

RFB No: *AF EIP ICB-1.5.1.1*

Project: *ADDITIONAL FINANCING FOR “EDUCATION IMPROVEMENT PROJECT”*

Purchaser: *Center for Education Projects PIU SA*

Country: *Armenia*

CLARIFICATION NO. 4, answers to questions received on 4 April 2023

Lot 1: Biology and Chemistry Laboratory Equipment

Line Item N°	Description of Goods			Total quantity	QUESTIONS	ANSWERS
	Name	Technical Specifications and Standards	Availability of the Manufacturer Authorization Form/ (Yes/No)			
3.	Binocular Microscope	Brightfield, binocular with double layer stage; objectives 4x, 10x, 40x, 100x Illumination: Light source type: white LED; with light intensity control Focusing: Coaxial coarse and fine focusing mechanism (graduated, 0.002 mm) with upper stop, to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob. Stage: Double layer with mechanical sliding	Yes	990	<p>item #3 includes the Eyepiece reticule- 10x Stage micrometer. This is the same as items #4 and #6. Is it dubbing or separate extra positions?</p> <p>Please confirm that a binocular head angle of 45 degrees is a valid equivalent to a head angle of 30 degrees? Head angle of 45 degrees provides better functionality.</p> <p>Do we understand correctly that the main functional purpose of the device is to use it to carry out the experiments necessary in the Armenian school curriculum. And if the device will have a slight difference in color or size, but perform the necessary function, then it will be</p>	<p>It is not an extra position- the stage micrometer and eyepiece reticle should be compatible with the microscope in item #3.</p> <p>Yes, 45 degrees is acceptable equivalent.</p> <p>Yes long, as the microscope exhibits full functionality, the slight differences in color and the size are not important.</p>

		stage, size approx. 125 x 116 mm, X-Y movement range approx. 76 x 30. Specimen holder for one slide. Vernier scale on the two axes, accuracy 0,1 mm. Nosepiece: Quadruple revolving nosepiece Head Binocular observation head, inclined 30° and rotatable 360°. Diopter adjustment on left eyepiece. Interpupillary adjustment approx. 48 - 75 mm Eyepieces. Widefield eyepieces WF10X/18 with field number 18 mm. Condenser: Abbe condenser, N.A. 1.25 precentered. Instruction manual and dust cover shall be included. Shall include: - the Eyepiece reticule- 10x - Stage micrometer			considered a complete analogue?	
4.	Eyepiece reticule	Compatible with Binocular microscope, 10x	No	990	See item #3 question	The item should be removed, and the appropriate amendments are made in the bidding documents (please see attached)
6.	Stage micrometer	For binocular microscope	No	803	See item #3 question	The appropriate amendments are made in the bidding documents (please see attached)
8.	Classroom DNA	Complete Electrophoresis	Yes	83	item #8 includes Gel electrophoresis kit- for	Yes, it is the same item- the provided kit shall be

	Electrophoresis Lab Station	<p>system</p> <p>1. Electrophoresis Apparatus-UV-transparent bottom, 2 comb positions, gel size 10 x 10 cm; made of UV and chemical resistant Plexiglas; Including safety plug with integrated power connections and comb with 12 pockets.</p> <p>2. Electrophoresis Power supply- Stabilized power supply for both DNA and protein separation. Adjustable output voltage, timer with alarm function, two outputs for connecting of at least 2 electrophoresis chambers simultaneously. Max. output voltage: 300 Volt (in 50 Volt stages), Max. output current: 400 mA, Max. power consumption: 60 Watt, Input voltage: 100 – 240 Volt, AC. Timer function: 1-999 min. with alarm function,</p> <p>3. Gel visualization system Gel electrophoresis kit- for at least 8 groups</p>			<p>at least 8 groups. This is the same as items #9. Is it dubbing or separate extra positions?</p> <p>Do we understand correctly that the main functional purpose of the device is to use it to carry out the experiments necessary in the Armenian school curriculum. And if the device will have a slight difference in color or size, but perform the necessary function, then it will be considered a complete analogue?</p>	<p>compatible with DNA Electrophoresis Lab Station.</p> <p>Yes, as long as the provided apparatus is compatible with commonly available ready-made gel sizes and classroom electrophoresis kits.</p>
9.	Gel electrophoresis	Compatible with gel visualization unit of	Yes	83	see #8 question there are no size	The item should be removed, and the appropriate amendments

	kit	electrophoresis system, for at least 8 groups of students			<p>requirements for this item 9. Can we presume that the size is not critical here unless the offered product provides overall functionality?</p> <p>Do we understand correctly that the main functional purpose of the device is to use it to carry out the experiments necessary in the Armenian school curriculum. And if the device will have a slight difference in color or size, but perform the necessary function, then it will be considered a complete analogue?</p>	are made in the bidding documents (please see attached)
14	Biology data collection and graphing set	<ul style="list-style-type: none"> • LabQuest 3 • Stainless Steel Temperature Probe • Go Wireless® Heart Rate • Go Direct® Gas Pressure Sensor • Go Direct® CO2 Gas Sensor • Go Direct® O2 Gas Sensor • Go Direct® Conductivity Probe • Go Direct® pH Sensor • Colorimeter • Go Direct® Optical Dissolved Oxygen Probe • Go Direct® EKG Sensor • BioChamber 250 • BioChamber 2000 • Go Direct® Respiration Belt or equivalent set 	Yes	83	<p>Items 23-46 have manufacturers' trademarks such as LabQuest 3, Go Wireless®, Go Direct®, and SpectroVis® that belong to Vernier manufacturer.</p> <p>- Do we understand correctly that if we offer an equivalent set, then in the correspondence table we indicate the names of the manufacturer whose solution we offer?</p> <p>- Do we understand correctly that the phrase ""equivalent set"" implies the ability to provide an alternative set of sensors from another manufacturer (different from Vernier), and the equivalence criterion is the ability to conduct a similar number of digital experiments."</p>	<p>Yes, you should provide full details to show that the offered set can provide the desired functionality.</p> <p>Yes, the "equivalent set" should enable all listed measurements and functionality, including mobility etc.</p>

Lot 3: Accessories and appliance for Biology and Chemistry Laboratories

Line Item N°	Description of Goods			Total quantity	QUESTIONS	ANSWERS
	Name	Technical Specifications and Standards	Availability of the Manufacturer Authorization Form (Yes/No)			
34.	Laminated poster, cells	At least 585x890 mm, prokaryotic, animal and plant cell structures	No	100	Confirm that the posters must be in Armenian	Yes, all posters should be in Armenian
35.	Laminated poster, Evolution Tree of Life Poster	At least 585x890 mm, shall show evolution tree of life, laminated	No	100	Confirm that the posters must be in Armenian	Yes, all posters should be in Armenian
36.	Laminated poster, plant structure and processes	At least 585x890 mm, shall show plant structure and processes	No	100	Confirm that the posters must be in Armenian	Yes, all posters should be in Armenian
37.	Laminated poster, protist diversity	At least 585x890 mm, shall show protist diversity	No	100	Confirm that the posters must be in Armenian	Yes, all posters should be in Armenian
53.	Photosynthesis kit	For Introductory school investigations of photosynthesis, for at least 8 groups of students	Yes	83	Photosynthesis kit includes phrase "for at least 8 groups of students". Does it mean 8 separate sets for Photosynthesis in one kit and total number of sets is 664 (8 sets x83 kits)?	One set should be enough for 8 groups of students to carry out an experiment. Total number of sets should be 83.

69.	Test Tube Stands	23 mm, 10-12 Place/Holes	No	2136	can we propose Wooden Tube Stands?	No, tube stands should be made of durable plastic.
123	Silicone insulated stranded wires	5 different color, 28AWG	No	4450	Is the requirements to this item correct?	Yes, the requirements of this item, are correct

Lot 5: Geography Laboratory Equipment

No	Name	Description of Goods			QUESTIONS	ANSWER
		Technical Specifications and Standards	Availability of the Manufacturer Authorization Form (Yes/No)	Total quantity		
2.	School meteorological stationary	<p>The school weather station should be wireless, have indoor and outdoor temperature and humidity, atmospheric pressure, light, UV radiation, wind speed and direction, dew point, precipitation measuring and recording devices, large color LCD display and built-in large capacity storage function.</p> <p>A set of training tools for meteorological observations: outdoor temperature (-30 - +65°C), outdoor humidity (0-99%rh), rainfall (0-9999 mm), wind speed (0-50m/s), illumination (0-400k Lu), indoor temperature (-10 - +60°C), indoor humidity (0-99%RH), barometric pressure (300-1100hPa), console (5V DC adapter), indoor sensor (2*AAA alkaline batteries), outdoor sensor (3*AA rechargeable batteries), transmission distance in open field 100 m,</p>	Yes	100	<p>Parameters which are required for indoor and outdoor temperatures and humidity exceed statistically-proved highs and lows registered in Armenia.</p> <p>Experiments and weather observations can only be performed within real weather conditions and officially permitted (by government education authorities) min. and max. temperature/humidity levels. This presupposes a narrower measuring span.</p> <p>Do we understand correctly that the main functional purpose of the device is to use it to carry out the experiments necessary in the Armenian school curriculum. And if the device will have a</p>	Based on the climatic characteristics of Armenia and the requirements of the standard of general education, the technical parameters of the school meteorological stationary were determined. The school meteorological stationary must fully comply with the requirements and standards presented in the technical description.

		communication frequency 433 MHz / 868 MHz / 915 MHz (optional), measuring interval outdoor sensor approx. 16s, measuring interval indoor sensor approx. 64s, alarm duration approx. 120s.			slight difference in color or size, but perform the necessary function, then it will be considered a complete analogue?	
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Lot 6: Physics Laboratory Accessories

	Description of Goods			Total quantity	QUESTIONS	Answer
	Name	Technical Specifications and Standards	Availabi lity of the Manufa cturer Authori zation Form/ (Yes/No)			
21.	Wallpaper: SI system units	A0-841x1189 mm. Colorful, laminated, with wall hanging.	No	100	Confirm that the posters must be in Armenian	The posters must be in Armenian
22.	Wallpaper: Dependence of the resistance of the conductor on temperature	A1-594x841 mm. Colorful, laminated, with wall hanging.	No	100	Confirm that the posters must be in Armenian	The posters must be in Armenian
23.	Wallpaper: Electromagneti c induction	A1-594x841 mm. Colorful, laminated, with wall hanging.	No	100	Confirm that the posters must be in Armenian	The posters must be in Armenian
24.	Wallpaper: Resistance: Ohm's law	A1-594x841 mm. Colorful, laminated, with wall hanging.	No	100	Confirm that the posters must be in Armenian	The posters must be in Armenian

25.	Wallpaper: Induced electromotive force (EMF) of the moving conductor	A1-594x841 mm. Colorful, laminated, with wall hanging.	No	100	Confirm that the posters must be in Armenian	The posters must be in Armenian
26.	Wallpaper: Electric current: Amount of current	A1-594x841 mm. Colorful, laminated, with wall hanging.	No	100	Confirm that the posters must be in Armenian	The posters must be in Armenian
27.	Wallpaper: Inductance and self induction	A1-594x841 mm. Colorful, laminated, with wall hanging.	No	100	Confirm that the posters must be in Armenian	The posters must be in Armenian
28.	Wallpaper: Electromagneti c field	A1-594x841 mm. Colorful, laminated, with wall hanging.	No	100	Confirm that the posters must be in Armenian	The posters must be in Armenian
29.	Wallpaper: Ohm's law for the closed circuit: EMF	A1-594x841 mm. Colorful, laminated, with wall hanging.	No	100	Confirm that the posters must be in Armenian	The posters must be in Armenian

Lot:7 Physics Laboratory Equipment

Line Item N°	Description of Goods			Total quant ity	QUESTION S	Answer
	Name	Technical Specifications and Standards	Avail abilit y of the Manu factur er Autho rizati on Form/ (Yes/ No)			
2.	Air Track	Track with triangular profile with small holes for air outflow set in two lines along	Yes	83	Do we understand correctly that the main functional	The main functional aim of the mentioned

		<p>the track (distance between the holes for air outflow - at least 24 mm). With riders for investigating frictionless linear motion, with A millimeter rule one side. On a robust U-shaped base, with three adjustable feet for levelling. Made of Anodized aluminum.</p> <p>Dimension: track - at least 2 m long. Working length: at least 1.90 m long and at least 94 mm wide. The sides of triangle - at least 67 mm long.</p> <p>Thickness of walls: 3 mm, Contents - at least: 1 Air track on base, 2 Gliders 300 g (red) with additional 50 g weights, spring buffers for elastic collisions and velcro strip for inelastic collisions, 3 Helical springs, 50 mm, 1.7 N/m, 2 Velocity flags, 10 cm, 2 Magnets for contactless impact, 1 English manual for the air track.</p>			<p>purpose of the device is to use it to carry out the experiments necessary in the Armenian school curriculum. And if the device will have a slight difference in color or size, but perform the necessary function, then it will be considered a complete analogue.</p>	<p>device is to use it for experiments necessary in the Armenian school curriculum. The main points are purposed functionality and structure. Thus, if the device will have a slight difference in color or size, but perform the necessary function, it will be considered a complete analog. On the other hand, the size of the device can't be bigger significantly than the given one, taking into account the classroom or laboratory area.</p>
4.	Gravity lab	<p>Integral Vibration Sensor in Base Unit</p> <p>Release Clamp</p> <p>12 mm Ball Bearing</p> <p>8 mm Ball Bearing</p> <p>Swivel Clamp Holder (The swivel clamp is made from plated steel and features two clamps. One clamp can be locked in any position and shall be rotated 360° along its axis. The swivel clamp shall accept rods up to 3/4" diameter (19 mm) s Length 4.5").</p> <p>Ring stand (13 cm x 20.3 cm Base, 50.8 cm Rod)</p> <p>Milisecond timer (has a clear, 4-digit LED display. Three sockets provide START and STOP inputs. A single switch</p>	Yes	100	<p>Do we understand correctly that the main functional purpose of the device is to use it to carry out the experiments necessary in the Armenian school curriculum. And if the device will have a slight difference in color or size, but perform the necessary function, then it will be considered a complete analogue.</p>	<p>The main functional aim of the mentioned device is to use it for experiments necessary in the Armenian school curriculum. The main points are purposed functionality and structure. Thus, if the device will have a slight difference in color or size, but perform the necessary function, it will be considered a complete analog.</p>

		changes the timer from GATE 1 start and stop to GATE 1 start, GATE 2 stop. The timer shall have millisecond resolution for times up to 10 seconds and then the display auto-ranges for longer periods up to 9999s with corresponding reduced resolution. 5V DC power supply and instructions included).				On the other hand, the size of the device can't be different significantly from the given one.
5.	Timer with two photogates	<p>Timer, Two Photogates with cords, AC adaptor. Built-in infrared light. Possibility to be operated in internal and external modes. Shall include at least operational indicator light, stand rod with screw thread, bolt for attachment to a roller track and connector lead with 8 pin mini DIN plugs. Barrier spacing: approx. 82 mm Rise time: not more than 60 ns Spatial resolution: < 1 mm Time resolution: not less than 0.1 ms.</p>	Yes	100	Do we understand correctly that the main functional purpose of the device is to use it to carry out the experiments necessary in the Armenian school curriculum. And if the device will have a slight difference in color or size, but perform the necessary function, then it will be considered a complete analogue.	The main functional aim of the mentioned device is to use it for experiments necessary in the Armenian school curriculum. The main points are purposed functionality and structure. Thus, if the device will have a slight difference in color or size, but perform the necessary function, it will be considered a complete analogue. On the other hand, the size of the device can't be different significantly from the given one.
6.	Digital Timer	Quartz crystal, 0.65 microsecond internal resolution, 0.0001 second display resolution.	Yes	356	0.0001 second display resolution is very rarely used in everyday circumstances. Confirm that 0.01 second display resolution is a	It will be better to propose the timer with resolution 0.0001 but 0.01 second display resolution is a valid equivalent.

					valid equivalent. The functionality for school purposes remains unchanged.	
9.	Car and Ramp Lab	Approx. 120 cm aluminum track with attachment grooves and tire guide grooves, car w/ball bearing wheels, spring and magnetic bumpers, weights 50 g, 100g, inclinometer, pulley and string.	Yes	83	Do we understand correctly that the main functional purpose of the device is to use it to carry out the experiments necessary in the Armenian school curriculum. And if the device will have a slight difference in color or size, but perform the necessary function, then it will be considered a complete analogue.	The main functional aim of the mentioned device is to use it for experiments necessary in the Armenian school curriculum. The main points are purposed functionality and structure. Thus, if the device will have a slight difference in color or size, but perform the necessary function, it will be considered a complete analog. On the other hand, the size of the device can't be different significantly from the given one.
19.	Digital balance	1 mg readability, max capacity 3 kg, min weight 1,2 g	Yes	178	After analyzing the Armenian school curriculum, we came to the conclusion that an accuracy of up to 0.01 g is sufficient to carry out school experiments. Please confirm that this resolution will be enough for school	The resolution of digital balance must be 0.001g.

					purpose.	
22	Aneroid Barometer	Measuring range: 760-1050hPa.	No	100	<p>The measuring range seems to consist of two different parameters:</p> <ul style="list-style-type: none"> - Lower (760) is related to millimeters of mercury - Higher (1050) is connected with kPa metrics. <p>Could you please clarify the case?</p>	The pressure range is given expressed by hPa (hectopascal, 1 hPa=100 Pa).
62.	Pascal's Demonstrator	Pascal's Demonstrator shall consist of a vertical glass bulb about 3.5 cm in diameter with small openings along one circumference and a branch tube containing a tight-fitting piston.	No	17	We propose to replace the glass sphere with a plastic one as a safer analogue for education purpose. The functionality remains unchanged.	Instead of glass sphere the plastics transparent one can be proposed.
70.	Rotating System on Air Bed	<p>1 Air bed 1 Rotating disc with cross bar 1 Multiple pulley 1 Release mechanism 2 S-shaped hooks 1.00g 1 S-shaped hook 2.00 g 1 Set of weights (2x 12.5 g, 2x 25 g, 2x 50 g) 1 Airflow generator (Compressor) for connection to mains 1 Silicon tubing with by-pass valve 1 Pulley</p>	Yes	83	Do we understand correctly that the main functional purpose of the device is to use it to carry out the experiments necessary in the Armenian school curriculum. And if the device will have a slight difference in color or size, but	The main functional aim of the mentioned device is to use it for experiments necessary in the Armenian school curriculum. The main points are purposed functionality and structure. Thus, if the device will have a slight

		<p>1 Stand rod with 3 securing screws and 2 screws for levelling 1 Stand rod with 2 securing screws 1 Stand rod, approx. 250 mm 1 Levelling disc 1 Roll of cotton thread</p> <p>Specifications:</p> <ul style="list-style-type: none"> • Protractor scale: 0 – 360° • Scale divisions: 1° • Moment of inertia of disc with cross bar: 0.16 g m² approx. • Maximum moment of inertia: 7.1 g m² approx. • Minimum driving torque: 0.05 mN m approx. <p>Maximum driving torque: 0.60 mN m approx.</p>			perform the necessary function, then it will be considered a complete analogue.	difference in color or size, but perform the necessary function, it will be considered a complete analogue. On the other hand, the size of the device can't be different significantly from the given one, taking into account the classroom or laboratory area.
71.	Atwood's machine	<p>An Atwood machine consists of set of loads, hanger, rings with couplings attaching to a string draped over a pulley. Both the string and pulley shall be massless and the pulley shall be frictionless. Pulley shall be attached to the vertical base. Photogate with timer shall be available to record the machine's motion.</p> <ul style="list-style-type: none"> . Photogate: Photogate Head with cable . Pulley: . Mounting rod: stainless steel mounting rod . Table Clamp: can hold rods that can be mounted either horizontally or vertically . Multi clamp with two thumb screws: . Fits rods . rod: non-threaded stainless steel rod . Braided String 	Yes	100	Do we understand correctly that the main functional purpose of the device is to use it to carry out the experiments necessary in the Armenian school curriculum. And if the device will have a slight difference in color or size, but perform the necessary function, then it will be considered a complete analogue.	The main functional aim of the mentioned device is to use it for experiments necessary in the Armenian school curriculum. The main points are purposed functionality and structure. On the other hand, the size of the device are not mentioned, only the mass of load and hanger set is given.

		. Mass and hanger set includes 4x Mass hanger (5.0 g), 3x 100 g mass, 3x 50 g mass, 2x 20 g mass, 2x 10 g mass, 3x 5.0 g mass, 3x 2.0 g mass, 3x 1.0 g mass, 3x 0.5 g mass.				
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Questions Regarding the qualification requirements

		Question	Answer
16.1	The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII, Schedule of Requirements.	Section I – Instructions to Bidders (ITB) Documents Establishing the Eligibility and Conformity of the Goods and Related Services	Do these two requirements convey the same idea – provision of supporting (print) materials? Can we meet these two requirements by furnishing for example a catalogue of goods?
(a)	Documentary Evidence: The Bidder shall furnish documentary evidence to demonstrate that the goods it offers meet the following usage requirement: technical and	Section III – Evaluation and Qualification Criteria	According to the bidding document: - To establish the eligibility of the Goods and Related Services in accordance with ITB 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms. -To establish the conformity of the Goods and Related Services to the bidding document, the

<p>performance characteristics and detailed description of the Goods offered meet technical specification requirements of the Section VII Schedule of Requirements.</p>			<p>Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section VII, Schedule of Requirements.</p> <p>The documentary evidence may be in the form of literature, drawings or data, as well as the catalogue, if it is containing the required above-mentioned information.</p>
<p>All goods should be new and unused. The Supplier should present warranty for the goods (Lots 1-3 and 5-7) with the minimum period of 12 (twelve) months. It is required to present user guidelines and technical documents of goods, also documents provided by the Manufacture to ensure the conformity of technical and functional parameters of the presented goods' to the required Technical Parameters. The Model, Manufacturer and Country must be specified for each</p>	<p>Section VII – Schedule of Requirements</p> <p>3. Technical Specifications</p>	<p>Do we understand this requirement correctly: a Bidder can present user guidelines during delivery as they are part of documentation of the Good and are put inside the packaging?</p>	<p>Yes, your understanding is correct: user guidelines or manuals should be submitted with the Goods at the delivery stage.</p>

product.			
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