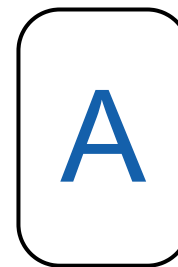


Assessment Report

National Assessment for Scientific Temperament & Aptitude

Name: SHRITI GUPTA
Enrollment No.: 1910052849
Roll No.: 19155930
School: DEV INTERNATIONAL SCHOOL
School Code: 10787
Class: 9
Award: ★DISTRICT TOPPER – MEDAL OF EXCELLENCE



This assessment report provides result for the KAMP - National Assessment for Scientific Temperament & Aptitude (NASTA-2019) which was held on 27th and 28th January, 2020. KAMP NASTA assessment consisted of 2 papers where Paper 1 comprised of 30 questions each from Science and EVS/Humanities. Paper 2 consisted of 30 questions from Mathematics, 25 questions from Computers/IT and 5 questions from Aptitude/Reasoning skills. Each question carried 6 marks for right answer.

Summary of Student's Performance in Scientific Skills

Observation & Precision:	A
Imagination, Creativity & Innovation:	A
Critical Thinking & Problem Solving:	A
Prediction & Interpretation:	A
Communication & Collaboration:	B+
Social Skills & Empathy:	A

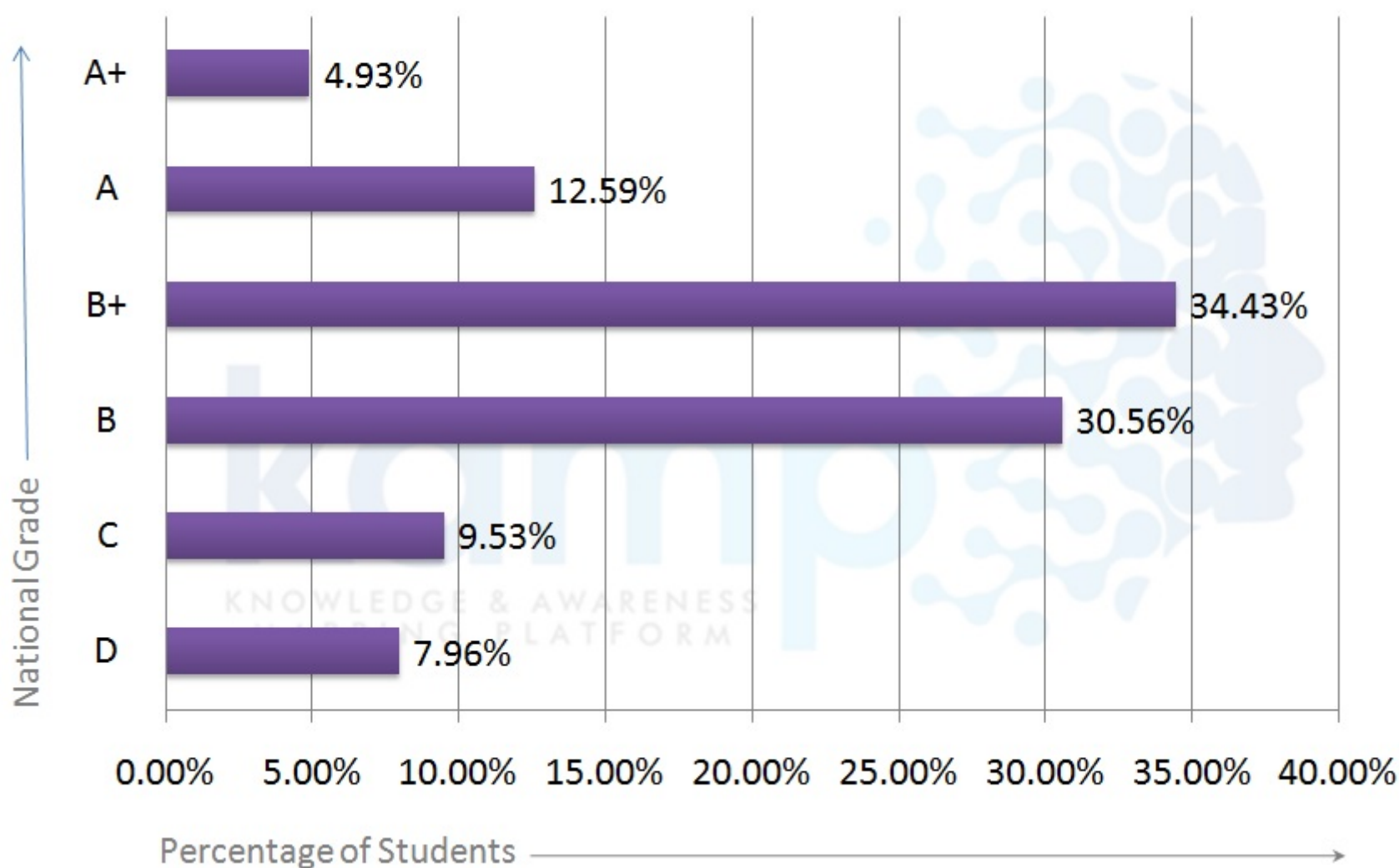
Summary of Student's Performance in Academic Skills

Science:	B+
EVS/Humanities	B+
Mathematics:	A+
Computers/IT:	B+
Aptitude/Reasoning:	B+

Understanding the Student Report

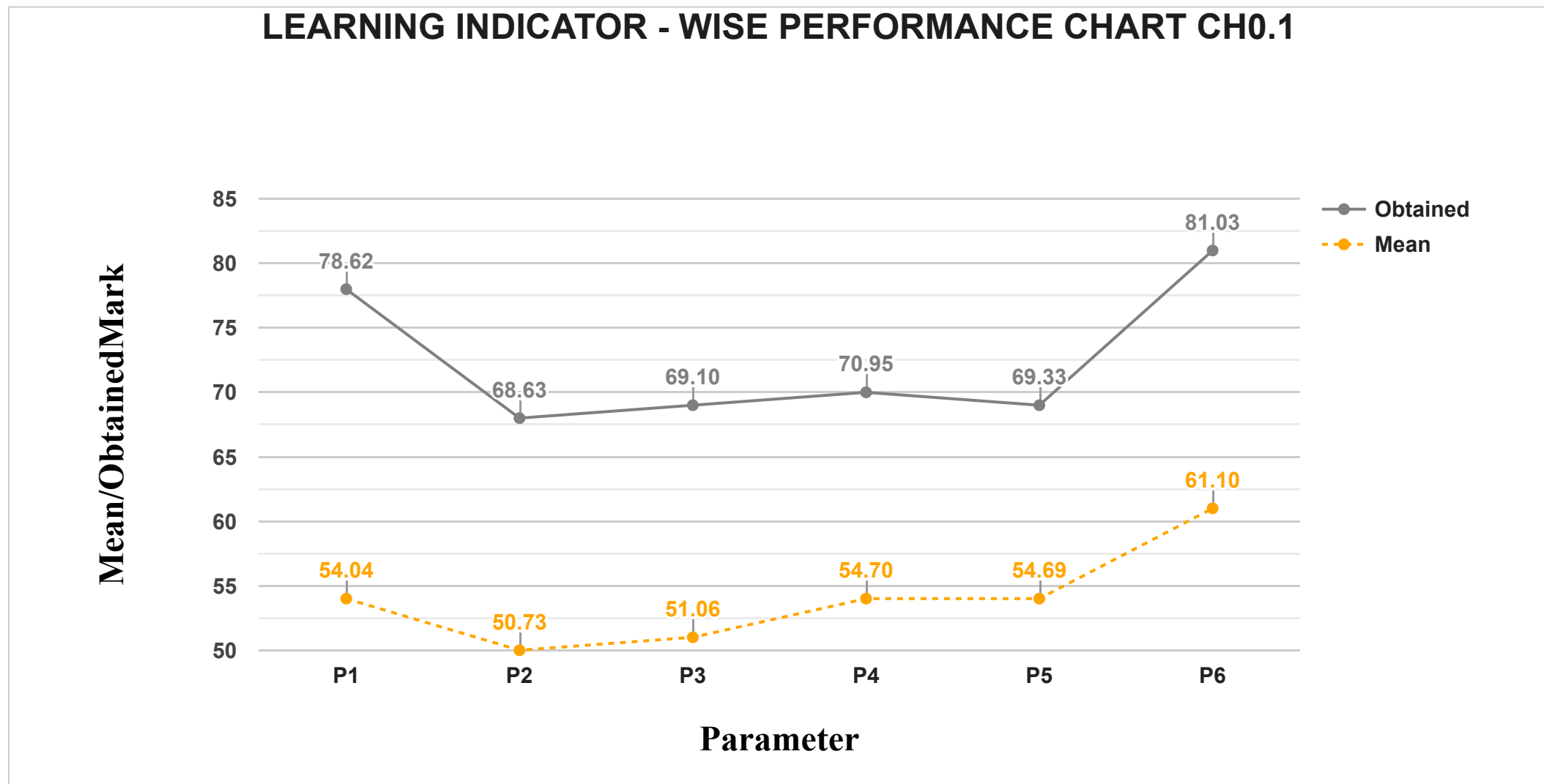
- **Scientific Skills:** Each paper assessed the following six scientific skill areas, these are called learning indicators.
 - **Observation & Precision**
 - **Imagination, Creativity & Innovation**
 - **Critical Thinking & Problem Solving**
 - **Prediction & Interpretation**
 - **Communication & Collaboration**
 - **Social Skills & Empathy**
- **Academic Skills:** represents the student's performance in five subject areas: Science, Mathematics, EVS/Humanities, Computers / IT, Aptitude and Reasoning Skills
- The total score obtained on each learning indicator will become meaningful when compared with the mean average score (\bar{x}) calculated on each indicator and subject.
- **Mean Score:** Mean score is the arithmetic average score achieved in the assessment. It is the total number of scores achieved by all students divided by total number of students appeared.

OVER ALL NATIONAL GRADE PERFORMANCE OF CLASS 9TH



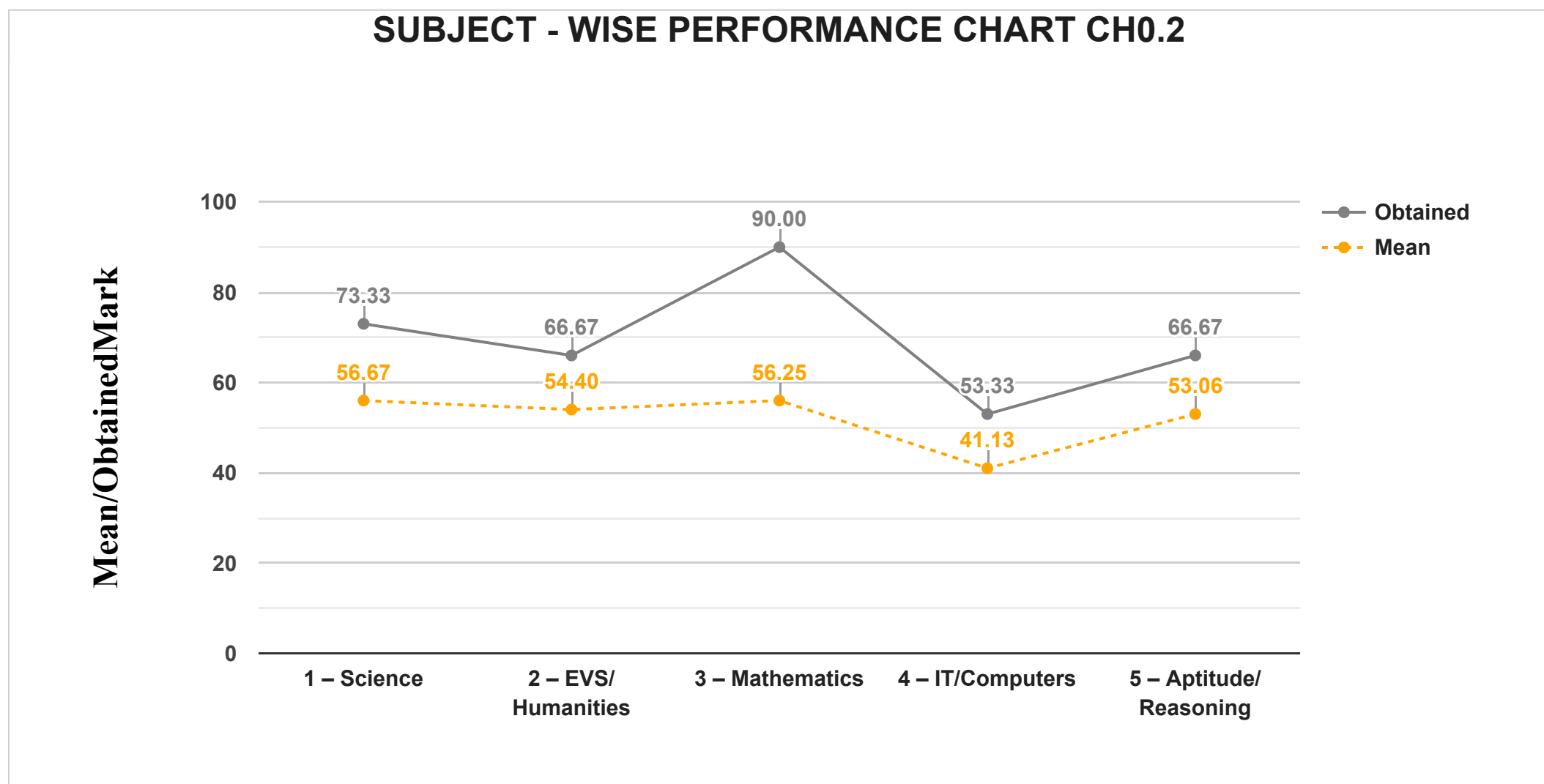
Average Marks Analysis

This chart shows the performance of student compared with the mean average score of individual learning parameter as shown in CH0.1.



Where P1-P6 represents the 6 learning indicators. P1 - Observation & Precision, P2- Imagination, Creativity & Innovation, P3 - Critical Thinking & Problem Solving, P4 - Prediction & Interpretation, P5 - Communication & Collaboration, P6 - Social Skills & Empathy

The chart shows the subject-wise performance of student compared with the mean average scores shown in CH0.2



Orange line depicts the average mean score of each parameter/subject out of 100

Grey line represents the marks obtained by the student out of 100

Findings and Suggestions

Based on the above grades, relevant findings and suggestions are provided which may be used to facilitate exploring of courses/occupations.

The skills assessed in NASTA-2019 are of great importance as they are the driving wheel for discovery and development of facts, concepts, attitudes and values. Students who are active in learning science through the use of these skills, discussions and experiments tend to gain more meaningful learning and dispel perceptions of rote learning.

Students need to be familiarized with these skills in order to obtain the correct concepts and to increase other high-level thinking skills. Which means higher the students' process skills, better the students' conception status.

Students need to be facilitated in the learning process that allows them to explore what they want to know freely and actively. The 5E (Engagement, Exploration, Explanation, Elaboration, Evaluation) learning model provides a suitable learning phase for improving these skills.

The 5E instructional model-based learning with various methods such as conceptual change, POE (Predict-Observed-Explain), cartoon concept and animation can improve the concept mastery of students. The integration of science activities with 5E instructional model may cause cognitive conflict that leads the students to try to solve the problem by using their thinking skills.

Grade Description

Grades	A+	A	B+	B	C	D
Learner Level	<p>Exemplary</p> <p>The Exemplary level signifies superior mastery of knowledge and skills. The learning shown by the student exceeds grade-level expectations in significant ways. The student may benefit from engaging in challenging tasks which may help to progress further along the learning pathways</p>	<p>Proficient</p> <p>The Proficient level represents solid mastery of knowledge and skills, indicating that the learning shown by the student meets grade-level expectations. There is evidence that relevant prescribed learning outcomes as defined by the developmental continuum have been accomplished</p>	<p>Accomplished</p> <p>The Accomplished level denotes partial mastery of the knowledge and skills that are fundamental for satisfactory work. The learning shown by the student may be inconsistent, and meets grade-level expectations at a minimal level. There is evidence of progress toward relevant prescribed learning outcomes but the student needs support in some areas.</p>	<p>Developing</p> <p>The Developing level denotes developing stage mastery of the knowledge and skills. The learning shown by the student may be inconsistent, and meets grade-level expectations at a minimal level. There is evidence of progress toward relevant prescribed learning outcomes but the student needs support in some areas.</p>	<p>Marginal</p> <p>The Marginal level indicates little or no mastery of fundamental knowledge and skills. The learning shown by the student does not meet grade-level expectations. There is little evidence of progress toward relevant prescribed learning outcomes and the learning environment needs intervention.</p>	<p>Novice</p> <p>The Emerging level indicates no mastery of fundamental knowledge and skills. The learning shown by the student does not meet grade-level expectations. There is little evidence of progress toward relevant prescribed learning outcomes and the learning environment needs intervention</p>

Scientific observation is the central element of scientific method or process. One of the core skills of a science enthusiast is to make observation. Precision and accuracy are two important factors during the course of scientific measurements. Students need to be able to develop the most basic skill in science done by using our five senses in surrounding environment. After making observations it is important to group objects according to a purpose. Measuring is important in collecting, comparing, and interpreting data.

Student may need to develop conceptual knowledge and understanding, which serve as a guide in the selection and interpretation of the observation made.

They may require some familiarity with the domains that they are working on and types of questions that drive observations in those domains. Ameliorate attention span, a useful way is to play memory games and adjust time frames.

Using senses, you can start gathering information about certain mundane phenomena and discover something more exciting and worth noting. Using your sense, you can gather qualitative data and by using exact measurements from tools you can gather quantitative data. Both are important to observe and gather information before drawing conclusions as both supports each other. One cannot defend itself alone and thus need the other to provide evidences.

Precision and observation skills may be improved by expressing the details of object what student see in real life, this will help them to identify properties and make knowledgeable hypotheses. Students may need to indulge in different activities to solve the problem by innovative mindset. Ideas and concepts are related to the natural surroundings, obtained from experience through a series of scientific processes such as investigation, preparation and presentation of ideas. Depending upon student inclination and interest, he/she may explore courses and occupation related to Medical, Technologists, Sociologists, Law Enforcement Services, Scientists & Researchers, , Educationalist, Analyst etc

Grade	Suggestive Activities
D	In order to improve your prediction and interpretation skills, begin practicing with novice level activities and gradually increase the difficulty level
C	In order to improve your above-mentioned skills, begin practicing with easy level activities and gradually increase the difficulty level
B	Keep practicing normal level activities to improve prediction and interpretation skills and gradually move to moderate level activities
B+	Well tried, try to practice hard level activities and challenge yourself with next stage of difficulty level
A	Good work, try challenging hands-on activities to further improve your skills
A+	Keep up the good work and keep practicing the expert level activities in order to maintain and further hone your skills

Imagination is about seeing the impossible, or unreal. Creativity is using imagination to unleash the potential of existing ideas in order to create and valuable ones. Innovation is taking existing, reliable systems and ideas and improving them. These skills serve as an important backbone while solving problems.

Albert Einstein said, "Imagination is more important than knowledge." Imagination is the door to possibilities. It is where creativity, ingenuity, and thinking outside the box begin for student development. Curiosity leads to creativity. Creativity directly enhances learning by increasing motivation, deeper understanding and promoting joy. Student needs to focus on selfimprovement by creating different ways of thinking, engaged with content and express their innovative ideas to solve a problem.

We need to encourage divergent thinking, help to maintain student's motivation and passion for indepth learning. Encouraging them to keep on generating new ideas fosters their creative-thinking abilities. Student should examine their own attitude toward creativity and think about alternative solutions of the problem. Students need to be able to think and work creatively in both digital and non-digital environments to develop unique and useful solutions.

Student should visualize images, combining of objects and ideas in new ways, producing alternate or unusual uses for objects, solving problems and puzzles, suggesting viable explanations for objects, verify explanations of visualizations, producing unusual ideas, communicating information to others etc. The potential should be enhanced by giving yourself an opportunity to perform activities that enhance creativity.

When you will learn how to become comfortable with ambiguities then you may began developing complex thinking skills. Imagination fosters cognitive and social development. Imagining, trying new ways of doing things, and experimenting help develop critical thinking.

Imagination builds social-emotional capabilities by allowing students to contemplate different resolutions thus boosting confidence, which can be used in interactions with others. Imagination and creativity are one of the important skills that you will need when you join the workforce of the future. Invent new scenarios and indulge in verbal activities to enhance your creative skills. Depending upon student inclination and interest, he/she may explore courses and occupation related to Scientists, Researchers, Engineering, Innovators, Entrepreneurs, Authors etc

Grade	Suggestive Activities
D	In order to improve your prediction and interpretation skills, begin practicing with novice level activities and gradually increase the difficulty level
C	In order to improve your above-mentioned skills, begin practicing with easy level activities and gradually increase the difficulty level
B	Keep practicing normal level activities to improve prediction and interpretation skills and gradually move to moderate level activities
B+	Well tried, try to practice hard level activities and challenge yourself with next stage of difficulty level
A	Good work, try challenging hands-on activities to further improve your skills
A+	Keep up the good work and keep practicing the expert level activities in order to maintain and further hone your skills



Critical thinking and problem solving refer to the ability to use knowledge, facts, and data to effectively solve problems. Scientific scenarios require one to assess the environment, analyze a situation, design a solution, and ultimately win in a competitive scenario. Both critical thinking and creative thinking serve as important pillars for design thinking. Learning to think critically or problem-solve takes time, perseverance and practice.

We think critically and in a problem-solving mindset when we rely on reason rather than emotion, evaluate a broad range of viewpoints and perspectives, maintain an open mind to alternative interpretations, accept new evidence, explanations and findings, are willing to reassess information, can put aside personal prejudices and biases, consider all reasonable possibilities and avoid hasty judgments. Challenge yourself in conventional ways of thinking.

Student needs to define ideas, compare viewpoints, find similarities, gauge differences and understand why the answer is correct. Student will determine the advantages and disadvantages of every option and come to conclusions depending on their independent thought processes. Students need the ability to think critically, which includes proficiency with comparing, contrasting, evaluating, synthesizing, and applying without instruction or supervision. They need the ability to solve complex problems in real time.

Critical thinkers are skeptical, open-minded, value fair-mindedness, respect evidence and reasoning, respect clarity and precision, look at different points of view, and will change positions when reason leads them to do so. To think critically, student must apply criteria. They need to have conditions that must be met for something to be judged as believable.

Student should break the cycle of rote learning and challenge themselves with open minded questions which force your brain to think. Challenging yourself with a tricky problems which will help you to learn from resources to produce creative solutions which help to boost critical thinking. Students should play brain games with other students with enticing rewards for motivation which push the player to think hard for win. Involve other students in a healthy debate will give you a chance to test your critical thinking skills which will learn to argue with your own logic and find your weaknesses among other students.

Depending upon student inclination and interest, he/she may explore courses and occupation related to Law, Medical Services, Educationalist, Entrepreneur, Accountancy, Analyst, Scientist, Engineering, Administration etc.

Grade	Suggestive Activities
D	In order to improve your prediction and interpretation skills, begin practicing with novice level activities and gradually increase the difficulty level
C	In order to improve your above-mentioned skills, begin practicing with easy level activities and gradually increase the difficulty level
B	Keep practicing normal level activities to improve prediction and interpretation skills and gradually move to moderate level activities
B+	Well tried, try to practice hard level activities and challenge yourself with next stage of difficulty level
A	Good work, try challenging hands-on activities to further improve your skills
A+	Keep up the good work and keep practicing the expert level activities in order to maintain and further hone your skills



A prediction, or forecast, is a statement about a future event. A prediction is often, but not always, based upon experience or knowledge. Interpretation on the other hand is the act of explaining, reframing, or otherwise showing your own understanding of something. Scientific skillsets require honing of both predictability and interpretability skills to extrapolate findings or provide plausible reasons for an observation.

Students should be able to predict and interpret situation, events, findings based on multiple observations. An inference is a link between what is observed and what is already known. Whereas, prediction is an educated guess based on good observations and inferences about an observed event or prior knowledge.

Predictions activates students' prior knowledge and helps them to make connections between new information and what they know. Predicting is an educated guess about what's likely to happen when you introduce changes.

Student may use graphic organizer to predict the outcome by identifying clues within the text. Making predictions encourage students to use critical thinking and problem-solving skills. Interpretation is closely related to inferring, which means coming to a conclusion after analysing information. Interpreting, is inferring, from a point of view. Two students may interpret an experiment's results differently.

Students should try to understand results, based on the records they keep. Their interpretation should align with the trend or big picture of the experiment. If students are not sure why an experiment turned out the way it did, you can direct them to do more research. Depending upon student inclination and interest, he/she may explore courses and occupation related to Analyst, Scientist, Researchers, Information Technology, Engineer, Accountancy, Law etc.

Grade	Suggestive Activities
D	In order to improve your prediction and interpretation skills, begin practicing with novice level activities and gradually increase the difficulty level
C	In order to improve your above-mentioned skills, begin practicing with easy level activities and gradually increase the difficulty level
B	Keep practicing normal level activities to improve prediction and interpretation skills and gradually move to moderate level activities
B+	Well tried, try to practice hard level activities and challenge yourself with next stage of difficulty level
A	Good work, try challenging hands-on activities to further improve your skills
A+	Keep up the good work and keep practicing the expert level activities in order to maintain and further hone your skills



Communication & Collaboration

Learner Level: Accomplished

Grade Achieved: B+

Collaboration and communication are interpersonal skills that help people work well with one another. These skills involve being able to read the vast number of verbal and nonverbal cues that we all use to communicate our ideas and emotions. In today's working environment, it is important that we proactively share ideas and knowledge to solve the complex and challenging problems that we encounter.

Students must possess the ability to collaborate seamlessly in both physical and virtual spaces, with real and virtual partners globally. They must be able to communicate not just with text or speech, but in multiple multimedia formats. They must be able to communicate visually through video and imagery as effectively as they do with text and speech.

Practical activity is essential to learn concepts but its importance increases when it involves communication and writing. Language is the basis for reflection, interpretation & bringing experiences together so that ideas and events are linked and the development of concepts becomes possible. It is the means whereby processes and ideas are challenged which is the basis for the fact that talking is essential to learning.

Allowing and encouraging students to use a personal notebook to record for themselves is a good way of helping them to remember the concepts and sort out their ideas. Scientific activity is systematic activity and using a notebook helps in keeping observations in an orderly fashion, recalling where certain observations were made and drawing diagrams to show exactly how things were before and after certain changes were made.

Students must be able to transmit information through words, charts, diagrams, and other mediums. Emphasis on the importance of using correct language when communicating with an audience (teachers/parents, family, friends/classmates) is necessary for the student to improve communication & collaboration skills. Student need to understand the importance of using accurate supporting mediums like charts, diagrams, etc. to express themselves.

Depending upon student inclination and interest, he/she may explore courses and occupation related to Medical Services, Advisors, Law, Analyst, Educationalist, Social Workers, Leader, Researchers, Human Resource Management, Media Relations etc

Grade	Suggestive Activities
D	In order to improve your prediction and interpretation skills, begin practicing with novice level activities and gradually increase the difficulty level
C	In order to improve your above-mentioned skills, begin practicing with easy level activities and gradually increase the difficulty level
B	Keep practicing normal level activities to improve prediction and interpretation skills and gradually move to moderate level activities
B+	Well tried, try to practice hard level activities and challenge yourself with next stage of difficulty level
A	Good work, try challenging hands-on activities to further improve your skills
A+	Keep up the good work and keep practicing the expert level activities in order to maintain and further hone your skills



Empathy and social skills allow us to function cohesively. We are continuously working towards examining and improving our world. While doing so, we end up judging or critically evaluating others. Empathy and social skills help us to be open-minded and develop a balance between selfconfidence and understanding different perspectives.

This includes adaptability, fiscal responsibility, personal accountability, environmental awareness, empathy, tolerance, and global awareness. Social skills are an integral part of functioning in society.

Displaying good manners, communicating effectively with others, being considerate of the feelings of others and expressing personal needs are all important components of solid social skills. Helping students to develop these important skills requires a different set of strategies in each stage of development.

Positive social skills promote dialogue among and between students. Having a network of friends provides a support network and a sounding board, helping each other to come up with ideas for dealing with a difficult situation or challenge. Positive social skills increase understanding and empathy of and by others. Positive social interaction can promote understanding of other viewpoints.

By seeing how other people tackle problems and make positive changes, you can discover a whole range of strategies for facing your own concerns. Good social skills are necessary to become a part of most social groups.

In order to build gratifying human relationships, it is vital that students learn and have the opportunity to practice the social skills considered appropriate by society. It is important to teach student to conduct themselves in ways that allow them to develop relationships with other people. Depending upon student inclination and interest, he/she may explore courses and occupation related to Social Worker, Medical and Health Services, Educationalist, Public Relations etc.

Grade	Suggestive Activities
D	In order to improve your prediction and interpretation skills, begin practicing with novice level activities and gradually increase the difficulty level
C	In order to improve your above-mentioned skills, begin practicing with easy level activities and gradually increase the difficulty level
B	Keep practicing normal level activities to improve prediction and interpretation skills and gradually move to moderate level activities
B+	Well tried, try to practice hard level activities and challenge yourself with next stage of difficulty level
A	Good work, try challenging hands-on activities to further improve your skills
A+	Keep up the good work and keep practicing the expert level activities in order to maintain and further hone your skills

Disclaimer: KAMP-NASTA scores are only suggestive of a student’s potential. In addition to quantitative information, the student report also provide qualitative information and a descriptive report about individual student. The student report provide users comprehensive information on all the vital parameters, yet concise, accurate information about each student in a standard format which is easy to understand and allows meaningful observations. We hope that these reports are used in constructive conversations which lead to improved education for all student’s across the country.