Republic of the Philippines
Department of Education
Region XI
SCHOOLS DIVISION OF DIGOS CITY
Digos City

October 21, 2019

Division Memorandum
No. 926 s. 2019

Submission of Developed Strategic Intervention Materials

To: Public Schools District Supervisors
School Principals/Officers-in-Charge
Public Elementary and Secondary Schools

1. The DepEd Digos City Division through the Curriculum Implementation Division (CID) has conducted the Division Training on the Development of Strategic Intervention Material (SIM) last May 15-17, 2019. The training's expected outputs are the developed SIMs by the participants.

2. To provide additional assistance to teachers in terms of enriching the learning resources, teacher-participants are advised to submit their developed SIM as output in said training to the Division LRMDS for evaluation and quality assurance. Attached is the List of Participants in said training whose outputs are expected to be submitted.

3. Enclosed are the guidelines to be followed in terms of technicalities as to SIM preparation for your reference in the submission of these learning resource materials.

4. For information, guidance and compliance.

WINNIE E. BATOON, Ed. D
Assistant Schools Division Superintendent
Officer-in-Charge
Office of the Schools Division Superintendent

DepEd Schools Division of Digos City
RECORDS SECTION
RECEIVED
DATE: OCT 22 2019 TIME: 1:57PM
BY: 4485

Encls: as stated
Reference: Division Memorandum No. 335, s. 2019
To be indicated in the Perpetual Index under the following subjects:
CURRICULUM SCIENCE LEARNING RESOURCES
lbj: submission of developed strategic intervention materials
21 October, 2019

Attachment to Division Memorandum No. ____, s. 2019

Participants to the Division Training on Development of SIM in Science
cum Action Research Writing
May 15-17, 2019

No.	Name	School	No.	Name	School
1	Andres, Elaine Joy	DICNHS	29	Mabiscay, Beau Gee	SMES
2	Aquitan, Letchell	Kapatagan NHS	30	Manacio, Shemae	DCCES
3	Arnado, Alicia	J Alberca ES	31	Manila, Araceli	Mahayahay ES
4	Bagasol, Jovelyn	DMMES	32	Moreno, Hanfrey Roscoe	MNHS
5	Balgue, Rochill	Soong ES	33	Mugot, Maria Violita	DMMES
6	Banggay, Jonabeth	RMCES	34	Navarro, Gimaline	PVBES
7	Baron, Norma	SMiguel ES	35	Paderanga, Ruby	RMCES
8	Bonjoc, Melissa	Balabag ES	36	Padillo, Marvin	Soong NHS
9	Camilo, Donna Fe	Damñas	37	Palmero, Warren	DICNHS
10	Codera, Ghia	Igpit NHS	38	Palmero, Wella Marie	DICNHS
11	Cortes, Joycee	Binaton ES	39	Quiday, Jimuel	F. Alferez ES
12	Crispino, Jaime	Dawis NHS	40	Remegio, Rosel	A. Maniapao ES
13	Dagadas, Amierah	KNHS	41	Reyes, Jessevir	PVBES
14	Damaso, Milogen	Rizal CES	42	Rollan, Aljun	LES
15	Demecillo, Ana	Kibanban ES	43	Roxas, Loueis Marcyl	Goma NHS
16	Estabaya, Darel	Ruparan NHS	44	Salaysay, Meizel	DCCES
17	Exclamado, Fe	G. Reusora ES	45	Saligan, Jazel	Balabag NHS
18	Florentino, Aengel	DICNHS	46	Sanchez, Cherrievic	P.Garcia ES
19	Fondevilla, Sheila Joy	RMCES	47	Segura, Criselda	Matti ES
20	Francisco, Sundew	Dawis ES	48	Sosmeña, Jazzel	Marawer ES
21	Galaraga, Judith	DAbawag ES	49	Sucayre, Lendy Mae	DMMES
22	Gilayo, Belen	N.Isidro ES	50	Tudtud, Avelino	Rizal CES
23	Gillado, Merla	Apolandia ES	51	Umbay, Maribeth	Ruparan es
24	Gonora, Joe Ann	Colorado ES	52	Valendez, Stephanie Anne	G. Reusora ES
25	Gutierrez, Eva	I.Abalayan ES	53	Vicho, Christer	RNSaplala ES
26	Hernan, Aurene	CB Nonol ES	54	Villacastin, Precious Joy	Badiang ES
27	Lerin, Nerysa Loen	Cogon ES	55	Villegas, Irmina	DCCES
28	Llanto, Nanette	Bagumbuhay ES	56	Dabalos, Niño	Aplaya ES

Prepared by:

LUZMINDA B. JASMIN
EPS-SCIENCE

Strategic Intervention Material (SIM)

It is an instructional learning resource which is developed by teachers based on the identified least learned skills.

Its purpose is to reteach the concepts and help the learners master the competency-based skills not mastered during the regular classroom teaching.

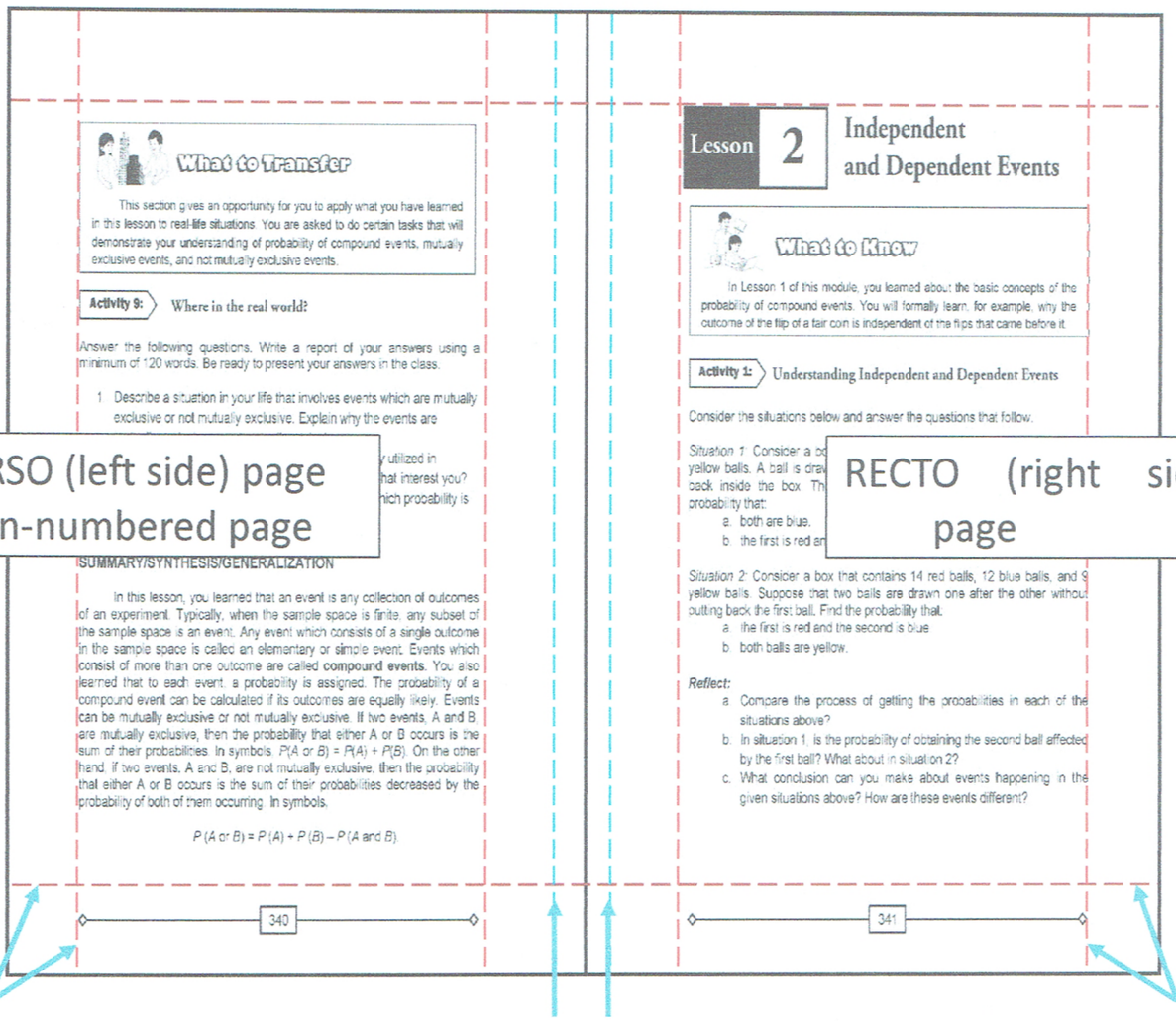
The material is intended for remedial individualized instruction with minimal or no supervision of a teacher.

Technical Standards and Guidelines in the Development of SIM

Page Properties	**Custom *used for print: LMs & TGs***	***A4 Digital distribution:*** ***LR Portal Resources***
Paper Size	8.25" X 10.75" (if portrait) 10.75" x 8.25" (if landscape)	8.268" x 11.693"
Margins	Set to mirrored setting with custom margins as follows: Top: 1 inch" Bottom: 1 inch" Inside: 1 inch" Outside: 1 inch"	Top: 1" Bottom: 1" Inside: 1" Outside: 1"
Gutter	0.5 inch	None

Document Page Setup

(Portrait)



What to Transfer

This section gives an opportunity for you to apply what you have learned in this lesson to real-life situations. You are asked to do certain tasks that will demonstrate your understanding of probability of compound events, mutually exclusive events, and not mutually exclusive events.

Activity 9: Where in the real world?

Answer the following questions. Write a report of your answers using a minimum of 120 words. Be ready to present your answers in the class.

1. Describe a situation in your life that involves events which are mutually exclusive or not mutually exclusive. Explain why the events are

y utilized in
hat interest you?
hich probability is

SUMMARY/SYNTHESIS/GENERALIZATION

In this lesson, you learned that an event is any collection of outcomes of an experiment. Typically, when the sample space is finite, any subset of the sample space is an event. Any event which consists of a single outcome in the sample space is called an elementary or simple event. Events which consist of more than one outcome are called **compound events**. You also learned that to each event, a probability is assigned. The probability of a compound event can be calculated if its outcomes are equally likely. Events can be mutually exclusive or not mutually exclusive. If two events, A and B, are mutually exclusive, then the probability that either A or B occurs is the sum of their probabilities. In symbols: $P(A \text{ or } B) = P(A) + P(B)$. On the other hand, if two events, A and B, are not mutually exclusive, then the probability that either A or B occurs is the sum of their probabilities decreased by the probability of both of them occurring. In symbols,

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$

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Lesson 2 Independent and Dependent Events

What to Know

In Lesson 1 of this module, you learned about the basic concepts of the probability of compound events. You will formally learn, for example, why the outcome of the flip of a fair coin is independent of the flips that came before it.

Activity 1: Understanding Independent and Dependent Events

Consider the situations below and answer the questions that follow.

Situation 1: Consider a bo
yellow balls. A ball is dra
back inside the box. Th
probability that:

a. both are blue.
b. the first is red an

Situation 2: Consider a box that contains 14 red balls, 12 blue balls, and 9 yellow balls. Suppose that two balls are drawn one after the other without putting back the first ball. Find the probability that.

a. the first is red and the second is blue
b. both balls are yellow.

Reflect:

a. Compare the process of getting the probabilities in each of the situations above?
b. In situation 1, is the probability of obtaining the second ball affected by the first ball? What about in situation 2?
c. What conclusion can you make about events happening in the given situations above? How are these events different?

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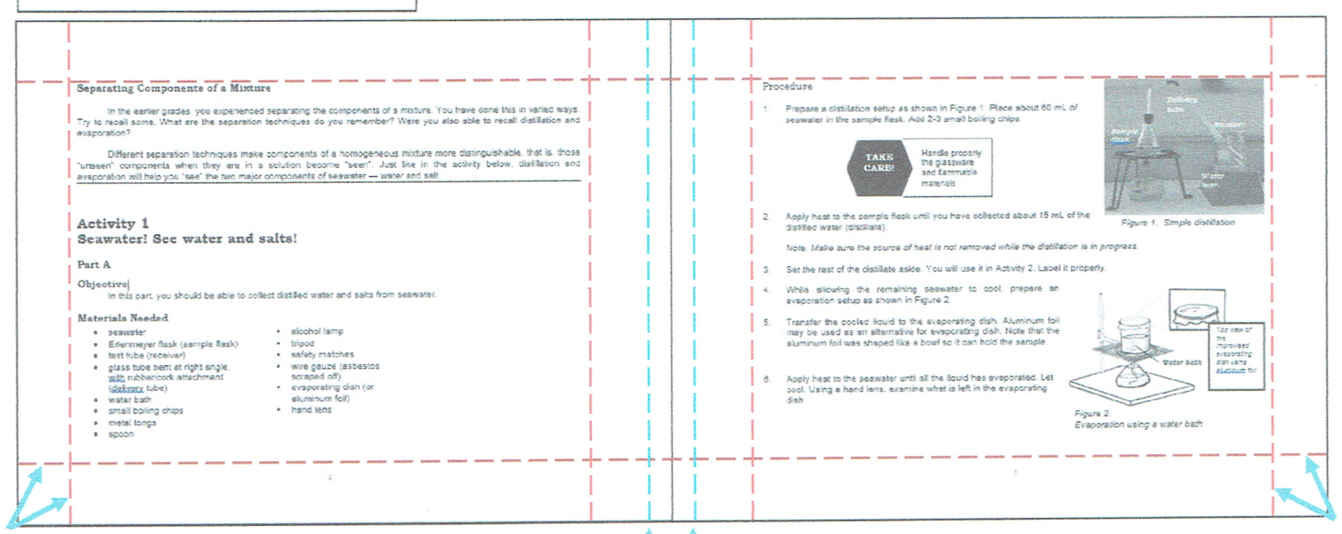
(Landscape)

VERSO (left side) page
Even-numbered page

RECTO (right side) page
Odd-numbered page



Separating Components of a Mixture

In the earlier grades, you experienced separating the components of a mixture. You have done this in varied ways. Try to recall some. What are the separation techniques do you remember? Were you also able to recall distillation and evaporation?

Different separation techniques make components of a homogeneous mixture more distinguishable, that is, those "unseen" components when they are in a solution become "seen". Just like in the activity below, distillation and evaporation will help you "see" the two major components of seawater — water and salt.

Activity 1
Seawater! See water and salts!

Part A

Objective
In this part, you should be able to collect distilled water and salts from seawater.

Materials Needed

- seawater
- Erlenmeyer flask (sample flask)
- test tube (receiver)
- glass tube bent at right angle, with rubber cork attachment (delivery tube)
- water bath
- small boiling chips
- metal tongs
- spoon
- alcohol lamp
- tripod
- safety matches
- wire gauze (asbestos scraped off)
- evaporating dish (or aluminum foil)
- hand lens

Procedure

1. Prepare a distillation setup as shown in Figure 1. Place about 60 mL of seawater in the sample flask. Add 2-3 small boiling chips.

TAKE CARE! Handle properly the glassware and flammable materials

2. Apply heat to the sample flask until you have collected about 15 mL of the distilled water (distillate).

Note: *Make sure the source of heat is not removed while the distillation is in progress.*

3. Set the rest of the distillate aside. You will use it in Activity 2. Label it properly.
4. While allowing the remaining seawater to cool, prepare an evaporation setup as shown in Figure 2.
5. Transfer the cooled liquid to the evaporating dish. Aluminum foil may be used as an alternative for evaporating dish. Note that the aluminum foil was shaped like a bowl so it can hold the sample.
6. Apply heat to the seawater until all the liquid has evaporated. Let cool. Using a hand lens, examine what is left in the evaporating dish.

Figure 1. Simple distillation

Figure 2. Evaporation using a water bath

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General Elements of Strategic Intervention Material (SIM)

- Cover Page
- Title page
- Copyright page
- Table of Contents
- Introduction
- Main Body (Guide Card, Activity Card, Assessment Card, Enrichment Card, Answer Key Card, Reference Card)
- Back Cover

Background Color per Learning Area

Learning Area	Background Color for Cover
English	Cyan / Light blue
Filipino	Dark blue
Science	Orange
Mathematics	Green
Araling Panlipunan	Red
Edukasyon sa Pagpapakatao	Brown
Music and Arts	Canary Yellow
Physical Education and Health	Light Yellow
Mother Tongue-Based Multilingual Education (MTB-MLE)	White
Edukasyong Pantahanan at Pangkabuhayan (EPP)/ Technology and Livelihood Education (TLE)	Violet

Typography of SIM & Other LRs

Grade Level	Recommended Font-Family	Font Size (Body Text)	Line Space (Leading)	Art-to-Text Ratio
K to Grade 1	**Alfabeto** (body text flushed left/ ragged right to avoid hyphenations)	Text 16 pt Heads 20 to 30 pt Sub Heads 16 to 18 pt	4 pt	65% : 35%
Grade 2		Text 16 pt Heads 20 to 30 pt Sub Heads 16 to 18 pt	4 pt	60% : 40%
Grade 3		Text 14 pt Heads 18 to 28 pt Sub Heads 14 to 16 pt	4 pt	50% : 50%
Grade 4	**Arial** **Times New Roman**	Text 14 pt Heads 18 to 28 pt Sub Heads 14 to 16 pt	3 pt	40% : 60%
Grades 5 to 12	**Bookman Old Style** *(body text Justified)*	Text 11 to 12 pt Heads 15 to 24 pt Sub Heads 11 to 13 pt	2 pt	30% : 70%