

## REINFORCEMENT ACTIVITIES

**Subject:** Natural Sciences and Environmental Education

**Grade:** 7<sup>th</sup>

**Period:** II

**Year:** 2019

### SUGGESTION

*Each period, the teacher formulates a problematizing question or situation related to the learning goals that help the student to train him/herself and get ready to prove his/her knowledge and proficiency levels in each area. This process is scheduled for the week in May from 20<sup>th</sup> to 24<sup>nd</sup>. The student should consult the bibliographic references cited by the teacher and turn in three academic products for the period written with basic standards to give account for the skills acquired.*

#### 1. Problematizing question:

- What is the importance of wave phenomena in the life of beings and their development?

#### 2. Learning Goals:

- Explains from the characteristics of the physical processes the wave properties, such as the propagation and speed of sound and light.

#### 3. Academic products:

1. The speed of sound propagation depends on the characteristics and the substance through which it travels. The sound propagates at high speed in solids, at lower speeds in liquids and less in gases. With the following data, calculate the travel time by a sound wave, if the distance is 6,500 m.

Medium	speed
Air	340m/s
Water	1.400m/s
Wood	4.100m/s
Iron	5.000m/s

2. A ray of light falls about 80 km from a population. Calculate the time it takes to see the lightning strike if the speed of light is 300,000 km / s. Express that time in seconds.

3. What are transverse, longitudinal, mechanical and electromagnetic waves, give an example of each.

4. Describe what the following wave phenomena consist of: Wave interference, diffraction, refraction, reflection And an example of each of them in everyday life.

5. Explain from the characteristics of physical processes how they are properties, propagation and speed of sound and light.

#### 4. Bibliographic references:

Hewitt. Física conceptual. Pearson Education, México, 2016

Robinson P. Taller de ciencia. Sonido, ruido y música. Editorial Monte Verde, Londres