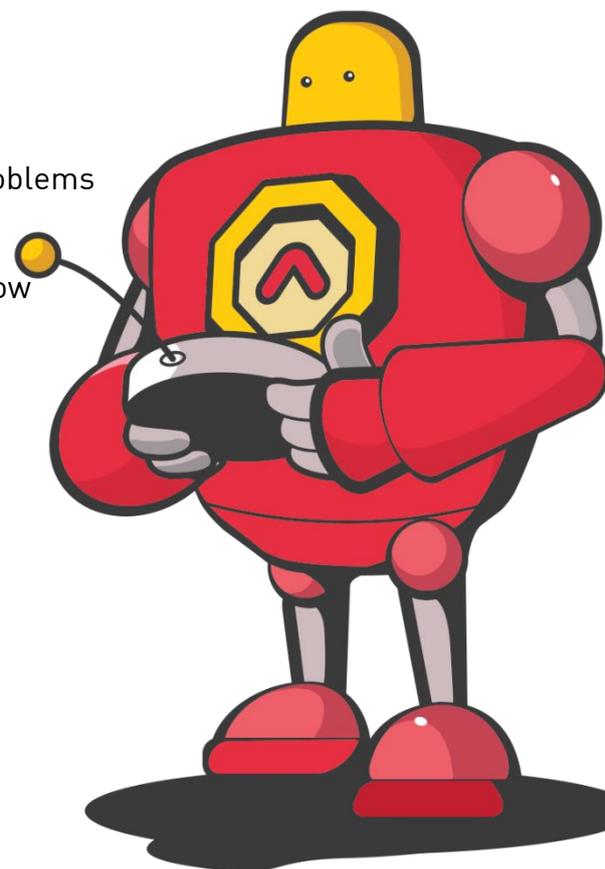


## Academic Benefits

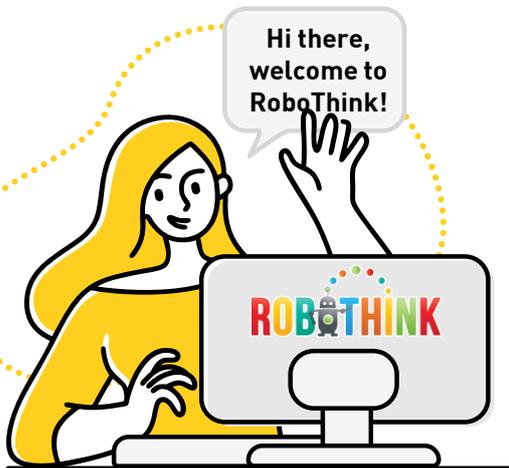
- ✓ Study of real programming concepts
- ✓ Application of hardware and software in solutions to real problems
- ✓ Encourages self-motivated and exploratory learning
- ✓ Early exposure to technology, robotics and understanding how computers work, and interfaces with robots in real life
- ✓ Develops critical thinking and problem-solving skills

## Instruction

The RoboCoder offers a step-by-step lesson plans and accompanying workbooks for the entirety of the programme!



## How Does It Work?



### Master Engineer RoboThink Instructors

RoboThink Online Programmes are led by engaging teachers. They are fully background checked and trained on RoboThink's methods. We're sure your child will love working with RoboThink's instructors.

### RoboThink Virtual STEM Classroom

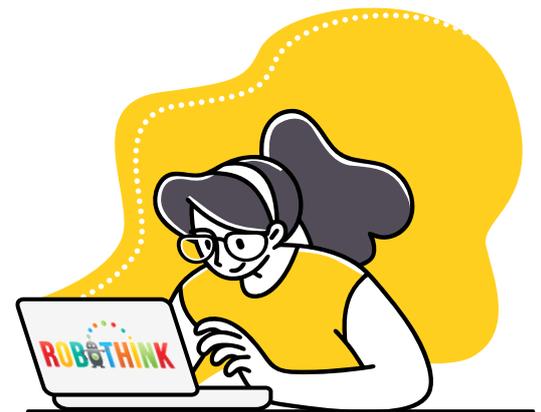
RoboThink's Online Classroom with live teaching (not pre-recorded videos), interactive class, virtual "raise-hand" feature and it's easy to use and engaging for students. Plus, students can log in from anywhere!

## What You Need

### Equipment

You will need to have:

- ✓ Windows, Mac or Chromebook device with keyboard, mouse/touchpad, webcam and a microphone.
- ✓ Google Chrome Browser (preferred)
- ✓ Broadband Internet Connectivity
- ✓ *iPads or tablets do not work!*



### Test Your Equipment

A few days before the class, test your equipment and make sure it's ready for the Virtual STEM Classroom at:

[www.myrobothink.com/test](http://www.myrobothink.com/test)

### Ready to Go!

Make sure your child is in a quiet environment. Feel free to watch or help your child. Got questions? E-mail or call your Instructor.



## RoboThink Hardware

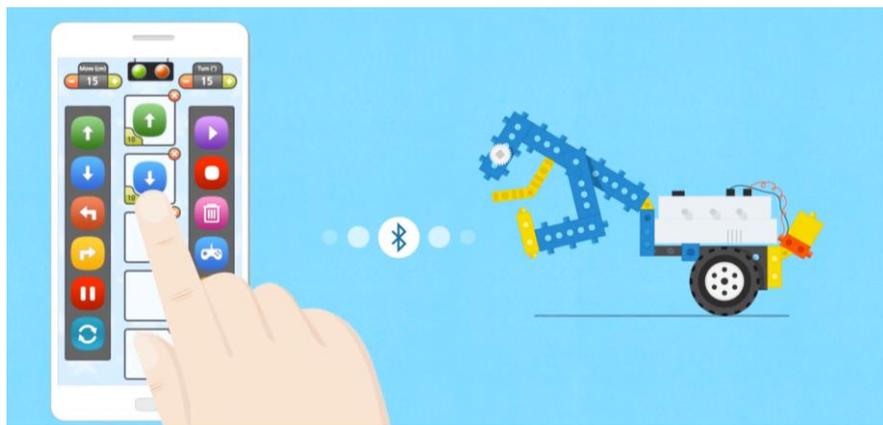
RoboThink uses a proprietary RoboThink Robotics Kit developed with ease-of-use and flexibility in mind. With no messy connectors and screws, students can build projects quickly and focus more creativity!



## Coding Platforms

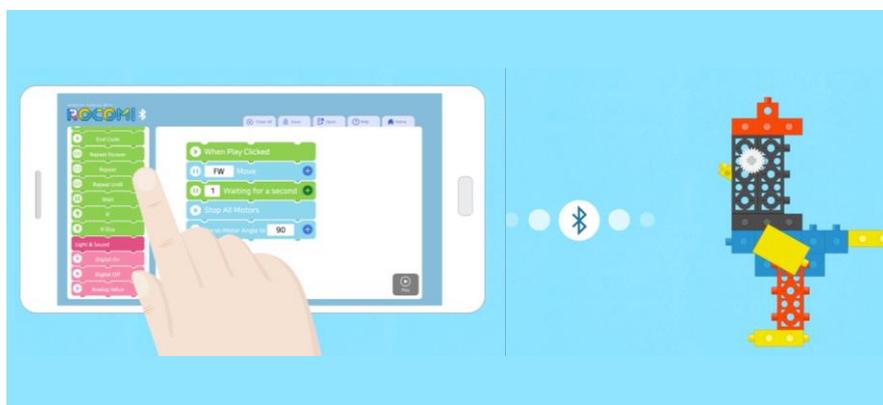
RoboThink developed three different coding platforms for our students of different ages. Through these three coding platforms, students are able to build and code robots that runs programmes they write!

### RoKids / RoKids Plus



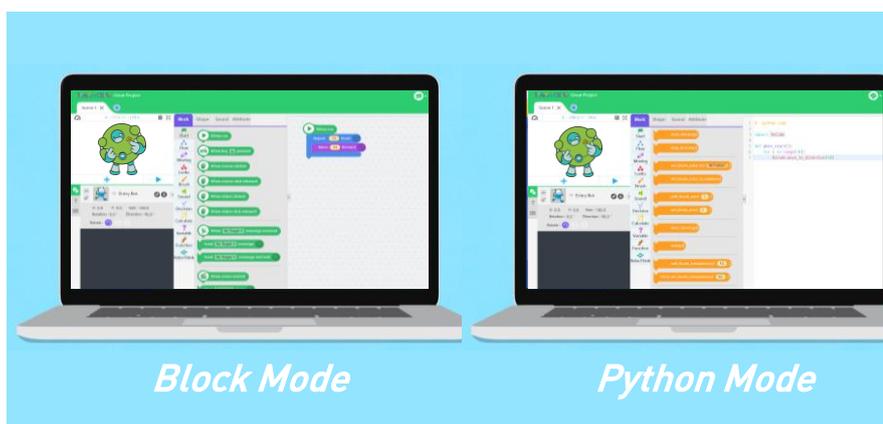
- ❑ Designed for 5-7 year olds.
- ❑ Teaches sequencing, wait and loops.
- ❑ Connects wirelessly with RoboThink kit via Bluetooth.
- ❑ Touch interface for younger students.

### RoComi



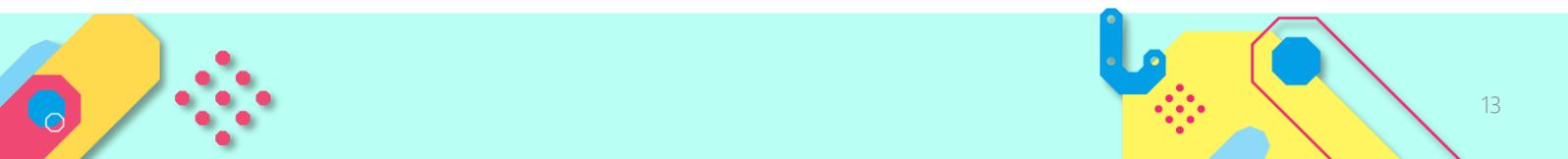
- ❑ Designed for 7 year olds & up.
- ❑ Teaches sequencing, wait, loops, if, if & else, digital & analog values.
- ❑ Connects wirelessly with RoboThink kit via Bluetooth.
- ❑ Touch interface for younger students.

### RoCode



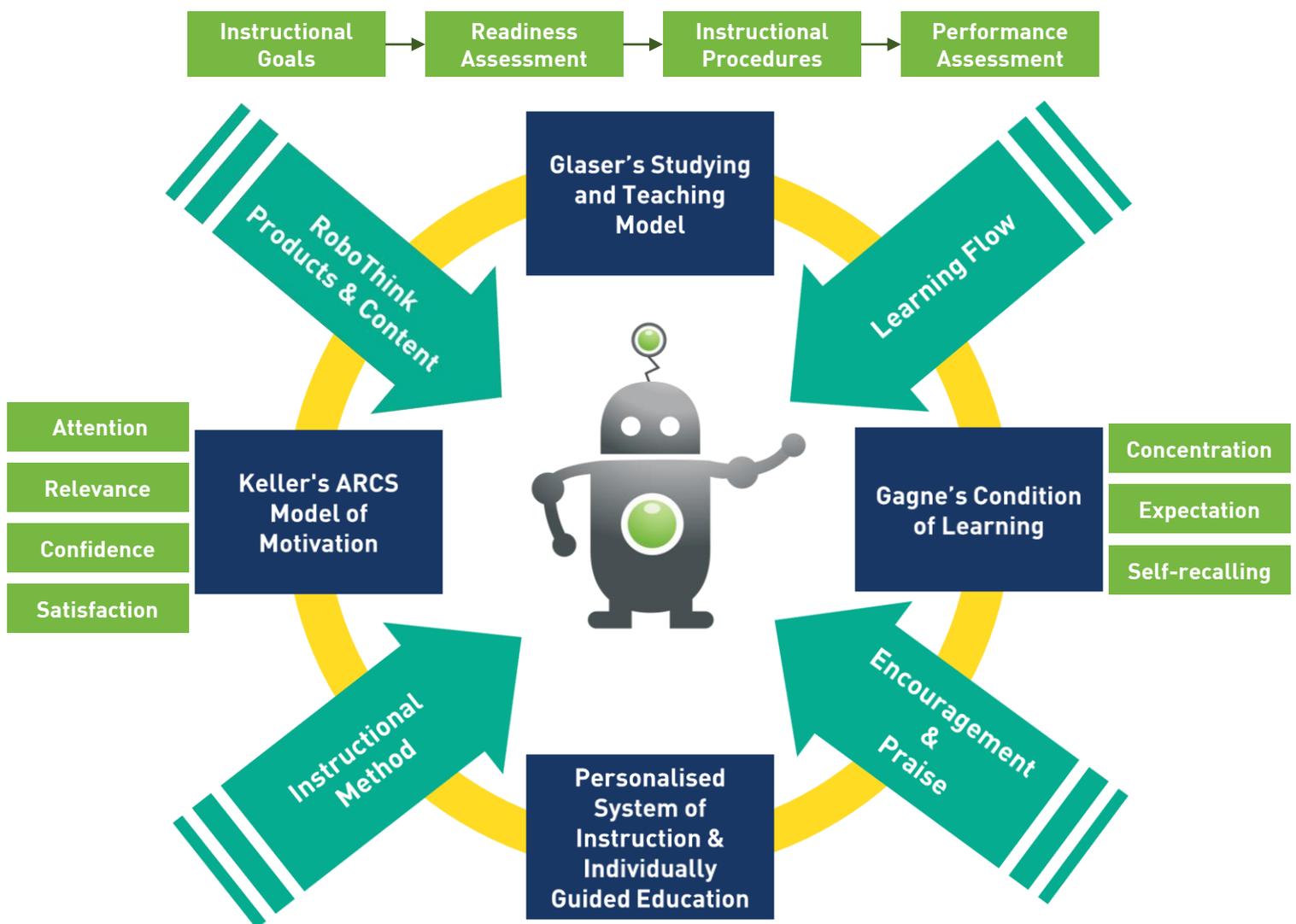
- ❑ Designed for 9 year olds & up.
- ❑ Teaches sequencing, wait, loops, if, if & else, digital & analog values, functions, lists and variables.
- ❑ Block Mode & Python Mode
- ❑ Connects with USB
- ❑ Click and drag

*Block Mode*                      *Python Mode*

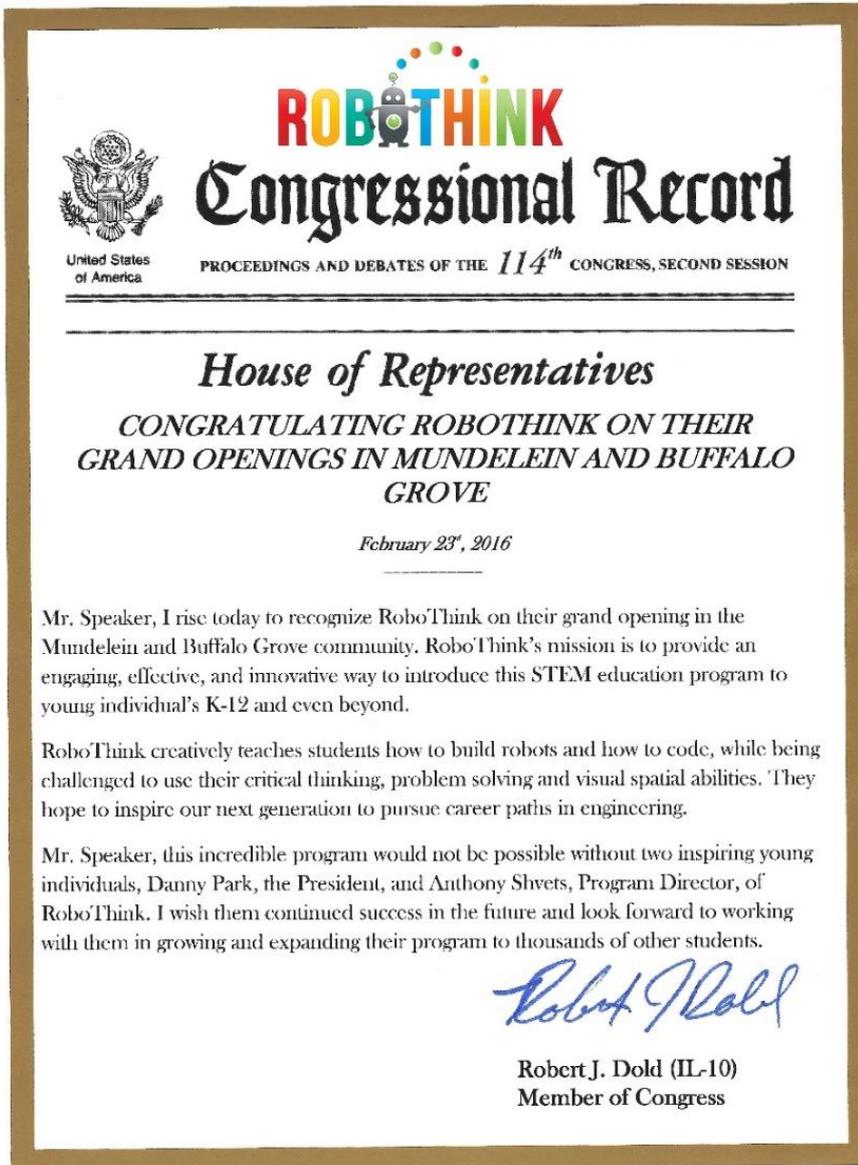


## RoboThink Instructional Model

The RoboThink instructional model is a learning system which is based on 4 theories. These theories provide the background that underpins RoboThink’s methodology to extract the maximum benefits to the students..



## Our Accolades & Recognitions



**ROBOTHINK**  
**Congressional Record**  
 PROCEEDINGS AND DEBATES OF THE 114<sup>th</sup> CONGRESS, SECOND SESSION

*House of Representatives*  
**CONGRATULATING ROBOTHINK ON THEIR  
 GRAND OPENINGS IN MUNDELEIN AND BUFFALO  
 GROVE**

*February 23<sup>rd</sup>, 2016*

Mr. Speaker, I rise today to recognize RoboThink on their grand opening in the Mundelein and Buffalo Grove community. RoboThink's mission is to provide an engaging, effective, and innovative way to introduce this STEM education program to young individual's K-12 and even beyond.

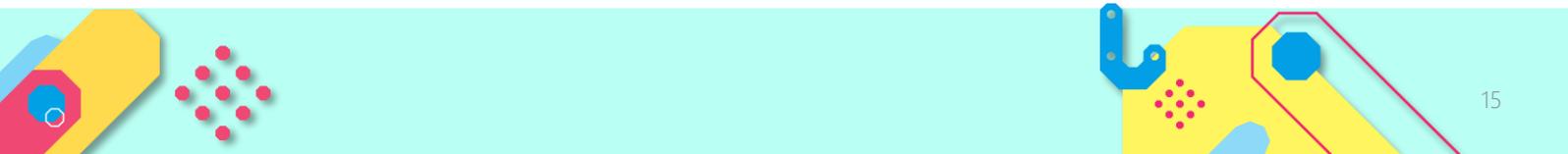
RoboThink creatively teaches students how to build robots and how to code, while being challenged to use their critical thinking, problem solving and visual spatial abilities. They hope to inspire our next generation to pursue career paths in engineering.

Mr. Speaker, this incredible program would not be possible without two inspiring young individuals, Danny Park, the President, and Anthony Shvets, Program Director, of RoboThink. I wish them continued success in the future and look forward to working with them in growing and expanding their program to thousands of other students.

*Robert J. Dold*  
 Robert J. Dold (IL-10)  
 Member of Congress

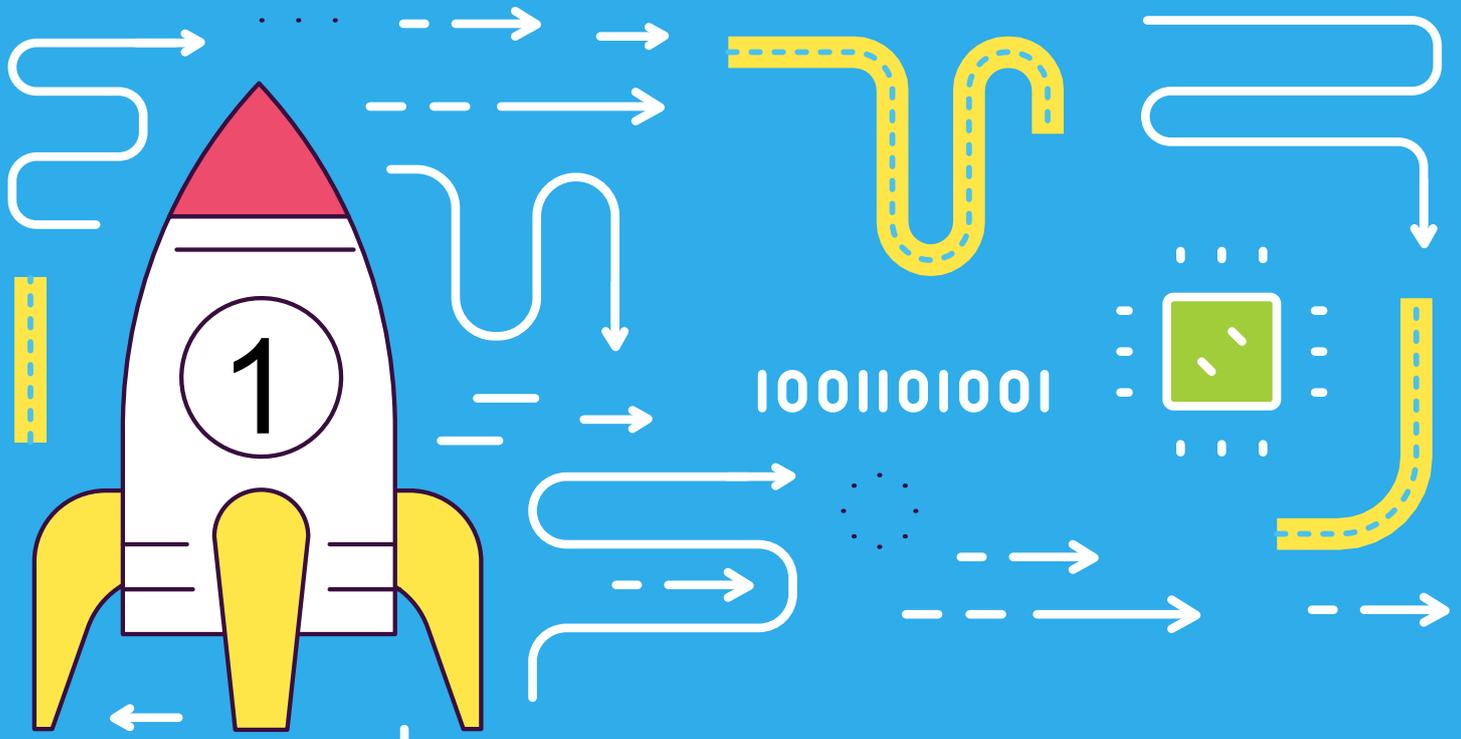


**GOOD DESIGN**



## Our Accolades & Recognitions

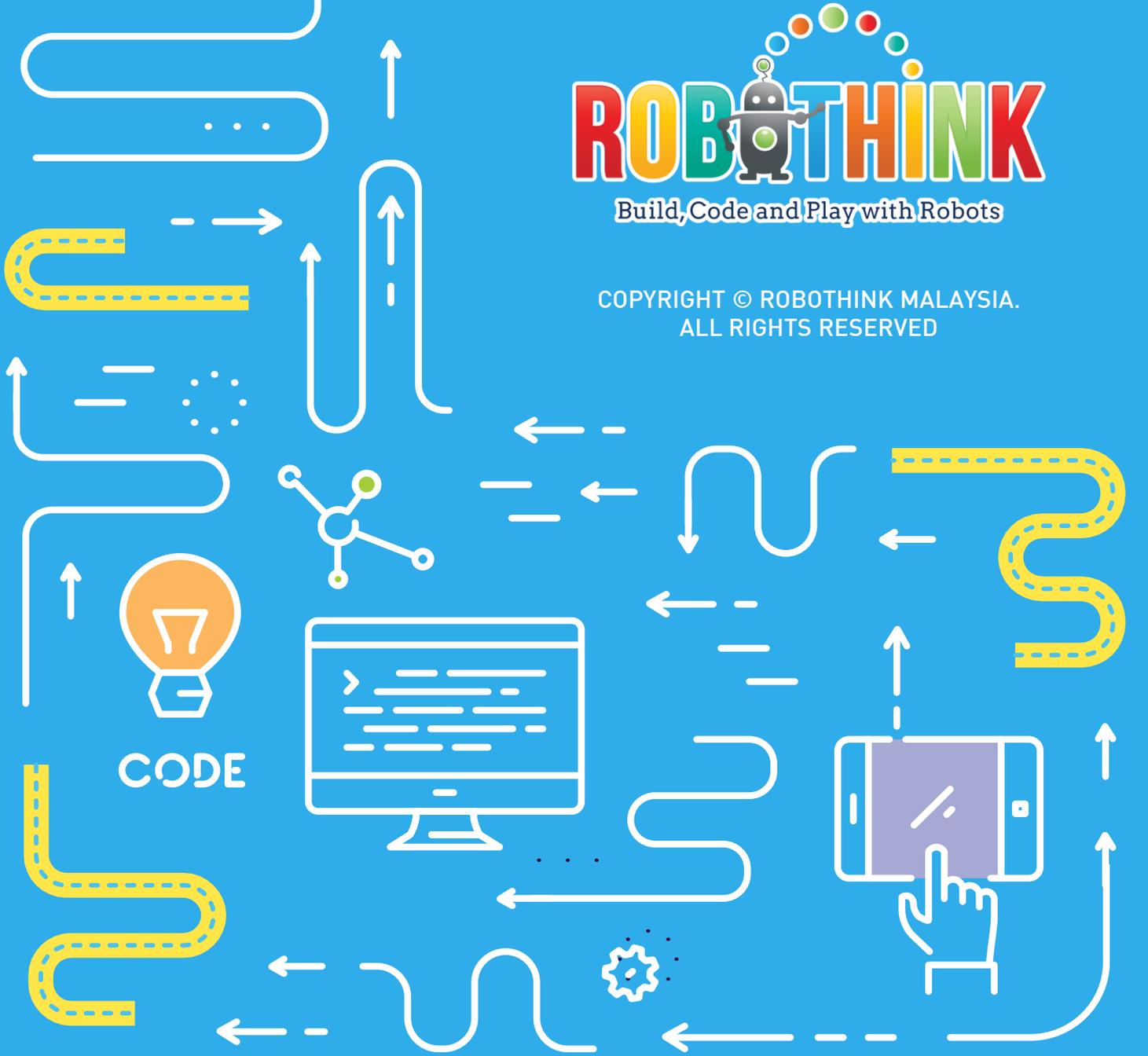




# ROBOTHINK

Build, Code and Play with Robots

COPYRIGHT © ROBOTHINK MALAYSIA.  
ALL RIGHTS RESERVED





**RoboThink Malaysia HQ**  
Lot S8, Second Floor, Centrepoint  
3 Lebuhraya Utama  
47800 Petaling Jaya

[info@robothink.com.my](mailto:info@robothink.com.my)

+60 14 718 3988

+60 3 7498 1490

[www.robothink.com.my](http://www.robothink.com.my)

  RoboThinkMalaysia

