

THE RACE FOR EXCELLENCE HAS NO FINISH LINE.
— SHEIKH MOHAMMED BIN RASHID AL MAKTOUM

GOOD

المعرفة
Knowledge

INSPECTION REPORT

2017-2018

The Kindergarten
Starters

Celebrating
10 years of
inspections

THE KINDERGARTEN STARTERS

INDIAN (CBSE) CURRICULUM

Contents

School information.....	3
The DSIB inspection process.....	4
Summary of inspection findings 2017-2018.....	5
National Priorities	9
Main inspection report	12
1. Students' achievements	12
2. Students' personal and social development, and their innovation skills.....	15
3. Teaching and assessment	16
4. Curriculum	17
5. The protection, care, guidance and support of students.....	18
Inclusion of students with SEND (Students of determination)	20
6. Leadership and management.....	21
The views of parents, teachers and senior students.....	22

School information

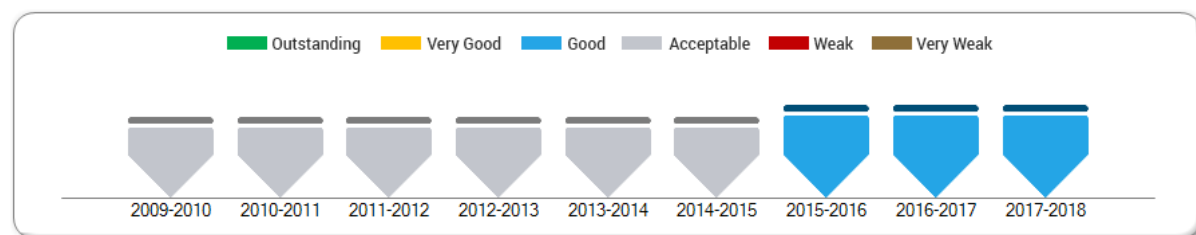
General information	
Location	Al Garhoud
Type of school	Private
Opening year of school	1990
Website	www.gemskgs.com
Telephone	04-2824090
Address	P.O.Box 4973, Dubai, United Arab Emirates
Principal	Asha Alexander
Principal - Date appointed	8/1/2011
Language of instruction	English
Inspection dates	25 to 28 September 2017

Teachers / Support staff	
Number of teachers	228
Largest nationality group of teachers	Indians
Number of teaching assistants	55
Teacher-student ratio	1:35
Number of guidance counsellors	3
Teacher turnover	17%

Students	
Gender of students	Boys and girls
Age range	4-11
Grades or year groups	KG 1-Grade 5
Number of students on roll	5347
Number of children in pre-kindergarten	0
Number of Emirati students	0
Number of students with SEND	754
Largest nationality group of students	Indian

Curriculum	
Educational permit / Licence	Indian
Main curriculum	CBSE / Indian
External tests and examinations	ASSET
Accreditation	None
National Agenda benchmark tests	ASSET

School Journey for The Kindergarten Starters



The DSIB inspection process

In order to judge the overall quality of education provided by schools, inspectors consider the six standards of performance that form the basis of the UAE School Inspection Framework (the framework). They look at children's attainment and progress in key subjects, their learning skills and their personal and social development. They judge how effective teaching and the assessment of learning are across the school. Inspectors consider how well the school's curriculum, including activities inside and outside classrooms, meet the educational needs of all students. They judge how well schools protect and support children. In addition, inspectors judge the effectiveness of leadership, which incorporates governance, management, staffing and facilities.

Inspection judgements are drawn from evidence gathered by the inspection team, including observation of students' learning in lessons, review of their work, discussions with students, meetings with the staff, parents and governors, and review of surveys completed by parents, teachers and students.

Judgements are made on a six-point scale

DSIB inspection teams make judgements about different aspects, phases and subjects that form the work of the school, using the scale below, which is consistent with the framework.

Outstanding	Quality of performance substantially exceeds the expectation of the UAE
Very good	Quality of performance exceeds the expectation of the UAE
Good	Quality of performance meets the expectation of the UAE (This is the expected level for every school in the UAE)
Acceptable	Quality of performance meets the minimum level of quality required in the UAE (This is the minimum level for every school in the UAE)
Weak	Quality of performance is below the expectation of the UAE
Very weak	Quality of performance is significantly below the expectation of the UAE

Summary of inspection findings 2017-2018

The Kindergarten Starters was inspected by DSIB from 25 to 28 September 2017. The overall quality of education provided by the school is **good**. The section below summarises the inspection findings for each of the six performance indicators described in the framework.

Leadership and management

Leadership and management of the school are very effective. Parents continue to be very supportive of the school and the leadership team. The school's self-evaluation process is good. However, improvement planning lacks focus on the school's key priorities. Governors of the school are supportive, they hold leaders accountable for the school's performance. Students' access to high quality learning is limited by the high number of students in each classroom.

Students' achievement

Students' attainment and progress are good in most key subjects. However, they remain acceptable in Arabic. Students' attainment and progress in science in the primary phase are very good. Children's progress in English, in the Kindergarten (KG), has declined to good. Most students demonstrate good learning skills.

Students' personal and social development, and their innovation skills

Students' personal and social development remain the key strength of the school. Students demonstrate very positive attitudes, excellent behaviour and are keen to showcase their care for their community. Students' innovation skills are increasingly developing.

Teaching and assessment

Teaching is effective in most curriculum areas. As a result, the majority of students make good progress in most subjects. Lessons are engaging and interactive. The development of critical thinking skills is inconsistent. Coherent assessment processes are in place. The use of assessment information remains inconsistent.

Curriculum

The curriculum design and implementation are particularly strong in the KG. The school makes adjustment to the curriculum to make it more interesting, enabling students to achieve well. Leaders continuously review the curriculum and modify it as needed. However, its implementation is not always consistent.

The protection, care, guidance and support of students

Procedures to keep all students safe are very effective. Child protection policies are in place. Care, support and guidance are provided well across the school. Arrangement to promote attendance and punctuality are effective. Students' behaviour is well managed.

What the school does best

- Students' outstanding personal development and their awareness of social responsibility at a very young age.
- The welcoming, vibrant and inclusive school community.
- The outstanding partnership with parents, and the local and international communities.
- The hard work and commitment of all staff to improve the school's performance.
- The principal's clear vision, direction and high expectation for the school.







Key recommendations

- As a matter of urgency, the governing body must support the senior leaders in implementing existing plans to reduce the number of students in classrooms.
- Develop the teaching strategies in Arabic to ensure students acquire language skills at a good or better rate.
- Improve the coherence and effectiveness of the school's self-evaluation and improvement planning by:
 - prioritising key areas for improvement
 - developing a sharply focused action plan that includes clear milestones
 - consistently monitoring and evaluating the impact of the actions on students' achievements and learning and make the necessary modifications.
- Improve the consistency of teaching by sharing and embedding the existing best practices.

Overall School Performance

Good

1. Students' Achievement

		KG	Primary
Islamic education 	Attainment	Not applicable	Good
	Progress	Not applicable	Good
Arabic as a first language 	Attainment	Not applicable	Not applicable
	Progress	Not applicable	Not applicable
Arabic as an additional language 	Attainment	Not applicable	Acceptable
	Progress	Not applicable	Acceptable
English 	Attainment	Good	Good
	Progress	Good ↓	Good
Mathematics 	Attainment	Good	Good
	Progress	Good	Good
Science 	Attainment	Good	Very good
	Progress	Good	Very good

	KG	Primary
Learning skills	Good	Good

2. Students' personal and social development, and their innovation skills

	KG	Primary
Personal development	Outstanding	Outstanding
Understanding of Islamic values and awareness of Emirati and world cultures	Very good	Very good
Social responsibility and innovation skills	Outstanding	Outstanding

3. Teaching and assessment

	KG	Primary
Teaching for effective learning	Good	Good
Assessment	Good	Good

4. Curriculum

	KG	Primary
Curriculum design and implementation	Very good	Good
Curriculum adaptation	Very good	Good

5. The protection, care, guidance and support of students

	KG	Primary
Health and safety, including arrangements for child protection / safeguarding	Very good	Very good
Care and support	Good	Good

6. Leadership and management

The effectiveness of leadership	Very good
School self-evaluation and improvement planning	Good
Parents and the community	Outstanding
Governance	Good
Management, staffing, facilities and resources	Good

National Priorities

National Agenda Parameter



In 2014, H.H. Sheikh Mohammed Bin Rashid Al Maktoum, Vice-President and Prime Minister of UAE, and Ruler of Dubai, launched the UAE National Agenda 2021, with education being a prime focus. The National Agenda includes two major objectives developed with the intention of placing the UAE among the most successful countries that provide world-class education. By 2021, it is expected that the UAE will feature in the top twenty countries

in the 'Programme for International Student Assessment' (PISA) test and in the top fifteen countries in the 'Trends in Mathematics and Science Studies' (TIMSS) test.

In response to this, each participating school was issued a report on their students' performance in these international assessments and, in addition, they were provided with clear targets for improving their performance. In 2015, KHDA launched the National Agenda Parameter, which is a method for measuring and monitoring schools' progress towards achieving their individual National Agenda targets through the use of external benchmarking assessments.

The following section focuses on the impact of the National Agenda Parameter in meeting the school's targets:

- Students' attainment based on the National Agenda Parameter benchmarks meets expectations in English, mathematics and science.
- The school meets the registration requirements for the National Agenda Parameter (N.A.P).
- The leadership team analyses the N.A.P tests, and shares them with all stakeholders. Training is provided to teachers on how to understand and interpret the data.
- The N.A.P. data analyses has started to influence curriculum planning. Triangulation between CAT 4, internal assessment and N.A.P test results identifies strengths and weaknesses of individual students.
- As a results of the analyses of N.A.P, departments have audited the curriculum to identify coverage and areas that need increased focus.
- Outcomes of the N.A.P findings are used to extend the range of teaching strategies. Problem solving and critical thinking are now regular features of students' activities.
- The majority of students are familiar with the N.A.P individual reports. This is having a positive impact on their learning. Students use digital and paper-based resources to develop effective research skills.

The school's provision for achieving its National Agenda targets meets expectations.

Moral Education

- The moral education programme (MEP) content is not yet included in the school's curriculum framework.
- The MEP is not yet taught as a subject but its principles and values are very evident in the school and result in the very good and outstanding outcomes in students' personal and social development.
- Learning, as an outcome of the teaching of the subject, is not evaluated.
- Assessment systems are not in place.

The school's implementation of the UAE moral education programme is underdeveloped.

Social Studies

- The curriculum follows the requirements of the UAE social studies learning outcomes. It is currently taught for 80 minutes per week from Grades 1 to 5, with some elements integrated into other studies.
- Teachers have good subject knowledge and plan appropriate lessons in which most students meet learning expectations.
- Students learn through an enquiry based approach and use technologies well to support their learning. Critical thinking and problem-solving skills are developing features of learning.
- UAE social studies learning outcomes are assessed through both formative and summative methods, although records are not complete.

The school's implementation of the UAE social studies programme is developing.


Innovation in Education

- Students are increasingly developing higher order learning skills across the curriculum.
- Students are very interested in using technology. Robotics and Lego lessons have a positive impact on the development of innovative learning.
- Teachers across both phases use external data to modify lesson plans to accommodate students' preferred learning styles and develop their skills.
- The school has incorporated innovative approaches and practices in the curriculum to stimulate curiosity and develop their thinking such as LEGO, use of engineering kits, and web-based learning.
- Most leaders across the school have a high commitment to promoting a culture of innovation. However, leaders have not set a clear strategy for the promotion of a holistic culture of innovation.

Overall, the school's promotion of culture of innovation is developing.

Main inspection report


1. Students' achievements

		KG	Primary
Islamic education 	Attainment	Not applicable	Good
	Progress	Not applicable	Good

- The majority of students across all grades demonstrate attainment and progress levels that are above curriculum expectations. Students have a good knowledge of the values and morals of Islam.
- Students in the upper grades of the primary phase, show steady improvement in their knowledge of the Pillars of Islam and age-appropriate concepts. However, a few students occasionally find it difficult to relate concepts to their own lives.
- The introduction of an additional lesson for recitation of the Holy Qur'an is leading to accelerated progress in students' memorisation of the prescribed verses.

For development


- Consistently provide opportunities for students to link Islamic concepts to their own lives.

		KG	Primary
Arabic as an additional language 	Attainment	Not applicable	Acceptable
	Progress	Not applicable	Acceptable

- The attainment level of most students is in line with the curriculum expectations for additional languages. Students in Grades 3 and 4 demonstrate better attainment levels than their peers in other grades.
- Students are familiar with an appropriate range of words and generally can understand basic classroom questions. They are familiar with simple short phrases. However, their ability to read and understand basic text is underdeveloped.
- Although students are provided with increased opportunities to engage in lessons, their attainment and progress remain similar to the previous year.

For development


- Improve students' reading and writing skills.

English 	KG		Primary
	Attainment	Good	Good
	Progress	Good ↓	Good

- The attainment of the majority of students in both phases is above the curriculum expectations. Children's progress in the KG, has declined since the previous inspection because the quality of teaching is inconsistent.
- Students' speaking and listening skills are stronger than their reading and writing skills. In the KG, children are at an early stage of language acquisition although many are growing in confidence and are able to explain their work and participate in lessons.
- In the KG, the majority of children are able to read key words through sight recognition and using picture cues, but the use of phonic skills is weaker. The emphasis on creative writing and extensive reading across the school is beginning to have impact on learning outcomes.

For development


- Improve the acquisition of phonics skills in KG.

Mathematics 	KG		Primary
	Attainment	Good	Good
	Progress	Good	Good

- There are inconsistencies in students' attainment levels especially in the upper grades of the primary phase. Students' attainment in the N.A.P assessment (ASSET) indicates less than acceptable results. However, the TIMSS 2015 results indicate significant progress compared to the 2011 performance.
- Students have a secure knowledge of number and quantity. Their knowledge of shapes and space is well-developed. Students' abilities in solving real life problems is not as strong.
- By the end of KG2, children are confident in using resources to demonstrate their understanding of the addition and subtraction operations. Most children make good progress when it is measured against the learning objectives in lessons.

For development

- Improve students' problem solving skills.

		KG	Primary
Science 	Attainment	Good	Very good
	Progress	Good	Very good

- By the end of the primary phase, the large majority of students develop very good scientific knowledge and skills. In the KG, the majority of children demonstrate good knowledge of science and the world around them.
- The large majority of students in the primary phase are able to make clear links between what they learn in science and real life. In KG, children are increasingly developing their exploration skills. However, a very few students in the primary phase lack the basic laboratory skills when undertaking practical investigations.
- Students are responding positively to recent developments, such as the introduction of Robotics and Engineering is Elementary programmes (EIE) to the curriculum. They are increasingly able to recognise the relevance and importance of science to the wider world.

For development

- Ensure all students develop basic laboratory and investigative skills.

	KG	Primary
Learning Skills	Good	Good

- Across both phases of the school, most students demonstrate well-developed learning skills. In the KG, children engage in real-life investigations that build on their enthusiasm for learning. Connections between areas of learning are made frequently in some classes.
- Students are enthusiastic learners and work hard to complete their tasks. They enjoy working together and often communicate learning articulately. The development of critical thinking skills is inconsistent between subjects and grades.
- The improved learning areas and resources contributes to the development of independent learning. However, occasionally the use of these resources lack clear learning outcomes.

For development

- Embed the best practices in the school with respect to the development of critical thinking and problem-solving in all subjects.

2. Students' personal and social development, and their innovation skills

	KG	Primary
Personal development	Outstanding	Outstanding

- Students' outstanding personal development is very evident in both phases of the school. They increasingly demonstrate independence and self-reliance. In the KG, children are very confident and sociable. They enjoy school and are keen to learn.
- Students' very positive attitude and excellent behaviour prevails throughout the school. They enjoy strong relationships with their teacher and each other. However, a few students occasionally do not follow the school's guidelines for adopting a healthy life style.
- The students' council is very active in promoting excellent behaviour and the integration of core values in lessons is contributing positively to students' overall personal development.

	KG	Primary
Understanding of Islamic values and awareness of Emirati and world cultures	Very good	Very good

- Student in both phases of the school display a well-developed awareness of Islamic values and life in the UAE. Most students appreciate the influence of these values on people's lives in Dubai. They participate in a range of cultural activities, with pride.
- Students' knowledge of their own cultures is very strong. They demonstrate strong appreciation and admiration for the UAE especially its modern architectures.
- Students are positively benefiting from a range of initiatives to further develop their awareness of world cultures such the schools recent use of local museums as classrooms.

	KG	Primary
Social responsibility and innovation skills	Outstanding	Outstanding
<ul style="list-style-type: none"> Social responsibility is excellent across the school. In the KG, children learn how to organise themselves and to care for their environment. Older students willingly volunteer for the many fund-raising events for charity. Their efforts have been recognised by the philanthropic awards. Students demonstrate excellent work ethic. In the KG, children are encouraged to be independent and develop skills of experimentation and enquiry. In the primary phase, students demonstrate their work ethic and entrepreneurship skills by participating in carnival games, exhibitions, and auctions. Students show an insightful understanding of environmental sustainability. The school is introducing many initiatives to develop students' innovation skills. For example, the use of engineering kits, and web-based learning. Students willingly take part in the wide range of projects and activities which aim to further develop these skills. 		
For development		
<ul style="list-style-type: none"> Ensure all students consistently adopt a healthy life style. 		

3. Teaching and assessment

	KG	Primary
Teaching for effective learning	Good	Good
<ul style="list-style-type: none"> The majority of teachers, in both phases, interact effectively with students to increase confidence, encourage participation and support their learning. Teachers in the primary phase, implement their science plans well to encourage students in developing skills of prediction and experimentation. Teachers plan lessons with a good knowledge of students' strengths, weaknesses and preferred learning styles and structure activities accordingly. However, these activities are not always matched to students' learning needs. As a result, progress is sometimes limited. Teachers' ability to consistently promote the development of critical thinking is emerging. Initiatives in KG have led to improving teaching and opportunities for learning through practical enquiry. Primary teachers are providing increasing opportunities for students to develop a range of higher order learning skills, although this is not yet consistent across subjects. 		

	KG	Primary
Assessment	Good	Good

- The quality of the assessment practices is effective in both phases of the school. Internal assessments are generally linked well to most areas of the curriculum. In the primary phase, external benchmarking tests are in place.
- Detailed analysis of the assessment information is regularly conducted. Leaders use the resulting assessment information to enhance and enrich the curriculum. However, the effective use of assessment information to improve teaching experiences for all students is inconsistent.
- Although the school uses ASSET to benchmark students' achievements, the resulting data are not effectively being used. CAT4 is increasingly being used to improve students' learning, although its impact is not evident.

For development

- Use the assessment data, in particular CAT4 more efficiently to develop targeted interventions for all students.
- Ensure all lessons provide opportunities for the development of students' critical thinking.

4. Curriculum

	KG	Primary
Curriculum design and implementation	Very good	Good

- The school has designed a strong KG curriculum that focuses on skill development through hands on experiential learning. In the primary phase, the curriculum is enabling the majority of students to make at least good progress in most curriculum areas.
- The strengths of the curriculum are the balance between knowledge and skills and the integration of technology and variety of hands on activities. However, the expectations of the CBSE core curriculum are not always implemented effectively to ensure students' transition from primary to the next phase is smooth.
- The impact of integrating elements of the Reggio Emilia approach into the KG curriculum with the aim to develop children's enquiry and thinking skills is not fully evident.

	KG	Primary
Curriculum adaptation	Very good	Good
<ul style="list-style-type: none"> The curriculum modifications are effective in enabling children in the KG to make accelerated progress. In the primary phase, modifications are beginning to have an impact but not consistent across the school. Effective changes are made to develop students' innovation and enterprise skills. Strong links with the Emirati culture are evident in and outside the classrooms. Teachers' implementations of the planned modifications to meet the needs of all groups remain inconsistent. Leaders are regularly modifying and enhancing the curriculum with the aim to improve students' outcomes. However, these modifications are often only focused on raising students' performance in external tests. The school provides Arabic for one weekly session of 30 minutes in KG 1, and two weekly sessions of 60 minutes in KG 2. 		
For development <ul style="list-style-type: none"> Ensure review and development of the curriculum are comprehensive and provide greater alignment with the school's curriculum. 		

5. The protection, care, guidance and support of students

	KG	Primary
Health and safety, including arrangements for child protection / safeguarding	Very good	Very good
<ul style="list-style-type: none"> The school provides a consistent and high quality of protection and safety all students across both phases of the school. Medical facilities are of high quality and medication is securely stored. Building and equipment are very well maintained. Procedures and policies are rigorous to ensure the safety of students. The premises and facilities provide a safe and secure physical environment for all students and particularly for students with SEND. The school is providing more shaded areas and additional padding in play grounds to ensure a safer learning environment. Additional procedures are being developed to ensure all students adopt a healthier life style. 		

	KG	Primary
Care and support	Good	Good

- Arrangement to care and support students are effective and consistent across both phases of the school. Behaviour management procedures are documented and implemented well.
- Management of attendance and punctuality is promoted very well resulting in very good attendance. Absence is followed up rigorously through a variety of channels of communication between the school, students, and parents.
- Provision of additional staff for inclusion is resulting in an increase in the number of students identified. Although the school has made efforts to improve provision for students with SEND, inconsistency in the quality of support provided by teachers and learning support in the classroom remain.

For development

- Consistently provide effective support to students with SEND in mainstream classes.
- Develop the procedures for identification of gifted and talented students and provide targeted and effective extension for them so that their full potential is realised.

Inclusion of students with SEND (Students of determination)

Provision and outcomes for students with SEND

Good

- Leaders nurture a strong commitment to inclusion. A governor for inclusive education and an inclusion champion have been appointed. Recent changes to leadership are starting to drive improvement in teaching, although monitoring and accountability systems are not yet secure.
- Students' needs are accurately identified. However, the register of students' main needs does not truly reflect the profile at the school because more emphasis is given to formal diagnoses than professional assessments. Individual education plans (IEP) are not clear enough for teachers to incorporate into their day-to-day lesson planning.
- Parents are well informed about the support being given to their children and appreciate the regular communication they have with specialist and classroom-based staff. Parents have access to an appropriate range of support and guidance including a parent support group.
- Teachers' adaptation of the curriculum to meet students' needs has improved since the previous inspection. However, some inconsistencies remain. Where planning is most effective, resources and teaching approaches are chosen to help to overcome students' barriers to learning.
- Students generally make good progress in lessons. Teachers receive information about students' progress, but not all use this information to challenge and move students on swiftly. Students who receive individual support in the Achievement Centre often make good progress over time, particularly in English.

For development

- Involve teachers in the development of IEPs for students with SEND's, to enable effective implementation.

6. Leadership and management

The effectiveness of leadership	Very good
School self-evaluation and improvement planning	Good
Parents and the community	Outstanding
Governance	Good
Management, staffing, facilities and resources	Good




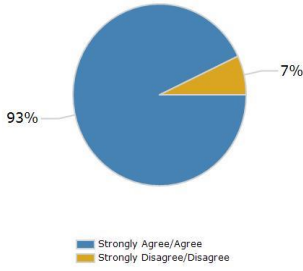
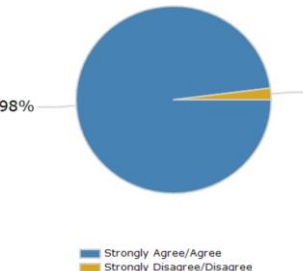
- The principal has set a clear vision and direction for the school. Inclusion and the national priorities are at the heart of all school actions, and all leaders are highly committed to these. Although senior leaders demonstrate very good educational leadership, this is not yet clearly evident amongst all middle leaders.
- The school self-evaluation processes enables the school to accurately identify the areas requiring improvement. Consequently, a comprehensive action plan has been developed. However, the action plan focuses on too many areas at the same time. As a result, it lacks precision and the key priorities for improvement are not always clear.
- Partnerships with parents are highly effective. A range of opportunities are available for parents to be fully involved in the school and the "open-door" initiative allows parents to observe lessons. Very productive community links have been established including the recent collaborations with museums.
- Governors effectively support the school on range of areas. However, governors have not provided the school with additional qualified leaders to strengthen its capacity to further improve. Long term plans to help the school reduce the number of students in classrooms are in place. Clear performance indicators have been established to hold leaders accountable for the school's performance.
- The school's day-to-day management is very effective. Most teachers are suitably qualified and leaders have worked hard to enhance and increase learning resources. However, the number of students in the classrooms remain high, and restricts students' access to high quality learning.




For development

- The school's self-evaluation and improvement planning should identify the school's key priorities.
- Monitor the effectiveness of the school's action through the use of relevant data and information.
- Governors should provide support to the senior leadership team to improve its capacity to improve the school.

The views of parents, teachers and senior students

Before the inspection, the views of the parents, teachers and senior secondary students were surveyed. Key messages from each group were considered during the inspection and these helped to form inspection judgements.

 Students No. of responses = 0	 Parents No. of responses = 702	 Teachers No. of responses = 182
Not Applicable	<p>Overall, I am satisfied with the quality of education at my child's school</p>  <p>93% 7%</p> <p>Strongly Agree/Agree Strongly Disagree/Disagree</p>	<p>Overall, I am satisfied with the quality of education at my school.</p>  <p>98% 2%</p> <p>Strongly Agree/Agree Strongly Disagree/Disagree</p>

 Students	Not Applicable
 Parents	Almost all parents who responded to the survey, are positive about the school, parental engagement, safety, leadership, and students' personal development. However, a few parents raised issues related classrooms sizes. Inspection evidence supports these views.
 Teachers	Almost all teachers who returned the survey, expressed their happiness about the school. A few teachers are very positive about the support they get from senior leaders in terms developing skills through trainings. Teachers reiterated the support the school extends to students with SEND. Inspection evidence concurs with these views.

What happens next?

The school has been asked to prepare and submit an action plan to DSIB within two months of receiving the inspection report. This should address:

- recommendations from DSIB
- areas identified by the school as requiring improvement
- other external reports or sources of information that comment on the work of the school
- priorities arising from the school's unique characteristics.

The next school inspection will report on changes made by the school.

Dubai Schools Inspection Bureau
Knowledge and Human Development Authority

If you have a concern or wish to comment on any aspect of this report, you should contact inspection@khda.gov.ae