The 19th Guangxi Adolescent Robotics Competition ASEAN Countries & Guangdong-HongKong-Macao Adolescent Robotics Invitational Tournament

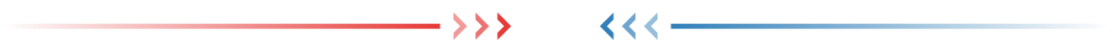## 2021 MakeX Spark Online Competition Rules Guide

MAKEX

CONTENTS

1.   Introduction

1.1   About MakeX

MakeX is a robotics competition platform that promotes multidisciplinary learning within the fields of science and technology. It aims at building a world where STEAM education is highly appreciated and where young people are passionate about innovation by engaging them in exciting Robotics Competition, STEAM Carnival, etc.

MakeX Robots Competition is hosted by the MakeX Robotics Competition Committee, organized by Shenzhen Hulu Maker Co., Ltd. and supported by Shenzhen Makeblock Co., Ltd. As the core activity of MakeX, it aims that through the competition, young people will discover the spirit of creativity, teamwork, fun and sharing. It is committed to promoting innovation in science, technology, education through high-level competition events, guiding young people to learn Science (S), Technology (T), Engineering (E), Art (A) and Mathematics (M) and apply such knowledge in solving practical problems through the exciting and challenging competitions.

1.2   MakeX Spirit

Creativity: explore new ideas and new skills, use creativity and innovative thinking to overcome real-world challenges.

Teamwork: have open communication with partners, work together towards a common goal and complete a task in the most efficient way for win-win development!

Fun: enjoy the fun and excitement in head-to-head competition and problem-solving process.

Sharing: have an open mind as a "Maker", share the joy, insights and experience with others.

MakeX spirit is the cultural cornerstone of MakeX Robotics Competition, which inspires young people to acquire new skills, improve teamwork, gain memorable experiences in the competition, share their insights and knowledge with their community so as to achieve their grand aspiration of changing the world and shaping the future!

2. The Competition

2.1 About Spark

MakeX Spark Online Competition is a project-based creative design program for young people aged 6 to 13. The participating team will need to focus on the specific theme and devise the solution through software programming and hardware construction. The solution will be a demonstration project and a poster with topics including research, design-thinking process, construction scheme, and outcome summary. Participants will have the opportunity to get involved in hands-on practice and showcase their projects in all areas of STEM.

2.2 Participation Requirements

Contestants shall participate in teams. Each team is composed of 1 or 2 members and instructed by 1 or 2 mentors. Mentors shall be over 18 years old.

Teenagers aged 6 to 13 (inclusive) can participate in the competition.
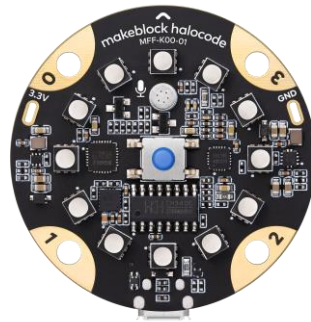
2.3 Equipment

2.3.1 Software

The contestants must use mBlock, a programming platform developed by Shenzhen Makeblock Co., LTD. They can choose mBlock for Web, mBlock for Windows, or mBlock for Mac.

2.3.2 Recommended Hardware

Halocode

It is recommended that contestants use Halocode produced and sold by Shenzhen Makeblock Co., LTD. Halocode is a wireless single board computer. With its built-in Wi-Fi support and microphone, the students can easily bring your board into the IoT projects and add speech recognition ability to it. It comes with plenty of sensors, such as 12 x Programmable RGB LED light, a Motion Sensor, a Touch Sensor and more. And its companion software, mBlock, makes it easy to get started with Halocode and learn to code. Using Halocode, everyone can make their own creations, in an easy and fun way!

AI & IoT Creator Add-on Pack

If the mainboard like Halocode is not enough for your project, we recommend the combination of Halocode with the AI & IoT Creator Add-on Pack produced and sold by Shenzhen Makeblock Co., LTD. The AI & IoT Creator Add-on Pack does not contain mainboard, but it offers 13 mBuild electronic modules and 9 accessories packages, which is designed to help students understand artificial intelligence, experience the simple application of it in life, learn to use common electronic modules to complete creative projects and master block-based programming skills. The add-on pack is equipped with appropriate building blocks, Python APIs, hardware online documents, assisted with wealthy teaching cases.

mBot Series

mBot is a STEAM education robot for beginners, that makes teaching and learning robot programming simple and fun. With just a screwdriver, the step by step instructions, and a study schedule, children can build a robot from scratch and experience the joys of hands-on creation. As they go, they will learn about a variety of robotic machinery and electronic parts, get to grips with the fundamentals of block-based programming, and develop their logical thinking and design skills.

If you want to buy any equipment, please contact the local distributor or MakeX Committee: makex_overseas@makeblock.com.

2.4   Theme

The theme of each match is different, which comes from STEAM education field, important international or national events, latest developments in science and technology, news reports and daily life, etc. Contestants are encouraged to participate in multiple matches to gain a full and thorough understanding of the competition. The theme of the project should be positive and closely related to the theme of each match.

Background

In 2020, an outbreak of the novel coronavirus (Covid-19) infection affected every aspect of our lives. Scientific institutions, governments and enterprises all over the world work closely together to take prompt scientific measures, from studying the principle of the virus, tracking the spread of the virus and popularizing scientific knowledge of epidemic prevention. Great efforts have been made to build a scientific defense line for the protection of human health.

Theme Explanation

The competition theme is **Code for Health**. Contestants are highly expected to develop creative ideas to safeguard the human health. There will be a great imagination space for the project designing. For example, it can be a touch-free robot which is able to fight against epidemics and deliver supplies to hospitals. It can also be an intelligent tool that can destroy viruses and protect human health, or a diagnostic tool to diagnose the physical health at any time....... As long as the ideas are bold enough and have something to do with protecting human health, you are the safety guardian we are looking for!

Let's create a Family Care solution with our brilliant ideas!

2.5   Procedure

MakeX Spark focuses on interdisciplinary learning, emphasize the interconnectedness of theoretical knowledge and the real world, and encourage contestants to take the initiative to understand the real problems and try to solve problems in different ways. The following is the recommended procedure. Each contestant should get adequate preparation and in-depth exploration, fully investigate the background or real situation of the problem, collect information, generate and test possible solutions, analysis and evaluate results.

Topic Research	→	Project Desgin	→	Project Construction	→	Poster Design	→	Online Submission
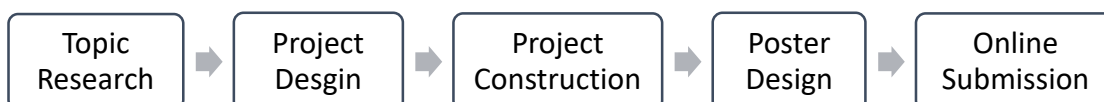
P01 Topic Research

In the early stage of the competition, contestants can focus on the study of the problems

related to theme in the real world, look for solutions and take it as the project topic. This competition encourages contestants to conduct thematic research and studies, explore real-world issues, understand the background, the reason of the problem, and existing solutions.

A.   Clear Purpose

After reading the theme of the match, the contestants are encouraged to experience, observe, record or think of daily life, brainstorm then try to write down the potential problems, and clarify the purpose of the research.

B.   Collect information

Collect information around the above potential issues, identify the research object and information collection sources.

Contestants can determine the needs of information collection based on their circumstances and resources, including but not limited to understanding the development history of the issue; current organizational or industry developments; product usage scenarios and user needs; The research objects include but are not limited to historical records of a certain era, a non-profit organization or enterprise, products of a certain brand, conditions of a certain region, specific segments of the population, etc. Select appropriate research methods according to time and budget, such as online research, on-site visits, field trips or interviews with experts.

C.   Record Process

It is recommended to make a brief record during the topic research. Record valuable information as much as possible related to research purposes and analytical plans, so that you can communicate and discuss with others at any time, and for later review and summary.

D.   Research Summary

After the topic research, the next step is systematic analysis and summary, then try to generate possible solutions. You can choose to communicate with the mentor or the professionals involved in the problem, speak out about your gains and ideas, get feedback and suggestions from others, and adapt the solutions as appropriate.

In addition, we encourage to develop the research framework according to mentor's teaching plan, or the contestants' learning plan, then conduct thematic research and study according to this framework.

P02 Project Design

A.   Equipment Preparation

According to the requirements of each competition, contestants should prepare materials on demand, including but not limited to mechanical parts, electronic components, tool kit, demonstration boards, wooden boards, paper boards, color pens, crayons, markers, as well as other decorative materials and daily items.
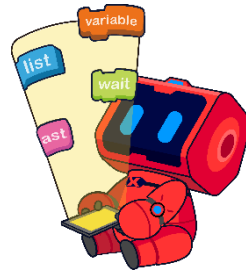

B.   Generate Possible Solutions

According to the conclusion of the topic research, plan the function and the construction of the project, try to list the corresponding equipment list, including mechanical parts, electronic parts, exterior design, etc. We look forward to seeing the contestants develop multiple solutions for the problems encountered during the build-up process, and continue to experiment and optimize them.

C.   Select and Test Solution

Analyze and test the above solutions. Before the formal start of construction, it is recommended to build a simple basic model, use it for rapid testing and iteration, to facilitate the subsequent construction of projects based on the accurate solution.
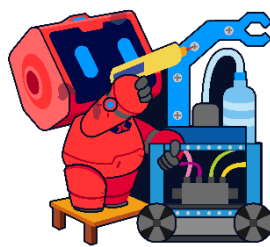
P03 Project Construction

Based on the determined plan, the contestants confirm the topic and functions of the project, clarify the equipment list and carry out software programming and hardware construction.

A.   Project Construction

Contestants need to program in the mBlock IDE where contestants can connect the hardware equipment and program it. Design and construct the hardware structures, test and demonstrate the functions, shape and design the exterior of the project.

B. Construction Records

Take records during the project construction, mainly including program logic, electronic parts construction process and exterior design process, etc. The content may include the design plan, problems encountered during the construction process and the solutions, etc.

P04 Poster Design

The competition requires contestants to make posters (the picture below as an example) for the projects and submit them online. P03 Project Construction and P04 Poster Design can be carried out together so that the mentors can give instructions more conveniently.

*Note: The poster needs to be hand-painted and created by the contestants themselves.

A. Project Summary

The basic information of the project and the creative ideas of the contestants need to be included in the poster. Specific requirements can be seen in **4.3 Poster Specifications**. In addition, contestants are encouraged to share the competition experience, achievement of goals in each part and what can be improved next.

B. Self-evaluation

We believe that in each competition, it is very meaningful to do our best to accomplish one thing and achieve the goal. We hope that during this process, contestants can record and
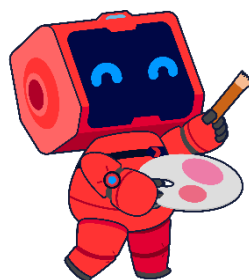
summarize their experiences, feelings and gains, try to reflect on the project and evaluate themselves.

P05 Online Submission

A.   Material Collation

Organize and summarize the materials required for the submission, including videos, pictures, contents of introductions and operating instructions, etc., which should be applied to the project submission. In the video, contestants need to introduce the projects in oral expression and demonstrate the functions. Specific requirements can be found in **4.2 Project Submission Specifications**.

B.   Project Submission

Contestants can publish the projects in mBlock Community with the help of mentors, fill in the text and upload videos and pictures. Then click the submission link on the competition webpage, select the corresponding project, fill in the real entry information, and upload the poster. Before the deadline of submission, contestants can still adjust and optimize the submitted projects.

3.   Assessment

Through MakeX Spark, contestants can reflect on their abilities in five dimensions, including design ability, innovative thinking, electronic technology, programming ability, and communication skill. In this competition, the score result of each dimension will be closely related to the performance of the contestants and the content of the submitted projects. Please refer to **Appendix 2: Assessment Criteria Details**. The brief descriptions of the dimensions are as following:

A.   Design Ability

★   Contestants can design complex mechanical structures and use related tools to achieve the functions of their projects;

★   Contestants can use a variety of maker or art materials to design the outlook of their projects;

★   The project shall be attractive in appearance and interactive in device, which is able to demonstrate the design ability and aesthetic taste of contestants.

B.   Innovative Thinking

★   The project solution shall be unique and novel enough to demonstrate the unique creativity of the contestant, without any high similarity with other projects created by

other contestants.

★   Projects shall be highly related to the themes of the competition with clear positioning of target user. The theme information can be collected from various ways.

C.   Electronic Technology

★   Contestants can use electronic modules of different degrees of difficulty to achieve the functions of their projects;

★   Under the specific functions of their projects, contestants can use various types of electronic modules;

★   The electronic modules of the project shall be used correctly to achieve the functions accurately and smoothly, while these functions are highly relevant to the theme.

D.   Programming Ability

★   Contestants can use block-based programming or text-based programming to achieve the functions of their projects abstractly;

★   Contestants are proficient in applying programming concepts or algorithmic techniques, and understanding how to use program structures such as sequence, loop, or selection;

★   The project program is concise with no bugs.

★   Contestants can use the best algorithm to make the codes run smoothly and achieve the functions accurately.

E.   Communication Skill

★   Contestants can speak fluently in the demonstration video, with rich vocabulary, clear pronunciation, complete and accurate descriptions;

★   Contestants can present the complete problem-solving process which are closely related to the final solution of their projects.

In addition, the competition encourages original ideas. Contestants are encouraged to think independently and incorporate insights, experiences, and thoughts into their projects. It is believed that each contestant may have a different understanding of the theme, and we wish to see hundreds and thousands of different elaborate designs, rather than copies of the same products.

4.   Specifications

4.1   Project Specifications

S01. MakeX Spark program is a creative construction competition, which requires contestants

to program the hardware. The main body of the project is hardware.

S02. Each team can only submit one project.

S03. Each team must submit original project.

4.2   Project Submission Specifications

4.2.1 Project Name

S04. Necessity— The published project must contain the official name of the project, and must be exactly the same as the name of project poster.

S05. Exactness—The project name is in line with the content, and the wording is grammatically correct.

S06. Refining—The project name should be concise and leave space for imagination.

S07. Vividness—The project name creates some images which can help people quickly understand the message that the project is trying to deliver.

4.2.2 Introduction

S08. Content—The introduction of the project shall include the theme and functions.

S09. Clear logic—The project description is impressive, has clear logic, and assists others to easily find the key points.

S10. Conciseness—The introduction of the whole project should not exceed 1000 words, generally 700 to 900 is the best, the longest cannot exceed 2000 words.

S11. Facticity—The description should not exaggerate the actual functions and working mechanism of the project.

4.2.3 Instructions

S12. Clear steps—The steps should be clearly identified in the instructions, and there should be a sequential relationship between the steps.

S13. Specific description—Avoid the situations that readers cannot understand, cannot perform or achieve the desired effect with the instructions. Do not mistake, miss, or skip steps.

4.2.4 Source Code

S14. The uploaded source code should have clearly marks for the realization of each function.

S15. The marks on the code should be simple to help the judge understand the logic easily.

4.2.5 Videos

S16. The videos support MP4 and MOV formats, with single size no more than 200M.

S17. Pay attention to clear and bright lighting to avoid blurry video.

S18. The video contents shall include oral introduction by the contestant and functional demonstration of the project.

S19. The display form in the video is not limited, but it needs to be easy to understood.

4.2.6   Pictures

S20. The photos support GIF, JPG, PNG format, with size no more than 10M for each one.

S21. Please upload at least 3 photos, and choose one photo as the cover of the project when publishing.

S22. Photos should be clearly visible with no ambiguity in the main displaying subject.

S23. Take photos from several angles to fully present the structure and design of all parts of the project.

4.2.7   Language Requirements

S24. Please submit project name, introduction, instruction in English so that the judges can read the contents clearly.

S25. If you cannot record the video in English, local language presentation with additional English subtitle is also acceptable. Please make sure the subtitle is precisely correct with the presentation.

4.2.8   Hints

S26. The whole presentation of videos and the project introduction content should avoid useless or irrelative description.

S27. Check the uploaded materials initiatively after the submission just in case anything goes wrong. Contestants may miss the score of the corresponding dimension if there's no corresponding information in the submitted materials.

4.3   Poster Specifications

4.3.1   Creation Method

S28. The poster must be created by the contestants themselves and drawn manually. Paper and digital version are both accepted. Contestants are encouraged to use imagination and artistic creativity to display their project with colorful elements.

S29. The size of each poster should not exceed 297mm*420mm (standard A3 paper size). Contestants can draw up to 3 separate posters if one is not enough, or intergrade all of them into one PDF. Paper or other environment-friendly display board materials can be used, with clear content for easy reading.

4.3.2   Poster Content

S30. The content of poster should include the basic information of the project, including but not limited to the name of the project and the author, main functions and inspirations of the project. The poster can also display problem discovery – problem solving process, preferably with manuscripts such as the design drafts, structure and program logic drawings.

S31. Please list the main hardware materials on the poster. If a large number of non-quantifiable material such as paper shell or metal beam is used, just fill in the name of the material without marking the quantity.

Example: mCore mainboard X1, several cardboards, ultrasonic sensor X1.

4.3.3   Language Requirement

S32. Please write the contents in English so that the judges can read the poster clearly.

4.3.4   Poster Submission

S33. When submitting the project, the poster is preferably submitted in PDF format. If you cannot transfer the poster into PDF, please take HD pictures and upload, with up to 3 pictures and size no more than 20M in total.

S34. The name of the poster must be the same as the submitted project.

5.   Competition Rules

5.1   Safety Rules

R01. The use of hazardous materials such as contaminated and unstable chemicals is prohibited.

R02. The use of high power equipment and dangerous materials that may cause personal injury is prohibited.

R03. Various parts of the projects must be used safely under the guidance of the mentors.

R04. Expert judges have the right to disqualify the contestants based on the safety problems of the projects.

R05. Contestants should read this guide carefully, prepare for the competition, design and construct the projects under the guidance of the mentors.

R06. Contestants must follow the instructions of the mentors in the process of the competition. Do not carry out dangerous operations without authorization.

R07. When using tools (such as screwdrivers, sharp knives) and other dangerous materials, pay attention to safety and use them under the guidance of the mentors.

5.2   Rules Explanations

R08. To ensure fair and high-quality competition experience, MakeX Robotics Competition Committee has the right to update this guide regularly, and to publish and implement necessary changes before the competition.

R09. During the competition, all matters that are not specified herein shall be determined by the expert judge.

R10. The rules guide is the basis for the work of the judges and expert judge, who shall have the final decision during the competition.

6.   Rules Guide Statement

MakeX Robotics Competition Committee reserves the final interpretation right of 2021 MakeX Robotics Online Competition Rules Guide.

6.1   Disclaimer

All contestants in 2021 MakeX Robotics Competition shall fully understand that safety is the most important issue for the sustainable development of MakeX Robotics Competition. To protect the rights and interests of all contestants and organizers, according to relevant laws and regulations, all contestants registered for the 2021 MakeX Spark online competition, shall acknowledge and abide by the following safety provisions:

Contestants shall take adequate safety precautions when constructing the projects, and all parts used for construction shall be purchased from legal manufacturers.

During the competition, the contestants should ensure that all the actions such as constructing, testing and demonstration will not do harm to team members and other contestants, chief judge, staff, audiences, equipment and venues.

In the process of construction and competition, if any action that may violate the national laws, regulations or standards occur, all consequences will be borne by the contestants themselves. The competition kits and parts sold and provided by the supporter, Shenzhen Makeblock Co., Ltd., should be used in accordance with the instructions. Shenzhen Makeblock Co., Ltd. and MakeX Committee will not be responsible for any injury or loss of property by improper use.

6.2   Copyright Declaration

Shenzhen Makeblock Co., Ltd. reserves the copyright of this Rules Guide. Without the written

consent or authorization from Shenzhen Makeblock Co., Ltd., any entity or individual may not reproduce, including but not limited to any network media, electronic media or written media.

Appendix 1: Assessment Chart

MakeX Spark Online Competition Assessment Chart							
Dimension	Sub-dimension	Grade					
		5	4	3	2	1	0
Design Ability	Structure Application						
	Exterior Design						
Innovative Thinking	Innovation						
	Theme Relation						
Electronic Technology	Electronic Technology						
Programming Ability	Programming Ability						
Communication Skill	Oral Expression						
	Process Presentation						

Appendix 2: Assessment Criteria Details

Assessment Dimension 1: Design Ability		
Sub-dimension	Grade	Assessment Criteria
Structure Application	5	Design and construct at least 3 kinds of simple or difficult mechanical structures. Combine various structures reasonably.
	4	Design and construct 1-2 kind/s of difficult mechanical structures, such as robot claws and robot arms, etc.
	3	Design and construct 1-2 kind/s of relatively difficult mechanical structures, such as the combination of crank, connecting rod and parallelogram structure, etc.
	2	Design and construct 1-2 kind/s of simple mechanical structures, such as pulleys, gear sets, belt drives and chain drives, etc.
	1	Use the simplest building block bricks for stacking without any other mechanical connection or any mechanical transmission method.
	0	The project has no structure with only electronic parts connected. Or the structures have nothing to do with the function of the project. Or the structure cannot work at all.
Exterior Design	5	Use various art or other environmentally-friendly processing materials; Use materials of both 3D printing and laser cutting; The project and poster are attractive in design, and the project is equipped with an interactive device.
	4	Use various art materials or environmentally-friendly processing

		materials; Use one of 3D printing or laser cutting to design; The overall project and poster are very beautiful.
	3	Use 3 or more kinds of art materials or other art processing materials to design the project exterior; The project and poster are relatively beautiful.
	2	Use 1-2 kind/s of art materials or other art processing materials to design the project exterior; The project and poster are ordinary.
	1	Use ready-made products or tools for decoration; The project is simple without poster.
	0	The project has no exterior design with only mechanical structure and electronic parts connected. Or the designed exterior has nothing to do with the theme of the project.

Assessment Dimension 2: Innovative Thinking		
Sub-dimension	Grade	Assessment Criteria
Innovation	5	The project solution is very unique and innovative, no other simulated projects or products on the market, reflects unique creativity.
	4	The project solution is relatively innovative, combined with functions from other projects or products on the market, has some improvements, reflects certain creativity.
	3	The project solution is innovative, improve the single function from other projects or products on the market, reflects certain creativity.
	2	The project solution is common, repeating the functions of other projects or products on the market, but no improvement.
	1	The project solution is ordinary, only repeating single function of other projects or products on the market .
	0	The project solution does not have any personal creativity, highly similar to other projects or products.
Theme Research	5	The target user and orientation of the project is clear; Reflect the collection of information from 3 or more typical sources; The project is related to the theme.
	4	The target user and orientation of the project is clear; Reflect the collection of information from 1-2 typical sources, such as experts, related industries or organizations; The project is related to the theme.
	3	The target user and orientation of the project is blur; Reflect the collection of information from 3 or more typical or ordinary sources; The project is related to the theme.
	2	The target user and the orientation of the project is blur; Reflect the collection of information from 1-2 typical or ordinary sources, such as internet search, media news, daily life observation; The project is

	1	The target user and the orientation of the project is blur; The core of the project is barely related to the theme or has nothing to do with the theme.
	0	The project has nothing to do with the theme.

(continued row above: related to the theme.*)*

Assessment Dimension 3:　Electronic Technology		
Sub-dimension	Grade	Assessment Criteria
Electronic Technology	5	Use electronic modules that enable vision sensing, voice recognition or techniques with same difficulty in combination with various input and output modules; Electronic modules are connected correctly and achieve the functions of the project.
	4	Use wireless communications technologies such as Wifi and Bluetooth in combination with various input and output modules; Electronic modules are connected correctly and achieve the functions of the project.
	3	Use servo, LED panel, speaker or other electronic output modules in combination with various sensors; Electronic modules are connected correctly and achieve the functions of the project.
	2	Use 3 or more kinds of sensors. Electronic modules are connected correctly and achieve the functions of the project.
	1	Only use 1-2 kind/s of sensors. Electronic modules are connected correctly and achieve the functions of the project.
	0	No electronic module, or use the techniques listed above but no function is achieved, or the functions are irrelative to the theme of each match.

Assessment Dimension 4:　Programming Ability		
Sub-dimension	Grade	Assessment Criteria
Programming Ability	5	Use block-based programming languages combining various program structures and algorithms, adopt AI algorithm to achieve voice and image recognition or functions with same difficulty. Or use text-based programming languages like Arduino C and Python to realize PID control, voice and image recognition or functions with same difficulty;
	4	Use block-based programming languages combining various program structures and algorithms, realize PID control in the program or functions with same difficulty.
	3	Use block-based programming languages, choose data structure and algorithm logically，comprehensively use "event", "variable" and "function" in the program.

	2	Use block-based programming languages, include 3 kinds of programming structures: "order", "loop", "select". Use 1-2 type/s of blocks from "event", "variable" and "function" in the program.
	1	Use block-based programming languages, include 0-2 kind/s of programming structures from "order", "loop", "select". No block from "event", "variable" and "function" in the program.
	0	No program provided, or the program is completely irrelative to the project.

Assessment Dimension 5：Communication Skill		
Sub-dimension	Grade	Assessment Criteria
Oral Expression	5	Fluent and well-organized expression, rich vocabulary, clear pronunciation, accurate use of words and idioms to describe the project, including all required information.
	4	Fluent expression, lack of organization, rich vocabulary, clear pronunciation, can accurately describe the project, lack of some required information.
	3	Fluent expression, lack of organization, moderate vocabulary, clear pronunciation, lack of some required information, with a lot of irrelevant information.
	2	Some pauses, limited vocabulary, clear pronunciation, lack of required information.
	1	Multiple pauses, poor vocabulary, slurred pronunciation, and no required information.
	0	No oral expression in the video.
Process Presentation	5	Present a complete problem solving process, including problem definition, problem analysis, generation of possible solutions, selection and testing of solutions, analysis and evaluation of results.
	4	Shows the key steps in the problem solving process, including problem definition, solution testing and results analysis.
	3	Shows the whole problem solving process, but some steps are irrelevant to the final project. Lack interpretable logic.
	2	Shows 3 steps of the problem solving process, but not all the key steps (problem definition, solution testing, results analysis). Lacks interpretable logic.
	1	Only shows 1-2 steps of the solving problem process. Lack of thinking process. Making people confused about why the problem exists, what problems have been solved, and how the final project solves the problem, etc.
	0	The problem solving process is completely absent, or the presentation content is completely unrelated to the project.

Appendix 3: Competition Resources

Join MakeX Spark Online Competition Skype Group:

https://join.skype.com/X5KZg8YXsnXp

*Note: Please sign in with a Skype account before you click the **Join Link** above. Otherwise if you select **Join as guest without account**, your guest conversation will only last for 24 hours.

MakeX Official Website: http://www.makex.io

MakeX Contact Email:makex_overseas@makeblock.com