TOM NEWBY SCHOOL EXAMINATION
MEMORANDUM

Subject	**Natural Sciences**	**Examiner**	**Mr Hudson, Mrs Fourie**
Date	**22 November 2018**	**Total marks**	**60**
Grade	**7**	**Duration**	**1 ½ hours**
		Moderator	**Miss Mpesu**
Special instructions/ Equipment			

This assessment has been compiled using notes and information contained in the Tom Newby School resource material. The marking memorandum has been compiled accordingly. While alternative responses will be given due acknowledgement, the official memorandum will be considered a priority document to ensure uniformity of marking.

Name:	Surname:	Class:

QUESTION	ANSWER	MARK	LEVEL
1	Multiple choice: Choose the correct answer from the possible answers give in each statement. 1. B √ 2. D √ 3. C √ 4. A √ 5. A √	5	1
2	Read the following and say whether the statements are True or False. 1. True √ 2. False. It is from one Full moon to the next.√ 3. True √ 4. True √ 5. True √	5	1
3	Match the given information in Column B with the correct term in Column A. Look at the image of the animal below and answer the questions about the image. 1. B √ 2. C √ 3. E √ 4. A √ 5. D √	5	1
4	1. Draw a diagram to show the alignment of the Moon, Earth and Sun at New Moon. Label each object clearly. Look at the image of a plant and answer the questions that follow. 	10	2 and 3

	The Sun √ Unlit part of Earth and the lit part of earth √ and new moon in between.√		
4 Continued	Complete the following questions by giving the best possible answers. 2. Waxing crescent √ 3. The moon faces away from the Earth and an observer will not see any of it. This phase is called the New Moon. In phase 2, the waxing crescent, the amount of the lit half can be seen grows bigger.√√ 4 Eight phases √ 5. First quarter/ waxing gibbous / full moon /third quarter /waxing crescent. Name any one. √ 6. Moons are small bodies that travel around a planet. Altogether there are 167 moons travelling around the planets in our solar system. Earth's moon is a small, rocky body that does not make its own light. The moon revolves around the earth in an anticlockwise direction. √√		
5	Study the following diagram about solar water heating and answer the questions. 1. Radiation or from the Sun√ 2. black boxes √ 3. A solar heating system heats tap water from the solar collector / the Sun. √ Most homes have electricity, but a solar water heating system uses radiation. √ At the core of a solar water heating system, is a solar collector and a storage tank.√ Cold water will be pumped into the tank and go through a boiler. The pump controller will heat it up and you will get hot water.√ 4. copper √ 5. heat waves √ 6. 36,9º √ 7. We cover our bodies with covering such as clothing – jerseys, jackets, scarves, gloves, beanies and blankets. √	10	2/ 3
6	Label and classify each of the following energy sources as either renewable or non-renewable. 1. A. Uranium and non-renewable √√ B. Wall of a dam, with water and renewable √√ C. A windmill and it is renewable. √√	14	1 / 2 / 3
6.	2. Energy sources such as coal, gas and oil		

Continued	are called non-renewable sources, as they will eventually be used up because they can't be replenished or replaced. √√ 3. 80 % √ 4. Uranium is a nuclear fuel. Chemical symbol = U. Koeberg Nuclear power station in the Western Cape is our only nuclear power station. Uranium mining produces radio-active waste. Uranium has a melting point of 1132ºC. Uranium is a heavy metal. It comes from under the seawater in the earth's crust. Any 4 facts mentioned. √√√√ 5. Uranium was discovered by a German chemist in the mineral called pitchblende and his name is Martin Klaproth. √√		
7	Energy systems and conservation of energy: Name the different energy systems and give an example of each OR draw a diagram: 1. Mechanical like hitting a cricket ball with a bat. Thermal like hot water in a cup. Electrical like a battery inside a torch. Biological like an athlete running or a horse eating grass and then moving around. Any suitable example. √√√√ 2. Energy can't be created or destroyed, but can be transferred from one system to another. √√ 3. The transfer of heat between solid objects that are in direct, physical contact with each other. √ 4. An air conditioner is positioned at the top of a room, next to the ceiling, since the cool air generated by the air conditioner sinks and the warm air rises, to be cooled by the air conditioner, until the room is eventually filled with cool air. √√ 5.  There is a tidal bulge around the Earth and the moon's gravitational pull affects the	11	1 / 2/ 3

	water on Earth, through the tides. √√		
	Total: 60 marks		