DETAILED ASSESSMENT EI

STUDENT REPORT

Sc

1 July 2014

Exam Code 7725964

States of Matter; Life on Earth; An Introduction to Physics

SCHOOL
School Name

CLASS 6 | **SECTION B**

STUDENT
Student Name

ROLL NO. 1897

Your Performance: 7.0 / 10.0

Class Average*: 5.5
Class Highest*: 8.0

(scores are rounded off to the nearest 0.5)

Best Performed Area:
- An Introduction to Physics

Areas for Improvement:
- Life Processes

**The class performance details displayed above represent that of all students present at the first conduction of the test. Scores of absentees, taking the test at a later date, may not be included.*

DA STUDENT REPORT	CLASS 6 B
	ROLL NO. 1897
EXAM CODE 7725964	DATE 1 July 2014

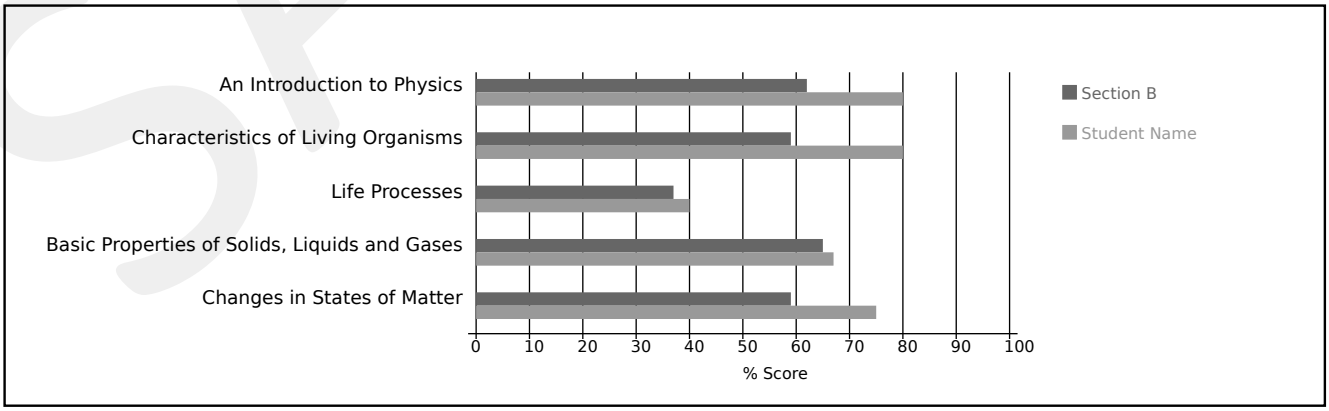
Your Test Summary

You attempted Version 4 of this test. The details of your responses, and hence your score, are given below.

Sr. No.	Concept Area	Q.No.	Your Response	Correct Answer	Result
1	An Introduction to Physics	5	2	2	✓
		6	1	3	✗
		7	3	3	✓
		8	3	3	✓
		9	4	4	✓
2	Characteristics of Living Organisms	10	3	3	✓
		11	2	2	✓
		12	4	1	✗
		13	4	4	✓
		14	1	1	✓
3	Life Processes	15	4	4	✓
		16	4	1	✗
		17	2	2	✓
		18	4	3	✗
		19	4	3	✗
4	Basic Properties of Solids, Liquids and Gases	20	3	3	✓
		21	4	4	✓
		22	2	4	✗
		23	4	4	✓
		24	3	4	✗
		25	1	1	✓
5	Changes in States of Matter	1	1	1	✓
		2	1	1	✓
		3	4	4	✓
		4	1	2	✗
				Correct Answers	**17/25**

Key Ideas Assessed

You were assessed on the following concept areas. Your performance in each of these areas is given in the chart below.



Misconceptions Identified
This section lists misconceptions identified based on your test performance.

Concept: Conservation of mass

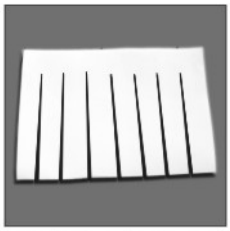
Q 24 **The weight of a substance changes when something is added or removed from it.**

Rani took 4 papers of the same size and weight.

The size of the original paper

She wanted to study what caused a change in the weight of the paper. She did some activities with them and then measured their weight again. Which of the following papers showed an increase in weight?

1



Some long cuts are made in the paper.

2

The entire paper was used to make a boat.

3

The paper was crumpled.

4

A label is stuck on the paper.

Correct Option: 4 **Your Response: 3**

Students choosing option 3 may think that since cuts are made, the paper will be lighter, and hence may be confusing it with an increase in the weight of the paper. They should realize that if no paper is cut out, it will not reduce the weight of the paper. Students choosing option 2 may have a strong misconception that if we fold a piece of paper, its mass increases. Students choosing option 3 may have a strong misconception that if we crumple a piece of paper, its mass increases. When asked why they think so, they give different reasons - e.g. when it is crumpled, the layers of paper add to the weight; air is trapped inside crumpled paper and so its weight increases etc.

Remedial Measure

Ask students the reason behind their answer. Ask students to try this experiment themselves. They can visit a grocery store nearby that has a digital balance and check the weight of 4 identical thick sheets of paper (thick paper is preferable as it will have some noticeable weight). They can then perform the actions given in the options and check the case in which the weight increases.

The next day, they can discuss their answers in the class. Guide them to understand that some matter has to be removed or added for the mass to change as mass is the measure of the amount of matter. Do not worry if students are not clear about the difference between mass and weight at this age. It is ok at this level to use the term weight.

Concept: Matter occupies space and has weight

Q 22 **Look at the list of things given below:**
air, water, dust, rocks, salt, powder, steam
Which of the above take up space and also have some weight?

1. only rocks, salt and powder
2. only water, rocks, salt and powder
3. only water, dust, rocks, salt, powder and steam
4. All the things in the list take up space and have weight.

Correct Option: 4 Your Response: 2

This question was designed to test the basic understanding of matter - that all matter occupies space and has volume. Students are expected to see that each thing in the list is considered to be matter that occupies space and has volume. However, students choosing option 1 and 2 seem to be think that air, dust and steam do not have volume and do not occupy space. The reason why they think so should be found out by asking them. Students choosing option 4 may think that gas is not matter.

Remedial Measure

Students need to be shown that air, dust and steam do occupy space and have weight. For air you could weigh a deflated balloon, and then get one of the students to blow it up and weigh it again. Ask students to account for the difference in weight. Similar experiments can be done with steam and dust.

Concept: Difference between respiration, photosynthesis and combustion

Q 16 **Which of the following are examples of respiration?**

P. Humans use oxygen and release carbon dioxide.
Q. Plants use carbon dioxide and release oxygen.
R. Burning dry leaves uses oxygen and releases carbon dioxide.

1 only P **2** only Q **3** only P and Q **4** all - P, Q and R

Correct Option: 1 **Your Response: 4**

Students know that plants use carbon dioxide during photosynthesis. But they even tend to think that only one gas can be used at a time and since carbon dioxide is being used, they cannot use oxygen. Hence, plants use only carbon dioxide and not oxygen. Students choosing option 2 tend to extrapolate this misunderstanding to the fact that they consider this process of using carbon dioxide and releasing oxygen as respiration. They draw an analogy with the animal systems that use oxygen and release carbon dioxide. Students choosing option 3 might be confused between the two processes - respiration and photosynthesis. Students choosing option 4 might think that burning of leaves is an example of respiration.

Remedial Measure

Let students understand the basic ideas in a concept before moving on to defining them. Ask students what they mean by respiration and photosynthesis. It is very likely that they give a standard definition answer to the question. Ask them to explain the difference between the two processes in terms of the gases that are exchanged. Explain the importance of respiration and photosynthesis in living organisms. Generate a discussion to get students to think about the given question and guide them to the correct understanding about the processes - photosynthesis, respiration and combustion.