Australian Government
Department of Defence
Defence Materiel Organisation

Regional Development Australia
HUNTER

CALLAGHAN COLLEGE

me program

ASSESSMENT NOTIFICATION
PHYSICS- PRELIMINARY

ASSESSMENT REPORT

CC ME SIGNAL GENERATOR AND CRO ACTIVITIES

Weighting: 25%

Due Date:

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PART I

Subject: Physics – Preliminary

Topic: World Communicates

Outcomes:

- **"Perform a first-hand investigation to gather information about the frequency and amplitude of waves using a CRO or Data Logging equipment"**
  - Reference: " in 2 Physics @ Preliminary Activity Manual" – Woodward et.al (Pearson/ Heineman, 2008.- Pages 43 to 47. (See attachment 1
- **"Plan, choose equipment for, and perform a first-hand investigation to gather information to identify the relationship between the frequency and wavelength of a sound wave travelling at a constant velocity**."
  - Reference " Physics in Focus- Preliminary" - Wu and Far (McGraw Hill -2009) Page 11-12.
- **Perform a first-hand investigation and gather information to analyse sound waves from a variety of sources using the CRO or alternative technology**.
  - Reference:" Physics in Focus- Preliminary"- Wu and Far (McGraw Hill -2009) Page 17 and 18.
- **Perform a first-hand investigation, gather, process and present information using a CRO or computer to demonstrate the principle of superposition for two waves travelling in the same direction**.
  - References: Physics in Focus- Preliminary"- Wu and Far (McGraw Hill -2009) Page 22 and 23.
  - " in2 Physics @ Preliminary Activity Manual" – Woodward et.al (Pearson/ Heineman, 2008.- Pages 53 to 58. (See attachment 1)

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- **Outline how the modulation of amplitude or frequency of visible light, microwaves and/or radio waves can be used to transmit information.**
  - Reference: Physics in Focus- Preliminary"- Wu and Far McGraw Hill -2009) Page 36-37.

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PART 2

Subject: Biology

Topic: HSC Option: Communication

Outcomes

- **Plan and perform a first hand investigation to gather data to identify the relationship between, frequency and pitch of a sound.**
  - Reference: " Biology Options Communication" - Chidrawi and Mercer – McGraw Hill – 2007 (Pg 55).

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PART 3

Subject: HSC Senior Science

Topic: Information Systems.

Outcomes

- **Perform a first-hand investigation to observe ways in which waves can be modulated to carry different types of information.**
  - Reference: Spotlight Senior Science: HSC 2nd Edition.- Heffernan et al-Science Press 2011. Page 89.

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PART 4

Subject : Stage 4 Science

Topic : Sound as a form of Energy

Outcomes:

- **Demonstrate sound as a form of energy and display in the form of graphs on a C.R.O. showing variations in pitch, wavelength and frequency. Also demonstrate the range of human hearing using the C.R.O., signal generator and loudspeakers.**
    - Reference: " Science Focus 1"2006 – Whalley et.al (Pearson/ Longman) 2006.- Pages 140 to 141.