7

DepED
DEPARTMENT OF EDUCATION

Learning Activity Sheet for Science

Quarter 3

Lesson

5

Worksheet for Science Grade 7
Quarter 3: Lesson 5 (Week 5)
SY 2024-2025

Development Team

Writer: Al B. Besmonte, PhD (Bicol University)
Validator: Donna Marie DM. Gonong, PhD (Philippine Normal University)

Management Team

Philippine Normal University
Research Institute for Teacher Quality
SiMERR National Research Centre

LEARNING ACTIVITY SHEET

Learning Area:	Science	**Quarter:**	3rd Quarter
Lesson No.:	5	**Date:**	
Lesson Title/ Topic:	**Motion (Speed or Velocity)**		
Name:		**Grade & Section:**	

I. Activity No.5.1: How fast can you run? (30 minutes)

II. Objectives

After this activity, you should be able to:

1. measure how fast can you run
2. demonstrate teamwork in gathering data.

III. Materials

1 stopwatch or wristwatch	1 meterstick
1 short wooden stick	2 big stones or any markers
Ash, sawdust, powdered chalk	yarn

IV. Instructions

A. Preliminaries

1. Class will be divided into 4 groups/ teams.
2. Each team should have runners, watchers, a timekeeper, and a recorder with a notebook and pen.
3. Each team places two stones (or any marker) 20 m apart. One member of each team makes a straight line from one stone to the other by using any of these materials (ash, sawdust, powdered chalk, or yarn). Use a stick marker if teams are playing on the grassland.
4. The recorder makes a table similar to Table 5.1. The recorder places as many rows as there are runners in the team.

B. Activity Proper

1. Half of the runners of each team position themselves at the starting point (stone 1) while the other half on the other point (Stone 2).
2. When the teacher gives the signal to start the activity, the first runner of each team (point 1) runs along a straight line from stone 1 to stone 2. As soon as the first runner starts to run, the watcher calls out "READ," and the timekeeper notes the time.
3. As the runner steps on stone 2, he or she gives the stick to the next runner. At the same time, the watcher calls out "READ." The timekeeper notes the time and the recorder records it on his or her table. (The recorded time is the time it takes a runner to go from stone 1 to stone 2 or stone 2 to stone 1.)
4. As soon as the next runner receives the stick, he or she should run from stone 2 to stone 1. The timekeeper, the watcher, and the recorder repeat what they have done as accurately as they can.

5. Continue playing until all of the runners have their turn. When the game is finished, the recorder of each team writes the data on the blackboard.

Data and Results

Team _____

Table 5.1 Distance traveled by each runner = 20 m

Name of Runner	Time to travel 20 m (s)	Speed (m/s)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Guide Questions.

1. Compare your team's data to other groups. Which is the winning team? (Support your answer using the data in the tables presented on the blackboard)

_____
_____
_____

2. (a) Can you tell by observation who runs fastest in your team based on the data gathered by the different watchers, timekeepers, and recorders?

_____
_____

(b) Is your observation the same as that of your classmates?

_____
_____

(c) Why do you need to use a watch and not just observe who runs faster?

_____
_____

LEARNING ACTIVITY SHEET

Learning Area:	Science	**Quarter:**	3rd Quarter
Lesson No.:	5	**Date:**	
Lesson Title/ Topic:	**Motion (Speed or Velocity)**		
Name:		**Grade & Section:**	

I. Activity No. 5.2: Speed/ Velocity Calculations (20mins)

II. Objective:

After this activity, you should be able to solve problems involving speed and velocity

III. Materials Needed:

paper and pen

IV. Instructions:

Solve the following problems on Speed and Velocity. Show your complete solution with proper units. (**Note:** Round off your answers to 2 decimal places)

1. A football field is about 100 m long. If it takes a person 20 seconds to run its length, how fast were they running?	**Given:** **Required:**	**Formula:** **Solution:**
2. If you drive at 80 km/hr, North for 6 hours, what is your displacement?	**Given:** **Required:**	**Formula:** **Solution:**
3. A bullet travels at 850 m/s. How long will it take a bullet to go 750 m?	**Given:** **Required:**	**Formula:** **Solution:**

Answer the given question below in not more than three (3) sentences. Life is a journey full of different destinations. How do you want to reach your destinations, fast or slow? Explain.

_____
_____
_____
_____
_____

LEARNING ACTIVITY SHEET

Learning Area:	Science	**Quarter:**	3rd Quarter
Lesson No.:	5	**Date:**	
Lesson Title/ Topic:	**Motion (Speed or Velocity)**		
Name:		**Grade & Section:**	

I. Activity No.5.3: Average Speed (30mins)

II. Objective(s):

After this activity, you should be able to:

1. measure the average speed of vehicles passing the school zone,
2. compare the speed of vehicles, and
3. demonstrate teamwork in gathering data.

III. Materials Needed:

25 m string
5 stopwatches or wristwatches per group
5 flags or handkerchiefs

IV. Instructions:

1. Select a street around the school where there are vehicles passing by.
2. If you are using wristwatches, synchronize the time of the five watches.
3. Mark the starting position. Assign one member to stand at the starting position.
4. Measure 25 m distance from the starting position and assign another member to stand at this position.
5. Repeat step 2 for the 50 m position, 75 m position and 100 m position.
6. Select and time a vehicle that passes your positions as follows:
    a. Start position – indicate the vehicle being timed by waving the flag or handkerchief as the vehicle crosses the start position.
    b. 25 meters position – begin timing at the "Start" command and stop timing as the vehicle crosses the 25 meter position.
    c. 50 meters position – begin timing at the "Start" command and stop as the vehicle crosses the 50 meters position.
    d. 75 meters position – begin timing at the "Start" command and stop as the vehicle crosses the 75 meters position.
    e. 100 meters position – begin timing at the "Start" command and stop as the vehicle crosses the finish line (100 m position).
7. Record your data on Table 2.1
8. Do step 6 two more times.
9. Calculate the average speed traveled by the vehicle.

Distance d (m)	Time t (s)			Speed v (m/s)		
	Vehicle 1	Vehicle 2	Vehicle 3	Vehicle 1	Vehicle 2	Vehicle 3
0						
25						
50						
75						
100						

V. Synthesis/Extended Practice/Differentiation (if needed):

1. Compare the speed of different vehicles for each distance traveled.

_____
_____
_____

2. Calculate the average speed of the 3 vehicles.

3. Compare the average speed and the speed at any particular distance traveled.

_____
_____
_____

4. Compare the average speed of the 3 vehicles? Are the vehicles' speeds within the speed limit in the school zone?

_____
_____
_____

LEARNING ACTIVITY SHEET

Learning Area:	Science	**Quarter:**	3rd Quarter
Lesson No.:	5	**Date:**	
Lesson Title/ Topic:	**Motion (Speed or Velocity)**		
Name:		**Grade & Section:**	

I. Activity No.5.4: Average Speed/ Velocity (20 minutes)

II. Objective(s):

After this activity, you should be able to:

1. calculate the speed and velocity
2. determine the average speed

III. Materials Needed:

25 m string
5 stopwatches or wristwatches per group
5 flags or handkerchiefs

IV. Instructions:

CHALLENGE:

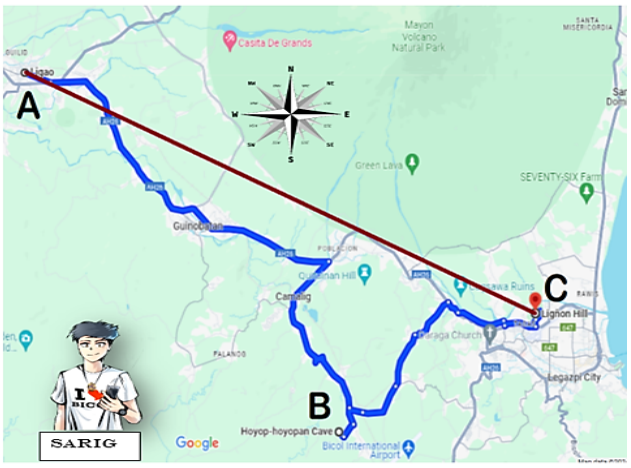
Sarig is enjoying his journey around Albay. He is having fun taking pictures and trying out different activities for tourists!

While taking a break, he decided to look at the Google Map and study his itinerary. He noted the following:

Point A - *Ligao City Proper*
Point B – *Hoyop-Hoyopan Cave*
Point C - *Ligñon Hill Nature Park*

Sarig wanted to know how fast it will take him to travel point A to B, B to C and A to C.

Do you think you can help Sarig find out the answers to his questions? Let's find out!



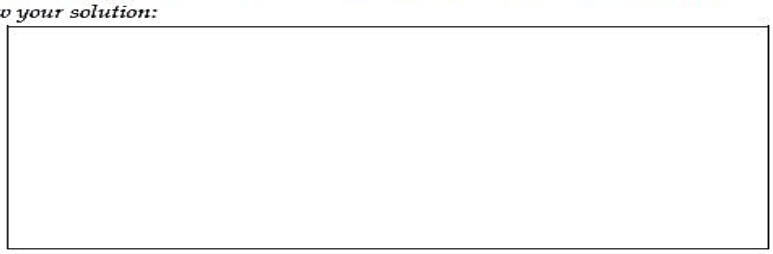
To help *Sarig*, study the table below. Enter the data you gather about the distance travelled of Sarig from your first Activity about distance and displacement.

Summary of Path Traveled			
From	**To**	**Distance (Kilometer)**	**Time (Hour)**
Sarig's Journey			
Ligao City Proper (**A**)	Hoyop-Hoyopan Cave (**B**)	7.6km	**0.6 h**
Hoyop-Hoyopan Cave (**B**)	Ligñon Hill Nature Park (**C**)	3.5km	**0.5 h**
Ligao City Proper (**A**)	Ligñon Hill Nature Park (**C**)	8.4km	**0.7h**

Do and Think About these:

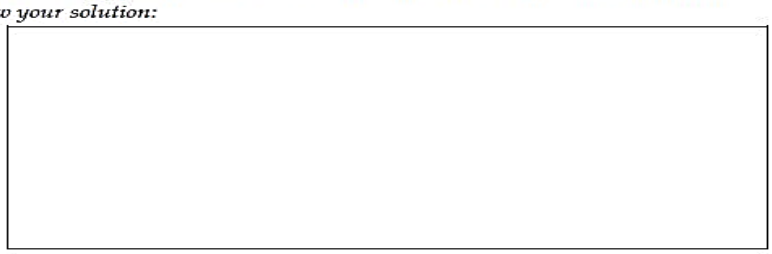
1. How fast did Sarig travel between the following destinations?
   a. Ligao City Proper (**A**) to Hoyop-Hoyopan Cave of Camalig, Albay (**B**)

Show your solution:



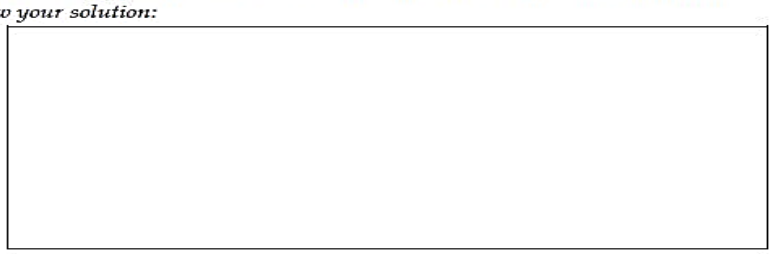
   b. Hoyop-Hoyopan Cave of Camalig, Albay (**B**) to Ligñon Hill Nature Park (**C**)

Show your solution:



   c. Ligao City Proper (**A**) to Hoyop-Hoyopan Cave of Camalig, Albay (**B**) to Ligñon Hill Nature Park (**C**)

Show your solution:



2. How fast did Sarig travel if he will consider the shortest destination which is from points **A** to **C**? Then, what is the direction of his travel?

3. Differentiate average speed and average velocity

_____

_____

_____