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Government of the HKSAR
Education Bureau

28 November 2016

Education Bureau Circular No. 12/2016

Arrangements for the Provision of Laboratory Technicians from the 2017/18 School Year Onwards

[Note: This circular should be read by –

(a) Supervisors and Heads of government secondary schools, aided secondary schools (including special schools) and caput schools – for necessary action;

(b) Supervisors and Heads of Direct Subsidy Scheme schools and Heads of Sections – for information]

SUMMARY

This circular is to inform all government secondary schools, aided secondary schools (including special schools) and caput schools of the updates of the job description, the manning scale and the relevant arrangements for laboratory technicians from the 2017/18 school year onwards. Schools are requested to bring this circular to the attention of their staff.

BACKGROUND

2. The Education Bureau Circular Memorandum (EDBCM) No. 140/2008 *Transitional Arrangement of the Provision of Laboratory Technicians and the Workshop Teachers* had informed schools that the provision of laboratory technicians in the 2008/09 school year would be frozen until the 2011/12 school year. The EDBCM No. 46/2012 *Arrangement of the Provision of Laboratory Technicians during the period from the 2012/13 school year to the 2015/16 school year* and the EDBCM No. 39/2016 *Arrangement of the Provision of Laboratory Technicians in the 2016/17 School Year* further informed schools that the frozen arrangement was extended to 31 August 2017.

DETAILS

3. With effect from the 2017/18 school year, the job description and the manning scale of laboratory technicians for secondary schools will be updated. In view of the latest development in science education and curriculum implementation, apart from providing support to science practical lessons and handling matters related to the normal safeguards in science laboratories, laboratory technicians are required to offer assistance in conducting science-related activities (e.g. science / "Science, Technology, Engineering and Mathematics" (STEM) education related projects and competitions) and assessing students' performance in science-related activities. In this connection, the job description of laboratory technicians are updated accordingly. Please refer to Annex I for details of the updated job description.

4. In addition, due to the implementation of the New Senior Secondary Curriculum, with effect from the 2017/18 school year, the standard numbers of practical periods for different curricula of senior secondary science education (i.e. paragraph 3 in Appendix 2 / Attachment C of the Code of Aid for Secondary Schools and paragraph 3 in Section 1A / Attachment C of the Compendium to Code of Aid for Aided Schools (for aided schools with the establishment of Incorporated Management Committee)) will be updated as follows:

Level / Subject	S1	S2	S3	S4	S5	S6
Science (S1-3)	4	4	4			
Biology (S4-6)				4	4	4
Chemistry (S4-6)				4	4	4
Physics (S4-6)				4	4	4
Integrated Science (S4-6)				4	4	4
Combined Science (S4-6)				4	4	4

(Remarks: The calculation of practical periods is based on 5 teaching days per week and 40 minutes duration per practical period. For schools assigning practical periods less than the "standard numbers" in the table above to each of the junior secondary classes / senior secondary science subject groups, the actual number of practical periods should be used in working out the manning scale. If the assigned practical periods are more than the "standard numbers" in the table above, the "standard numbers" will be used in the calculation.)

5. In addition to the total number of practical periods per week for the whole school obtained by adding up the number of practical periods of the approved classes at the junior secondary levels and the science subject groups operated at the senior secondary levels per week, the updated provision of laboratory technicians for secondary schools also includes an **additional 1.3 practical periods** per week for each of the approved classes in S1 to S3 in the calculation so as to reflect the laboratory technicians' work in providing support for the science-related activities of the whole school. In short, the following formula for the manning scale of laboratory technicians will be used by schools. Please refer to Annex II for calculation examples.

$$\text{No. of laboratory technicians} = \frac{\text{No. of practical periods per week for the whole school}^{1}}{54}$$

6. The current rules applicable to the manning scale of laboratory technicians and the rank structure (i.e. paragraphs 2 and 4 in Appendix 2 / Attachment C of the Code of Aid for Secondary Schools and Section 1A / Attachment C of the Compendium to Code of Aid for Aided Schools) remain unchanged. Please refer to the corresponding paragraphs in the above documents for details.

7. The Education Bureau (EDB) will subsequently revise the relevant parts of the Code of Aid for Secondary Schools and the Compendium to Code of Aid for Aided Schools based on the updates mentioned in paragraphs 4 and 5 above.

TRANSITIONAL ARRANGEMENT

8. To allow schools to have ample time to plan for the manpower deployment and arrangement, a three-year transitional period, from the 2017/18 school year to the 2019/20 school year, will be provided. The transitional period can facilitate the smooth implementation of the updated provision and job description of laboratory technicians. During the transitional period, secondary schools may apply to the EDB to retain surplus laboratory technicians on an annual basis[2] if deemed necessary. Please refer to Annex III for details of the application and arrangements. Schools should note that the transitional arrangement will expire at the end of the 2019/20 school year (i.e. 31 August 2020). In the event that schools still have surplus laboratory technicians after the expiry of the transitional arrangement, they should identify the sequence for laboratory technicians to become surplus according to the "school-based" criteria established in advance.

9. The arrangement of retaining surplus laboratory technicians is temporary in nature. Schools should rectify the surplus situation whenever an opportunity arises. A school sponsoring body (SSB) operating more than one school should arrange to redeploy its surplus laboratory technicians to fill available vacancies in other schools under its sponsorship. Schools should also make proper arrangements in accordance with the relevant EDB circular memoranda issued from time to time (the latest one being EDBCM No. 60/2016) to rectify the surplus laboratory technician situation. Schools should note that they are not allowed to offer

[1] The number of practical periods per week for the whole school is the sum of the total number of practical periods of the approved classes at the junior secondary levels per week, the total number of practical periods of the science subject groups at the senior secondary levels per week, and the total number of additional practical periods (i.e. 1.3 practical periods multiplied by the number of S1- S3 approved classes) per week.

[2] The 3-year transitional arrangement only covers serving laboratory technicians within the approved establishment as at 1.9.2016, excluding temporary and supply laboratory technicians. Surplus laboratory technicians at Laboratory Technician III and Laboratory Technician II ranks who have not reached the maximum point of the pay scale of their ranks are allowed to proceed along their pay scales, while those at Laboratory Technician I ranks are subject to the prevailing salary arrangements of over-ranked laboratory technicians. The transitional arrangement is not applicable to government schools as surplus laboratory technician situation, if any, will be resolved through internal redeployment.

any new laboratory technician appointment before the rectification of the surplus situation.

10. Surplus laboratory technicians arising from other reasons (e.g. reduction in the number of classes due to under-enrollment starting from the 2017/18 school year or class reduction subsequent to the headcount at the beginning of the respective school year) will not be covered by the 3-year transitional arrangement. Schools should handle the surplus laboratory technicians according to the relevant circulars/circular memoranda or guidelines of the EDB as appropriate.

MANNING SCALE IN SPECIAL SCHOOLS

11. There is no change in the manning scale of laboratory technicians in special schools. For further information, please refer to the relevant parts in paragraph A3 at Appendix 2 of the Code of Aid for Special Schools and paragraph B1 at Section 1C of the Compendium to Code of Aid for Aided Schools.

ENQUIRY

12. For enquiries about the circular, please contact the Science Education Section of the Education Bureau on 3698 3439 or 3698 3438.

Sheridan LEE
for Secretary for Education

Annex I

The Job Description for Laboratory Technician I, II / III

1. To assist teachers to supervise the pupils with diverse interests and abilities in performing science experiments.

2. To assist teachers in planning, trying out and conducting science experiments and relevant demonstrations, as well as other science-related activities (e.g. science/STEM-related projects and competitions).

3. To assist teachers in assessing pupils' performance in science-related activities, including the smooth implementation of school-based assessments.

4. To prepare, update and manage science-related materials/resources, including those related to data-capturing systems, digital multimedia resources and web-based materials.

5. To provide support and advice on science-related learning (e.g. science club activities, "lesson study" in the Science Education Key Learning Area).

6. To prepare, construct, operate and maintain laboratory apparatus and equipment, and to conduct routine laboratory tests.

7. To purchase laboratory apparatus, equipment and other items necessary for laboratories.

8. To prepare annual estimates of consumables, stores and additional items for laboratories.

9. To keep stores and inventory in laboratories, and to carry out annual stocktaking of all stores and equipment in laboratories.

10. To be responsible for the maintenance of science-related facilities.

11. To assist in coordinating the use of resources among laboratories. **For LT Is only*

12. To be responsible for all the normal safeguards in laboratories.

13. To provide support and advice on the promotion and monitoring of laboratory safety.

14. To supervise and co-ordinate the work of the Laboratory Technicians II/III. **For LT Is only*

15. To instruct and supervise laboratory attendants in the work of the laboratories and the preparation rooms.

16. To undertake any other duties as required by the Principal.

Annex II

Calculation of Number of Laboratory Technician Posts

Example 1:

School A has 12 junior secondary approved classes (each with four 40-minute practical periods per week) offering Science (S1-3) curriculum, and a total of 12 science subject groups at senior secondary levels (each with four 40-minute practical periods per week).

The number of laboratory technician posts for School A is calculated as follows:

Number of laboratory technician posts[3] $= \frac{[12\times(4+1.3)]+[12\times4]}{54} = \frac{111.60}{54} = 2.07$

Hence, School A will be entitled to two laboratory technicians.

Example 2:

School B has 12 junior secondary approved classes (each with four 35-minute practical periods per 6-day cycle) offering Science (S1-3) curriculum, and a total of 12 science subject groups at senior secondary levels (each with four 35-minute practical periods per 6-day cycle)

The number of laboratory technician posts for School B is calculated as follows:

Number of 40-minute practical lessons per week for each science subject $= \frac{4\times35}{40} \times \frac{5}{6} = 2.92$

Number of laboratory technician posts[3] $= \frac{[12\times(2.92+1.3)]+[12\times2.92]}{54} = \frac{85.68}{54} = 1.59$

Hence, School B will be entitled to two laboratory technicians.

[3] Values with 2 decimal places are used in the calculation of the number of laboratory technician posts; any fraction of a post of laboratory technician of half or above will be considered as one post.

Example 3:

School C has 12 junior secondary approved classes (each with four 40-minute practical periods per week) offering Science (S1-3) curriculum, and a total of 18 science subject groups at senior secondary levels (each with four 40-minute practical periods per week).

The number of laboratory technician posts for School C is calculated as follows:

Number of laboratory technician posts[4] $= \frac{[12\times(4+1.3)] + [18\times4]}{54} = \frac{135.60}{54} = 2.51$

Hence, School C will be entitled to three laboratory technicians[5].

Example 4:

School D has 9 junior secondary approved classes (each with four 40-minute practical periods per week) offering Science (S1-3) curriculum, and a total of 9 science subject groups at senior secondary levels (each with four 40-minute practical periods per week).

The number of laboratory technician posts for School D is calculated as follows:

Number of laboratory technician posts[4] $= \frac{[9\times(4+1.3)]+[9\times4]}{54} = \frac{83.70}{54} = 1.55$

Hence, School D will be entitled to two laboratory technicians[6].

[4] Values with 2 decimal places are used in the calculation of the number of laboratory technician posts; any fraction of a post of laboratory technician of half or above will be considered as one post.

[5] If a school has the same number of science classes at junior secondary levels / subject groups at senior secondary levels as School C, but encounters practical challenge in timetabling for laboratories due to using a 6-day or 7-day cycle system, the school may submit a written application with justifications to the EDB. The application will be considered on a case-by-case basis.

[6] If a school has the same number of science classes at junior secondary levels / subject groups at senior secondary levels as School D, but encounters practical challenge in timetabling for laboratories due to using a 6-day or 7-day cycle system, the school may submit a written application with justifications to the EDB. The application will be considered on a case-by-case basis.

Example 5:

School E has 12 junior secondary approved classes (each with five 40-minute practical periods per week) offering Science (S1-3) curriculum, and a total of 12 science subject groups at senior secondary level (each with five 40-minute practical periods per week).

The number of laboratory technician posts for School E is calculated as follows:

Number of laboratory technician posts[7] $= \frac{[12\times(4+1.3)]+[12\times4]}{54} = \frac{111.60}{54} = 2.07$

Remark: If the assigned practical periods for each of junior secondary classes / senior secondary science subject groups are more than the "standard numbers" for each science subject listed in the paragraph 4 of this circular, the "standard numbers" listed in this circular should be used in the calculation of the number of laboratory technician posts.

Hence, School E will be entitled to two laboratory technicians.

[7] Values with 2 decimal places are used in the calculation of the number of laboratory technician posts; any fraction of a post of laboratory technician of half or above will be considered as one post.

Annex III

Application for Retaining Surplus Laboratory Technicians

(For the 2017/18 school year to the 2019/20 school year)

1. In the 3-year transitional period (i.e. the 2017/18 school year to the 2019/20 school year), schools should first assess their manpower requirements annually. If schools consider that there are genuine needs, they should make applications to the Education Bureau (EDB) for retaining their surplus laboratory technicians.

2. In the application, schools should provide justifications to demonstrate that they are unable to rectify the surplus situation in the corresponding school year. At the same time, schools should attach a concrete plan on how to rectify the surplus situation as soon as possible, such as by redeployment to other schools under the same school sponsoring body (SSB).

3. After receiving the approval from the EDB on retaining their surplus laboratory technicians, schools should formulate a manpower deployment plan listing the science-related tasks undertaken by surplus laboratory technicians during the transitional period to facilitate student learning and sustainable development of the schools. After getting endorsement from the School Management Committee / Incorporated Management Committee, the plan should be included as an appendix in the Annual School Plan of the respective school years. The school must make the plan known to the stakeholders and report the corresponding progress and accomplishment in the School Report.

4. The above-mentioned manpower deployment plan should be submitted to the Science Education Section, EDB, for inspection, with a copy submitted to the respective School Development Officers for information.