

# STEM Learning through radio and online in the post ECQ period

Prior to SARS-CoV-2 virus and Enhanced Community Quarantine (ECQ) period, some students in the provinces get to appreciate science because of the Science Explorer and nuLab buses of the Science Education Institute of the Department of Science and Technology (DOST-SEI).

These facilities bring science and laboratory experiences to the students in different parts of the country. However, with the current situation where mobility is limited and social distance needs to be observed, these buses will have to park temporarily. But this does not mean that students' learning will also have to stop.

Natural disasters and recently even public health crises have brought all educational activities to almost a complete halt, with most schools compressing the academic curricula to take home assignments, readings, and home-based activities. Children are left to the guidance of their parents, doing written activities using workbooks/worksheets, or for urban schools, to the technology of online teaching and learning. These frequent disruptions in the formal schooling of K-12 students, greatly impede the learning of basic concepts necessary in building a strong foundation for higher education.

processing more complex concepts in later years of education, "says Dr. Joesette Biyo, Director of DOST-SEI.

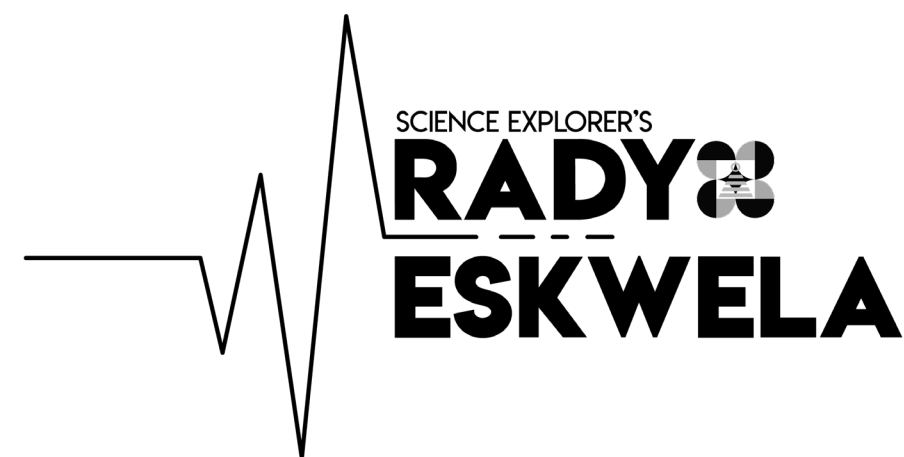
To ensure that the students' learning will not be hampered by the current national health situation, DOST-SEI is developing supplemental education resources that will enable the students and teachers to enrich their STEM learning even when they're outside the confines of their classrooms and in effect promote STEM careers.

This school year, elementary students, especially in the remote areas of the country which do not have a reliable internet connection, and high school students who have access to the internet, will be able to learn the sciences even when they're at home.

DOST-SEI will be collaborating with the Department of Education (DepEd) to enhance STEM learning for elementary students through their RadyoEskwela sa Siyensya and for high school students through TuklaSiyensya sa Eskwela programs. These programs will be on the roll in time for the opening of classes this school year.

RadyoEskwela for elementary students

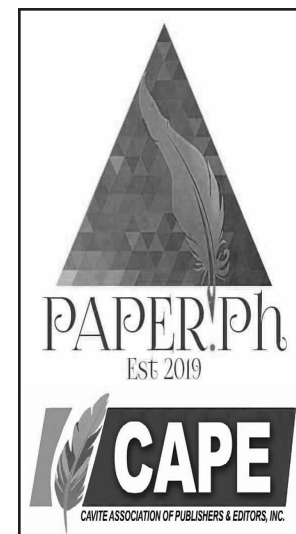
Why "balik radyo?" Radio remains as the most accessible medium in the rural area. It has proven to be an effective educational channel in the past when used in combination with classroom learning and/or printed learning materials. Online learning may be feasible to students in the urban



areas, but this is not the case for the students in many disadvantaged areas in the country who do not have access to reliable internet connection at home, and whose family may not own tablets, laptops or computers. For these school population, information comes from the radio, which is considered to be the second most-used media, reaching 85 percent of Philippine households, according to the Philippine

Statistics Authority data. Siyensya, a radio program which will feature story-based science lessons to be aired by a network of community radio which will be the media partner of DOST-SEI in implementing this project for the students. RadyoEskwela consists of twenty (20) 30-minute episodes which are story-based and produced for early, primary and intermediate clustered grade school students can listen to RadyoEskwela sa

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# LGUS placed 112 areas under localized lockdown - DILG

The Department of the Interior and Local Government (DILG) said today that 112 areas all over the country have been placed by their respective Local Government Units under localized or granular lockdown showing that LGUs have been implementing the LGU-led zoning containment strategy developed by the National Task Force against COVID-19.

According to DILG Secretary Eduardo M. Año, localized lockdown is the best approach in containing COVID-19 as it surgically targets areas where cases, either positive or suspected, are concentrated. He says that 112 areas in the country as of June 21 prove that proper implementation, spread of the coronavirus can be contained on the community-level. "Localized lockdown is like hitting COVID-19 at its source which has been proven

The National Task Force Against COVID-19 led by Defense Secretary Delfin Lorenzana recently issued the Operational Guidelines on the application of the zoning strategy in implementing the National Action Plan against COVID-19.

DILG Undersecretary and Spokesperson Jonathan Malaya said that 112 areas that have been placed under localized lockdown as of June 21, 67 are in the Cordillera Autonomous Region (CAR); 18 in National Capital Region, 19 in Cebu

City, 1 each in Cavite, Quezon Province, Leyte, and 5 in Cagayan de Oro City. CAR has 67 areas which have carried out or are carrying out localized lockdown encompassing 7 municipalities, 51 barangays, 1 purok, 1 subdivision, 2 buildings, and 5 zones within Mt. Province, Province of Apayao, Kalinga, Ifugao, Abra, Benguet, and Baguio City.

Malaya said that the decision of the LGUs to put their barangays under localized lockdown is "contributory to the low number of positive cases in CAR." As of this writing, CAR only has 109 confirmed COVID-19 cases, 62 of which are active while 42 cases have already recovered. It currently has a 1.8% case fatality rate.

Meanwhile, COVID-19 hotspots such as the National Capital Region (NCR) and Cebu City have 18 and 19 areas that have been placed under localized lockdown, respectively.

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LEADING TOWARDS DEVELOPMENT AND PROGRESS

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**City Government of Imus**

**PUBLIC ADVISORY Market Schedule**

Simula sa darating na **HUNYO 28, 2020**, ang **Imus Public Market** at **Bahayang Pag-asa Public Market** ay magbubukas hanggang **1:00 ng hapon (half day) tuwing araw ng Linggo** para sa mga mamimili.

Kaugnay nito, mahigpit pa rin nating ipinatutupad ang pagsusuot ng face mask at physical distancing sa loob at labas ng mga pamilihan.

Ang tanggapan ng Economic Enterprise Management Office (City Market of Imus) ay patuloy ding magsasagawa ng mga health and safety protocol para sa kaayusan at kaligtasan ng lahat.

f MAYOR Emmanuel MALIKSI

**City Government of Imus**

For the safety of our drivers and passengers, the City Government of Imus continue to conduct an inspection with the Tricycle Regulatory Unit (TRU) at the city tricycle terminals along with the distribution of face masks and thermal scanners to ensure that they are following the following of these appointed health protocol and other rules implemented.

<https://www.facebook.com/MayorELM>

**City Government of Imus**

**Covid-19 Imus Hotlines**

EMERGENCY OPERATIONS CENTER NEW EDC COVID-19 RESPONSE HOTLINE

**(046) 481 - 4599**

CITY EPIDEMIOLOGY AND SURVEILLANCE UNIT

CITY HEALTH OFFICE	0927-878-7777
OVERALL DISEASE SURVEILLANCE OFFICER	0919-073-4977
DSO 1	0998-370-5428
DSO 2	0917-865-0427
DSO 3	0932-346-4248

f MAYOR Emmanuel MALIKSI

## City Government of Bacoor

Reminder that our city is still in community quarantine, and we need to follow protocols for everyone's safety. Let's help CICU and PNP implement the protocols for staying in our homes.

Yesterday, PNP and CICU were caught again hanging out in public places and riding a motorcycle. They also continue to remove basket rings from courts in San Nicolas 1 and 2, and Greenpoint Mambog 4



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## LGUS placed 112 areas under localized lockdown - DILG

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 In NCR, Quezon City has 4 areas have been placed under localized quarantine; 9 in Parañaque City; 1 each in Muntinlupa City, Navotas City, and Malabon City.

In Cebu City, there are 19 containment zones including Sambag II, Punta Princesa, Tejero, and Inayawan. The following barangays, on the other hand, were identified as hotspots and are under strict lockdown: Sambag II; Kamputhaw; Sambag I; Basak San Nicola; Mabolo; Guadalupe; Lahug; Duljo Fatima; Tinago; Tisa; Ermita; and Tejero. Malaya said that since the beginning of the GCQ/MGCQ, the national government has shifted to the zoning containment strategy since the COVID-19 cases being reported now are clustered in several municipalities and communities, making large

scale containment operations and interventions no longer feasible, efficient, and cost-effective.

"Thus, the NTF saw the need for an LGU-led containment strategy where LGUs could monitor the pandemic more accurately in their respective areas and allow them to adopt a calibrated response that can adapt to emerging conditions in their areas, enabling them to stay ahead of the outbreak trajectory," he said.

The DILG Spokesperson said that LGUs, with the concurrence of their regional IATF, are encouraged to place areas, may it be a street, purok, barangay or the whole city or municipality under localized lockdown 'if the numbers and data point towards that direction.' "LGUs must do all necessary precautionary measures for the safety of their constituents including the

localized lockdown."

Meanwhile, he reminds LGUs which impose localized lockdown that they must have organized quick response teams (QRTs) that shall carry out the test-trace-treat strategy against COVID-19 in the lockdown areas. "Mahirap din naman yun basta-basta lang tayo magdeclare ng localized lockdown with no system in place."

He says that the QRTs to be organized include: Health Promotion and Prevention Team (for syndromic surveillance); Disinfection Teams; Swabbing Teams; Contact Tracing Teams; Medical Evacuation Teams; Law and Order Teams; Barangay Health Emergency Response Team (BHERTS) and Social Amelioration/Support Teams. Said teams will be stationed at the Municipal/City Level Emergency Operations Center (EOC). Source: DILG

## MINDANAO RESEARCHERS DEVELOP VITAMIN A-ENRICHED NOODLES FROM ALUGBATI

Do you know that other than being added to Filipinos' favorite munggo or ensalada, alugbati can also be combined with wheat flour to make egg noodles?

Finding intrinsic value in this vegetable, a team of researchers from the University of the Philippines Mindanao developed a product using alugbati leaves powder, which is a good source of vitamin A, as an ingredient in fresh egg noodles.

Studies have reported that fresh alugbati leaves are relatively high

in crude ash and crude protein, which signifies that it has a high mineral content that can help address protein energy malnutrition. This is the reason why alugbati can be utilized in

food fortification and enrichment in certain products, such as noodles.

Normally, egg noodles are made of wheat flour, eggs, and water. The study substituted wheat flour with 10%, 15%, and 20%, respectively of alugbati leaves powder in the formulation. Results show that a substitution level of 15% was the

most preferred. Noodles can be used as carriers of nutrients if plant-based or animal-based ingredients are added to enhance their nutrient content.

Vitamin A Deficiency (VAD) remains one of the three common forms of malnutrition worldwide, the other two being iron deficiency anemia and iodine deficiency disorder. According to the National Nutrition Survey, despite the declining mortality rate caused by VAD in the Philippines, the overall prevalence rate of VAD in

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## MINDANAO RESEARCHERS DEVELOP VITAMIN A-ENRICHED NOODLES FROM ALUGBATI



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 creased from 5.9% in 2008 to 6.1% in 2013.

Incidentally, preschool children have a VAD prevalence rate of 20.4%. Micronutrient deficiency, the lack of needed vitamins and minerals needed for growth and development, leads to stunting, wasting, and other severe illnesses especially among children and pregnant women.

"Consuming the



Provincial Government of Cavite through the Provincial Tourism and Cultural Affairs Office (PTCAO) along with the City and Municipal Tourism Offices remain in coordination with the Department of Tourism (DOT) for the returning Caviteños who are stranded in different regions due to the coronavirus disease (COVID-19) pandemic. On May 23, 2020, a total of 12 domestic travelers (DTs) availed the sweeper bus from Leyte to Centri Station in Quezon City. The transport service going to their respective hometowns were provided by PTCAO and LGUs of Bacoor and Imus. On the same day, a sweeper flight from Cebu City arrived at the Ninoy Aquino International Airport Terminal 4 with 35 DTs on board. Upon arrival at the airport, they were assisted by the LGUs of Alfonso, Bacoor, Cavite City, General Emilio Aguinaldo, General Trias, Imus, Kawit, Noveleta, Indang, Trece Martires, and Tagaytay. Returning DTs expressed their gratitude to everyone for bringing them home safely. Likewise, the DOT and LGUs have ongoing monitoring and coordination for the stranded foreign tourists in the country. Source: cavite.gov.ph

pjs\_pdf/vol149no2/utilization\_of\_alugbati\_leaves.pdf. PJS is a publication of the Science and Technology Information Institute of the Department of Science and Technology (DOST-STII). DOST also has testing facilities in its regional offices nationwide that provide technical assistance to those who wish to venture into technology-based businesses. (Geraldine Bulaon-Ducusin, S&T Media Service)

## STEM Learning through radio and online in the post ECQ period

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 may be replayed by regional stations and offered to

the Department of Education for students who will be in distance learning mode anytime during the school year. The teachers will also be provided with Teacher's Guide to help them in integrating the episodes in their daily lessons. These may be downloaded from the SEI website and will also be accessible through the DOST regional offices and Provincial S&T Centers. Some of the topics for the RadyoEskwela include Mikrobyo, Lutang, Insekto, Pagsukat, Tala, Street Food, and Tubig.

TuklaSiyensya sa Eskwela for junior and senior high school students

TuklasSiyensya is designed as both a supplement to the traditional learning method for junior and senior high school students and STEM career promotions package. The modules are designed to help students adapt to the "new normal" and ensure their continuous learning amidst the post ECQ. Online modules will be pro-

duced using the facilities available at the nuLab and based on the existing modules developed by young scientists and scholars who will also serve as facilitators. It will feature engaging presentations by the scientist-facilitators, process demonstrations, animations, and post-viewing activities to enrich student's learning experience and inspire them to explore natural phenomenon or know more about a particular STEM discipline.

Results of project evaluation reveal how the scientists who facilitate

nuLab and Science Explorer modules are able to influence the participants in their choice of future careers in the STEM fields.

TuklasSiyensya will produce fifteen (15) science lessons, each running for 30-45 minutes. These lessons will be uploaded to an online platform, making it available for access to formal and informal learners anytime. Topics include aerospace engineering, geological hazards, ocean-

## Municipality Carmona, Cavite



To help continue serving us medical health workers for our health and safety, the Town Government of Carmona distributed the supplies of complete washable isolation gown, disposable isolation gown, face shield, N95 mask, face mask and gloves for complete supplies to the 27 members of Carmona Dental Circle. This is part of the donations given to Carmona Town Government. Thank you so much!