

Quality Education Fund
Application with Grant Sought Not Exceeding \$200,000
Part B: Project Proposal

Project Title	Project Number
Developing School-based Archery Curriculum	2018/0614 (Revised)

Basic Information

Name of School / Organisation / Individual

Po Leung Kuk Laws Foundation College

Beneficiaries

- (a) Sector: ☐ Kindergarten ☐ Primary ☒ Secondary ☐ Special
(Please tick the appropriate box(es))
- (b) Students: 580 (in number)* and S.1 – S.5 (class level/age)*
- (c) Teachers: 64 (in number)*
- (d) Parents: 30 (in number)*
- (e) Participating Schools (excluding applicant school): _____ (in number and types)*
- (f) Others (please specify): _____
** Please specify where appropriate*

Proposal

(I) Project Needs

- (a) Please state the aims of the project in clear and concise terms and elaborate on how the proposed project could impact on school development.
1. **To further extend the potential and competences of current archery team members who have attended the archery courses in the school year of 2017/2018 as Phase I development of the school-based archery team which aimed to attract and nurture a group of students that are interested in archery, so that they are qualified to attend territory-wide competitions as part of the Phase II development.**
 2. **To nurture budding archers through provoking interests and equipping S.1 to S.3 students with the basic archery skills.**
 3. **To provide a platform for cross-disciplinary learning as some topics in Physics and Mathematics are involved in archery.**
- (b)
- (i) What are the areas of the needs and priorities of the school?
(Please tick the appropriate box(es))
 - ☒ Enhance learning and teaching to facilitate students' knowledge on subjects / learning areas / generic skills development
 - ☒ Promote students' social and emotional development
 - ☐ Enhance school management / leadership and teachers' professional development / wellness
 - ☐ Others (please specify) _____

- (ii) Please give background information to justify the demonstrated needs as mentioned in (b)(i).

(Please tick the appropriate box(es))

- ☒ School development plan: The major concern of this year is to establish effective practices to maximize opportunities of students' engagement in learning. One of the strategies proposed is to create diverse learning opportunities so that more students will be engaged to become self-regulated learners in various communities.
- ☐ Survey findings: _____
- ☒ Literature review summary: According to Nevin Gündüz et. al. (2017), students taking the archery lessons as extra-curricular activities indicated that archery is recommended to be included in the physical education program due to the enhanced attention and concentration span in lessons. Taking archery lessons may help students, especially those with ADHD, improve their attention during normal lessons. This provides strong evidence to support our needs for developing the school-based archery curriculum to correlate with the school's major concern about 'maximizing opportunities of students' engagement in learning'. Lastly, in the review conducted by Nevin, both boys and girls shared that they found archery as a pleasant and enjoyable extra-curricular activity. This suggests that both boys and girls can enjoy playing archery. (Nevin Gündüz et. al.,2017)
- ☐ Assessments on students' performance: _____
- ☒ Relevant experiences: As in the Phase I development of the school-based archery curriculum, two archery beginners' courses and one archery advanced course were successfully organized for our students in the school year of 2017/18. As a sustainable development, a year-long archery course is continually offered in the school year of 2018/19 for the current and new archery team members.
- ☐ Others (please specify) _____

- (c) Please elaborate on the innovative ideas or new practices to enhance, adapt, complement and/or supplement the existing practices that will facilitate the development of the school to address the needs specific to its own context.

- The lack of appropriate venue and equipment greatly limit the Phase II development of our school-based archery curriculum.
- Currently, our archery team members can only learn and practice archery through joining archery lessons offered by external organization. Without an appropriate venue at school, they cannot conduct regular and extended practice after each lesson on the school campus.
- However, after the inspection made by professional coaches, the covered playground on the ground floor in the school is believed to be the potential field for holding archery lessons and activities through the installment of a safety net at the shooting site.
- With the grant received, archery equipment can be purchased and the covered playground can be modified to become a suitable site for holding archery lessons. By doing so, not only can extra archery lessons be organized for S.1 to S.3 students during P.E. lessons, but regular and extended training sessions can be provided for the archery team to enhance their skills and development.
- Moreover, specific events like inter-house and inter-class archery competitions can also be held to further strengthen the class and house spirit among the students in order to promote social engagement, which is also a major concern of the school.

(II) **Project Feasibility**

- (a) Please describe the design of the project, including:
- (i) Approach/Design/Activity (Applicants are advised to provide details on project activities as well as learning and teaching arrangements.)
- ‘Continual, sustainable development’ is key to our school-based archery curriculum.

Level 1 – Whole-form approach: S.1 – S.3 Archery Experience Lessons

- For this level, the beneficiaries would be all S.1 to S.3 students. This level is designed to promote students’ interests and understanding towards archery as well as to improve their hand-eye coordination through the archery experience lessons offered during the normal P.E. lessons. It is our hope that intrinsic motivation can be developed among these students who would become the future archery team members.

• *Details of Lesson Arrangement*

Target participants:	All S.1 – S.3 students
Period of lessons:	January – March 2020
Time of lessons:	<ul style="list-style-type: none">– Three 1-hour lessons conducted in consecutive weeks– Lessons would be conducted during regular P.E. lessons of S.1 to S.3 students

• *Learning objectives, content and expected learning outcomes:*

Learning objectives:	<ul style="list-style-type: none"><input checked="" type="checkbox"/> To learn safety measures in practicing archery.<input checked="" type="checkbox"/> To learn the rules and regulations in practicing archery.<input checked="" type="checkbox"/> To learn the basic skills in practicing archery.
Learning content:	<p>Throughout the three archery lessons, students would learn:</p> <ul style="list-style-type: none"><input checked="" type="checkbox"/> Safety measures in practicing archery<input checked="" type="checkbox"/> Rules & regulations in practicing archery<input checked="" type="checkbox"/> Handling equipment & protective equipment<input checked="" type="checkbox"/> Routines in practicing archery
Expected learning outcomes:	<ul style="list-style-type: none"><input checked="" type="checkbox"/> Students should develop proper safety awareness in practicing archery.<input checked="" type="checkbox"/> Students should develop basic understanding about rules and regulations in practicing archery.<input checked="" type="checkbox"/> Students should develop basic skills and competence in handling equipment in practicing archery.

Level 2 – Pull-out approach: Structured Archery Training Modules for Archery Team

- For this level, the beneficiaries would be all archery team members. This level is designed to further sharpen their skills and competences in archery through regular and structured archery training sessions and exercises. It is our hope that the team can become proficient enough to join different territory-wide competitions.

• *Details of Module Arrangement*

Target participants:	All archery team members
Period of lessons:	October 2019 – June 2020
Format of Module:	<ul style="list-style-type: none">– 2-hour training lessons would be arranged weekly throughout the period– Lessons would be conducted from 4 p.m. to 6 p.m. during normal school days

● ***Learning objectives, content and expected learning outcomes:***

Learning objectives:	<input checked="" type="checkbox"/> To learn about the rules, regulations and routines in local archery competitions. <input checked="" type="checkbox"/> To learn advanced skills and techniques in archery.
Learning content:	Throughout the training sessions, students would learn: <input checked="" type="checkbox"/> Rules, regulations and routines in archery competitions <input checked="" type="checkbox"/> Advanced techniques and skills in archery <input checked="" type="checkbox"/> Calibration and adjustment of equipment to increase accuracy and preciseness in archery
Expected learning outcomes:	<input checked="" type="checkbox"/> Team members should be able to calibrate and adjust their equipment to suit their needs in facing different conditions. <input checked="" type="checkbox"/> Team members should be competent to join different territory-wide competitions. <input checked="" type="checkbox"/> Team members should be experienced and be able to carry out the duties assigned during competitions in accordance to the rules and regulations set.

Level 3 – Off-school approach:

- For this level, all members of the archery team would be highly recommended to attend workshops, courses and training exercises offered by associations under the Association to broaden their horizons and receive training from different parties.

Cross-disciplinary learning approach: Workshop

- Archery can be one of the selected topics of investigative studies for students studying in Physics or Mathematics.

● ***Details of Workshop Arrangement***

Target participants:	– Archery team members – Interested S.4 – S.5 students taking Mathematics and/or Physics
Format of Workshop:	– The workshop would be held beyond regular lesson time (e.g. lunch time or after school section). – Worksheet with examples to work out would be distributed during the workshop. – Interactive discussion held between participants and teachers are expected during the workshop.

● ***Learning objectives, content and expected learning outcomes:***

Learning objectives:	<input checked="" type="checkbox"/> To integrate students' concepts learnt in Mathematics and Physics to real-life scenario like archery <input checked="" type="checkbox"/> To arouse students' awareness to be aware of tuning and optimizing performance in a more scientific and systematic approach
Topics:	<input checked="" type="checkbox"/> Trigonometry ('sine, cosine and tangent') (Mathematics) <input checked="" type="checkbox"/> Projectile motion (Physics) <input checked="" type="checkbox"/> Force & motion (Physics) <input checked="" type="checkbox"/> Energy conversions (Physics)
Learning elements:	– Through the tutorial, designated worksheet and carrying out mini investigations, students would learn the relationship between the shooting angle, the speed and the time travelled of arrows as well as the shifts in height on the target reached by arrows. – Scientific elements: <input checked="" type="checkbox"/> STEM

	<input checked="" type="checkbox"/> Scientific investigations <input checked="" type="checkbox"/> Fair tests
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Evaluation:

- **Regular and structured evaluations would be adopted to consistently review the outcomes of the following programs:**
 - **For archery experience lessons organized for all S.1 to S.3 students, pre- and post-lesson surveys would be conducted to investigate the changes in their degree of interest, understanding, confidence and competence towards archery before and after taking the series of lessons.**
 - **For archery training sessions organized for archery team members, mid- and end-of-year evaluations would be conducted in the format of observations by professional coach, surveys and/or selected individual interview. These help to keep track of the continual development, progress and improvement of archery team members in terms of their skills, confidence, understanding and interest towards archery.**

(ii) **Key Implementation Details**

Project period: September 2019 to September 2020 [13 months]

Month / Year	Content / Activity / Event	Target Beneficiary/Participants
Oct 2019	Training course of being archery instructor	Project leaders & P.E. teachers
Oct 2019 – July 2020	Training lessons for archery team members	Archery team members
Jan 2020 – March 2020	Archery experience lessons for all S.1 to S.3 students during P.E. lessons (3 lessons)	All S.1 – S.3 students
March 2020	Archery experience activity for Parent Teacher Association	Members of PTA
May 2020	Inter-house Archery Competition	All S.1 – S.5 students
June 2020	Archery experience activity during staff development session	All teachers
July 2020	Inter-class Archery Competition as part of the school tradition event ‘Games Day’	All S.1 – S.3 students

- (b) Please explain the extent of teachers’ and/or principal’s involvement and their roles in the project.

- (i) Number of teachers involved and degree of input (time, types, etc.):

Teacher 1 and Teacher 2 are the project leaders and the teachers-in-charge during the training lessons of the archery team. Teacher 3 and Teacher 4 are the P.E. teachers and the teachers-in-charge during the archery experience lessons of all S.1 to S.3 students. The teaching assistant would be the facilitator for the logistic arrangement for the project.

- (ii) Roles of teachers in the project:

(Please tick the appropriate box(es))

- ☒ Leader
 ☒ Co-ordinator
☒ Developer
 ☒ Service recipient
☐ Others (please specify) _____

(c) Please provide the budget of the project and justify the major items involved.

Grant Sought: HK\$ 200,000 _____

Budget Item	Expenditure Detail (Including the breakdown for the budget items)		Justifications
	Item	Amount (\$)	
i) Staff* (\$95,918)	Project assistant*	$\$14,500 \times 1.05 \text{ MPF} \times 1.05 \text{ pay adjustment}^{**} \times 12 \text{ months} \times 0.5$ $= \$95,918$	<p>The assistant will be responsible for keeping the stock and maintaining the conditions of the equipment. He/ She will also help set the field for the lessons.**</p> <p><u>**Remark: Our project team will refer to the QEF Pricing standard (2019/2020)</u></p> <p><u>**Remark: Our school may top-up the salary to become a full-time staff to offer assistance to teachers for related learning and teaching tasks if necessary.</u></p>
ii) Service (\$27,000)	Instructor fees for teaching archery during PE lessons	$\$600/\text{lesson} \times 45 \text{ classes}$ $= \$27,000$	<p>The instructor must hold a recognized and valid archery level I coach certificate or above issued by the Association. He/ She is hired to teach the archery classes.</p> <p>Teachers 3 and 4 who are the PE teachers also take part in the lessons and learn archery together with students. They are also required to provide support when conducting the archery lessons.</p>

iii) Equipment (\$69,935)	1. Bow	\$1,750 x 14 pcs = \$24,500	Archery equipment is purchased for students to learn archery in school. **** Remarks: For item no. 8 target pin, there is a typo mistake with the no. of pcs in the original version. Each pack should come with 100 pcs instead of 1000 pcs. The target pins are used to fix the target face on to the target.
	2. Bow stand	\$75 x 14 pcs = \$1,050	
	3. Arm guard	\$45 x 20 pcs = \$900	
	4. Finger guard (4pcs/ pck_)	\$40 x 5 = \$200	
	5. Arrows (6 doz)	\$2,545 x 3 pck = \$7,635	
	6. Target	\$ 2,200 x 3 =\$6,600	
	7. Target Stand	\$1,000 x 3 = \$3,000	
	8. Target Pin (100pcs) ****	\$120 x 1 = \$120	
	9. Target face (50pcs)	\$165 x 2 =\$330	
	10. Net at the back	\$14,000 x 1 (set) =\$14,000	
	11. Net on the side	\$5,800 x 2 (sets) =\$11,600	
iv) Works (\$2,147)	1. Installation of the net (including tools)***	= \$2,147	To fix the net on the wall as safety precaution to protect the wall and people from being hit by the arrows.
v) General expenses (\$5,000)	1. Audit Fee	= \$5,000	
Total Grant Sought (\$):		\$200,000	

***Recruitment of Staff (Part-time project assistant)**

Qualification	– University graduates with teacher training (e.g. PGDE) are preferred
Experience	– Basic knowledge in computer skills
Concrete duties	– Handling administrative duties and clerical work – Leading archery team members to have outing activities, for example, participating in territory-wide archery competitions

*****Installation of Net**

- Our school understands that we should obtain the approval of the proposed construction work and/or change of room use from relevant department(s) before the commencement of the project (if applicable).
- After consulting the professional advice from the structural engineer from _____, the installation of the net shall not cause structural changes to the building structure under normal circumstances.

(III) Expected Project Outcomes

- (i) Please describe how to evaluate the effectiveness of the project.
(Please tick the appropriate box(es))

- ☒ Observation: The performance and competence in archery for all S.1 to S.3 students undertaking the archery experiencing lessons or the archery team members undertaking the year-long program of training lessons would be assessed through observation by qualified professional coach recruited.

Evaluation

Success criteria:	<p>Achievement of project aims would be assessed by evaluation of attainment of the following success criteria:</p> <p><u>(i) Whole-form Approach: ALL S.1 – S.3 students</u> <input checked="" type="checkbox"/> 75 % of S.1 to S.3 students would have acquired basic understanding of archery</p> <p><u>(ii) Pull-out Approach: Archery Team</u> <input checked="" type="checkbox"/> Increased number of archery team members participating in diversified territory-wide competitions</p>
Evaluation format:	<p><u>(i) Whole-form Approach: ALL S.1 – S.3 students</u> <input checked="" type="checkbox"/> Pre- and post-lesson surveys</p> <p><u>(ii) Pull-out Approach: Archery Team</u> <input checked="" type="checkbox"/> Mid- and end-of-year questionnaires <input checked="" type="checkbox"/> Records of students' participation in territory-wide competitions</p>
Evaluation period:	<p><u>(i) Whole-form Approach: ALL S.1 – S.3 students</u> <input checked="" type="checkbox"/> Surveys would be conducted at the beginning and at the completion of the series of three archery lessons.</p> <p><u>(ii) Pull-out Approach: Archery Team</u> <input checked="" type="checkbox"/> Questionnaires would be conducted during the mid- and end-of-year. <input checked="" type="checkbox"/> Records of participation in territory-wide competitions would be done during the whole project period.</p>

- ☐ Focused group interviews: _____

- ☒ Pre-and post-activity surveys: Questionnaires are included in all archery experience activities and lessons for all S.1 to S.3 students, teachers and parents. Questionnaires are also included in the mid- and end-of-year reflections which form part of the key evaluations of the outcomes of the archery team. All of the above beneficiaries are required to indicate the degree of interest, understanding, confidence and competence in archery in the questionnaires.

- ☒ Performance change of students in assessment: Two in-class competitions would be held in the middle and at the end of the year-long program of training lessons for the archery team members. Their scores in the two competitions would be compared to evaluate their changes in competence and performance in the practice of archery.

- ☐ Others (please specify) _____

(ii) Please state the project deliverables or outcomes.

(Please tick the appropriate box(es))

- ☐ Learning and teaching materials
- ☐ Resource package
- ☐ DVD
- ☒ Others (please specify) **After the successful implementation of our school-based archery curriculum, our experience and the framework could be the role model for other local schools to design their school-based archery curriculum. Our programs of organizing archery experience lessons for all S.1 to S.3 students as well as the specialized year-long archery training lessons and practices for the archery team can set as the reference to be adopted by other local schools as well.**

Deliverables

Nature:	<input checked="" type="checkbox"/> A set of complete package of materials covering the details of the design of the school-based archery curriculum, videos of conduction of archery lessons for S.1 to S.3 students and training for archery team and worksheet for cross-disciplinary learning in Physics and Mathematics would be prepared.
Quantity:	<input checked="" type="checkbox"/> 1 guideline in design and implementation of school-based archery curriculum (including floor plan setting & lists of equipment for starting up the curriculum) <input checked="" type="checkbox"/> 2 videos capturing how the archery lessons and training are conducted for S.1 to S.3 students and the archery team <input checked="" type="checkbox"/> 1 worksheet covering the concepts of Physics and Mathematics in archery
Topic:	<input checked="" type="checkbox"/> Trigonometric ($\sin \theta$, $\cos \theta$ & $\tan \theta$) in Mathematics <input checked="" type="checkbox"/> Force & Motion (displacement & velocity) in Physics
Level:	<input checked="" type="checkbox"/> NSS Mathematics & Physics (S.4)

(IV) Safety

- Our school would closely follow the safety guidelines on Physical Education Key Learning Area for Hong Kong Schools and provide related safety measures.

(V) Assets Usage Plan

Category	Item / Description	No. of Units	Total Cost	Proposed Plan for Deployment
sports equipment	1. Bow 2. Arrows (6 doz) 3. Target 4. Target Stand 5. Net at the back 6. Net on the side	14 pcs 3 pck 3 pcs 3 pcs 1 set 2 set	\$24,500 \$7,635 \$6,600 \$3,000 \$14,000 \$11,600	All items 1 – 6 listed would be used in subsequent school years for the continual development of the school-based archery curriculum.

(VI) Report Submission Schedule

Project Management		Financial Management	
Type of Report and covering period	Report due day	Type of Report and covering period	Report due day
Progress Report 1/9/2019 – 31/8/2020	30/9/2020	Interim Financial Report 1/9/2019 – 31/8/2020	30/9/2020
Final Report 1/9/2019 – 30/9/2020	31/12/2020	Final Financial Report 1/9/2020 – 30/9/2020	31/12/2020