Republic of the Philippines
Department of Education
Region V (Bicol)
DIVISION OF CATANDUANES
Virac, Catanduanes

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SEP 26 2016
11:07 AM

DIVISION MEMORANDUM
No. 99 s. 2016

2016 DIVISION SCIENCE AD TECHNOLOGY FAIR

To: **Secondary School Heads**

1. This is to announce the conduct of the 2015 Division Science and Technology Fair on **October 14, 2016** at **SDO Conference Hall A, Schools Division Office** at **8:00 AM**.

2. The Science and Technology Fair aims to promote sciece consciousness among the youth and identify the most innovative researcher who will represent the Division in the coming **Regional Science and Technology Fair** on **November 16-18, 2016** at a venue to be announced later. This year's fair encourages schools to promote science investigatory projects that will address environment protection and conservation of the ecosystem and the use of robotics in science research.

3. The deadline of the submission and the evaluation of papers by the SRC is on **October 14, 2016.**

4. **SRC Members** are directed to report at the Schools Division Office on **October 14, 2016** to evaluate the papers. A planning conference of the SRC and the working committees will be held on **October 7, 2016,** at **CID Office** at **1 PM**. Attached is the list of participants for the planning conference.

5. No registration fee shall be collected. Travel expenses of the participants shall be charged against local funds subject to the usual accounting and auditing rules and regualtions.

6. Enclosed is the Regional Memorandum No. 110 s.2016 for your reference.

7. For immediate dissemination and compliance.

SOCORRO V. DELA ROSA, CESO VI
Schools Division Superintendent

Enclosure 1

Science Review Committee

1. Ronald Refre – Mayngaway National High School
2. Jose Roy Aguilar – Bato Rural Development High School
3. Claudette Caluban – Catanduanes National High School
4. Mary Rose Sta. Rosa – Supang-Datag National High School

Working Committee

1. May Crispino – SDO-SGOD
2. Mari Ann Manguerra – CNHS
3. Beth Bernal – San Miguel RDHS
4. John Dewey Chavez –Bato RDHS

REPUBLIC OF THE PHILIPPINES
Department of Education
REGION V
REGIONAL CENTER SITE, RAWIS, LEGAZPI CITY
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September 21, 2016

Regional Memorandum
No. 110 s. 2016

2016 REGIONAL SCIENCE AND TECHNOLOGY FAIR (RSTF)

To: SCHOOLS DIVISION SUPERINTENDENTS

1. This Office announces the conduct of the **2016 Regional Science and Technology Fair (RSTF)** on **November 16-18, 2016** at a venue to be announced later.

2. The Science and Technology Fair (STF) aims to promote Science and Technology consciousness among the youth and identify the most creative/innovative researcher who will represent the region in the coming National Science and Technology Fair (NSTF) this February, 2017. The schools are encouraged to promote Science Investigatory Projects that will address environmental protection, conservation of the ecosystem and the use of robotics in science research.

3. In order to ensure the successful conduct of the activity, the following schedule should be observed:
   - Submission of Division Entries for Regional SRC Paper Evaluation
     (Life and Applied Science) **-October 24, 2016**
     (Robotics Science) **-October 28, 2016**
   - Regional Scientific Review Committee (SRC) Paper Evaluation **-October 25-31, 2016**
   - Regional Science and Technology Fair **-November 16-18, 2016**

4. All STE schools who were recipients of Robotics Kit and training last May and June of 2016 are expected to submit entries of their students in the regional fair. Likewise, advisers are requested to participate in the Robotics Olympics which is an add-on activity this year. Mechanics to this competition can be found in the attached enclosure.

5. A registration fee of **One Thousand Five Hundred Pesos (PhP 1,500.00)** shall be charged each participant and research adviser to defray cost for cash prizes, materials, medals, trophies, certificates, and all other operational expenses **EXCEPT** food and lodging of participants. Likewise, honoraria of the Scientific Review Committee (SRC) Evaluators shall be charged against Regional Funds while honoraria for the Board of Judges shall be charged against the STE Subsidy Fund downloaded to the region. Registration Fees and other expenses of participants relative to the conduct of the activity is chargeable against school MOOE/local and/or other sources subject to the usual accounting and auditing rules and regulations.

6. The same guidelines as specified in DepEd Memo No. 117, s. 2015 shall be followed this year. Likewise, **TARPAULIN displays will not be used in the RSTF and NSTF** in support of the environmental advocacy of the government in reducing the consumption of non-biodegradable or non-recyclable materials.

7. For immediate dissemination and strict compliance of all concerned.

RAMON FIEL G. ABCEDE
Regional Director

To be included in the Perpetual Index
under the following subjects:

CELEBRATIONS/FESTIVALS
CONTESTS
SCHOOLS
SCIENCE EDUCATION
STUDENTS

/clmd-chieduroy/

Mechanics

(ROBOTICS OLYMPICS FOR COACHES)

Line Follower Rules (Individual Category)

Objective:

The goal of this contest is for the robot to complete the course of black lines on a white background and reach the finish line in the shortest period of time.

Qualification:

Registration for the line follower competition is only for individual teacher.

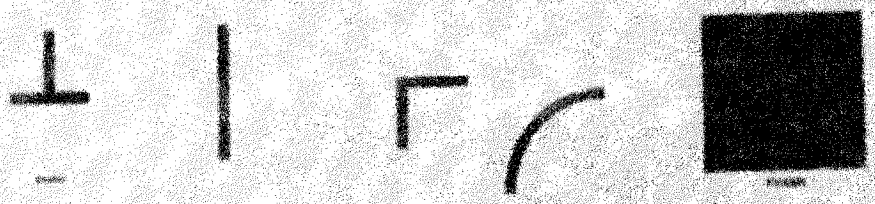
Requirements for Robot

1. The robot shall be self-contained (no remote control).
2. The robot can be either be two- wheeled drive (2WD), or four- wheeled drive robot (4WD).
3. The robot shall not leave any part of its body behind while negotiating the line.
4. The robot shall not jump over, fly over, climb, scratch, cut, burn, mark, damage, or destroy the lines.
5. The robot shall not be larger, either in length or in width, than 20 centimetres. The dimensions of a robot that changes its geometry during a run shall not be greater than 20cm × 20 cm. There are no restrictions on the height of a robot.
6. Any violation of these rules will cause the immediate disqualification.

Rules for the competition

1. Time is measured from crossing the start line until the robot crosses the finish line. A robot is deemed to have crossed the line when the forward most part of the robot contacts or crosses over the line.
2. A maximum of 5 minutes is allowed for a robot to complete the course. A robot that cannot complete the course in the allotted time shall be disqualified.
3. Time shall be measured by an electronic gate system or by a judge with a stopwatch, based on the availability of equipment. In either case the recorded time shall be final.
4. A robot that wanders off of the arena surface will be disqualified. A robot shall be deemed to have left the arena when any wheel, leg, or track has moved completely off the arena surface.
5. The line following course shall traverse a white rectangle. The line shall be black, 18 mm (~width of an electrical tape) wide. There shall be a starting area at the beginning of the course and an exit area at the end.

6. Below are the lines that will be used in the competition



Organization

1. The robot must be registered before the competition. The registration process includes technical inspection of the robot and marking the robot with a number sticker.
2. Technical inspection must be completed by the time that is specified by the organizers.
3. No objections shall be declared against the judges' decisions.
4. All questions and problems arising during the competition are solved by the judges.

Maze Solving Game Rules (Individual Category)

Objective:

In this competition, the mission of the autonomous mobile robot is to negotiate a maze from specified starting corner to finish line in the shortest possible time.

Qualification:

Registration for the maze solving competition is only for individual teacher.

Rules for the Maze Solving

1. The robot shall be self-contained (no remote controls).
2. The robot can be either be two- wheeled drive (2WD) or four- wheeled drive robot (4WD).
3. The robot shall not leave any part of its body behind while negotiating the maze.
4. The robot shall not jump over, fly over, climb, scratch, cut, burn, mark, damage, or destroy the walls of the maze.
5. The robot shall not be larger, either in length or in width, than 20 centimetres. The dimensions of a robot that changes its geometry during a run shall not be greater than 20cm × 20 cm. There are no restrictions on the height of a robot.
6. Any violation of these rules will constitute immediate disqualification.

Rules for the maze

1. The maze is composed of 22cm × 22 cm unit squares .The walls of the maze are 22 cm high and 0.5 cm thick (assume 5 % tolerance for mazes).

2. The sides of the maze walls are white and black, the tops of the walls are red, and the floor is black (or white), finished with matt colour.

3. Warning: Do not assume the walls are consistently white or black, or that the tops of the walls are consistently red, or that the floor is consistently black. Fading may occur; parts from different mazes may be used. Do not assume the floor provides a given amount of friction.

4. The start of the maze is located at one of the four corners. The start square is bounded on three sides by walls. The start line is located between the first and second squares. The destination goal is on the other side of the maze with a finish line tag.

5. Multiple paths to the destination square are allowed and are to be expected. The destination square has only one entrance.

Rules for the competition

1. Each contesting mobile robot is allocated a total of 5 minutes of access to the final maze. Any time used to adjust a robot between runs is included in the 5 minutes. Each run (from the start cell to the finish zone) in which a robot successfully reaches the destination square is given a run time. The minimum run time shall be the robot's official time. First prize goes to the robot with the shortest official time. Second prize to the next shortest, and so on. Robots that do not enter the finish zone will be ranked by the maximum number of cells they consecutively transverse without being touched.

2. Each run shall be made from the starting square. The operator may abort a run at any time. If an operator touches the robot during a run, it is deemed aborted, and the robot must be removed from the maze. If a robot has already crossed the finish line, it may be removed at any time without affecting the run time of that run.

3. After the maze is disclosed, the operator shall not feed information on the maze into the robot.

4. The contestants are allowed to:
   a. adjust sensors
   b. make repairs in case the robot breaks down.

5. The run timer will start when front edge of the robot crosses the start line and stops when the front edge of the robot crosses the finish line.

Organisation

1. The robot must be registered before the competition. The registration process includes technical inspection of the robot and marking the robot with a number sticker.
2. Technical inspection must be completed by the time that is specified by the organisers.
3. All questions and problems arising during the competition are solved by the referee.

Modify and revised based from the Maze Solving / Micromouse Rules/date from http://robogames.net/rules/maze.php