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**Training Organization Guide (ToG)**

**For**

**TVET CERTIFICATE III IN PUBLIC WORKS**

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## Part 1: pedagogical organization

### 1. Presentation of the training programme

#### 1.1. Qualification

This qualification prepares individuals to integrate the construction industry with the professionalization of Road marker. This qualification again offers the opportunity to execute the works as Assistant road maintainer, Masonry Technician, Excavation technician, Pavement Technician, Grading technician, signs technicians, Safety Officer, and Unpaved road technician while ensuring that safety, security and environmental regulations are respected.

#### 1.2. Minimum Entry requirements

The minimum entry requirement to this course is to be physically and mentally fit with an interest in building and construction and related areas.



## 2. The training programme

### 2.1 Information about competencies

No	Code	Complementary competencies	Credit
1	CCMOL302	Describe the occupation and learning process	3
2	CCMHE302	Maintain SHE at workplace	3
3	CCMBC302	Create a Business	3
4	CCMCC302	Comply with Citizenship Values	3
5	CCMCF302	Pratiquer l'activité de Communication en Français dans le métier	3
6	CCMWC302	Communicate effectively at workplace	3
7	CCMEN302	Apply proficient Technical English	3
8	CCMCL302	Apply computer literacy	3
9	CCMKN302	Gukoresha Ikinyarwanda kiboneye	3
10	CCMKW302	Kutumia Kiswahili Wastani	3
<b>Total</b>			<b>30</b>

No	Co-Curricular activities	Credit
1	Sports/Clubs	3
2	Self-study/Library Reasearch	3
Total		6

	N o	Code	Core competencies	Credit
<b>GENERAL</b>	1.	GENAM301	Apply Algebra and Trigonometry	6
	2.	GENBC301	Demonstrate Basics of Chemistry	4
	3.	GENPY301	Apply general physics	5
	4.	PWOTD301	Basic Technical Drawing	10
	5.	PWOSH301	Public Works Hygiene and Safety Precautions	3
	6.	PWORS301	Establish Road Signs, Marking and Crush Barriers	6
<b>SPECIFIC</b>	7.	PWOURC301	Construct unpaved Roads	8
	8.	PWOFE301	Conduct field excavation works	3
	9.	PWODS301	Construct drainage structures	8
	10.	PWOMW301	Perform masonry works	12
	11.	PWOPR301	Describe Public Works Resources	4
	12.	PWOUM301	Perform unpaved road Maintenance	6
	13.	PWORW301	Construct Retaining walls	10
	14.	PWORA301	Set out Road Alignment	5
	15.	PWOIAP301	Integrate the Workplace	30
Total				120

- ❖ Complementary competencies: 30
- ❖ Co-Curricular activities: 6
- ❖ Core competencies :120
- ❖ The total number of Credits: 156

### 3. Human resources

#### 3.1. Trainers' qualifications and competences (Trainers' profile)

S/N	Modules	Qualification	Field or training experience	Technical teaching experience	Languages skill	ICT skills.
1.	<b>PUBLIC WORK HYGIENE AND SAFETY PRECAUTIONS</b>	At least Advanced diploma ( A1) in civil engineering .	Experience in hygiene and safety is an added value	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is an added value</li> </ul>	Computer literacy <ul style="list-style-type: none"> <li>• MS word</li> <li>• MS excel</li> <li>• PPT and</li> <li>• Internet</li> </ul>
2.	<b>PUBLIC WORK RESOURCES</b>	At least Advanced diploma ( A1) in civil engineering .	Experience in Construction Resources management is an added value	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is an added value</li> </ul>	Computer literacy <ul style="list-style-type: none"> <li>• MS word</li> <li>• MS excel</li> <li>• PPT and</li> </ul>

						Internet
3	<b>BASIC TECHNICAL DRAWING APPLICATION</b>	At least Advanced diploma ( A1) in civil engineering.	Having A2 in construction /Public works would be added value	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is an added value</li> </ul>	<p>Computer literacy</p> <ul style="list-style-type: none"> <li>• MS word</li> <li>• MS excel</li> <li>• PPT and</li> <li>• Internet</li> <li>• CAD (Computer Aided Design)</li> </ul>
4	<b>DRAINAGE STRUCTURES CONSTRUCTION</b>	At least Advanced diploma ( A1) in civil engineering .	Experience in Construction work is an added value	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is an added value</li> </ul>	<p>Computer literacy</p> <ul style="list-style-type: none"> <li>• MS word</li> <li>• MS excel</li> <li>• PPT and</li> <li>• Internet</li> <li>• Computer</li> </ul>

						Aided Design (Archcad, Autocad)
5	<b>FIELD EXCAVATION WORK CONDUCTION</b>	At least Advanced diploma ( A1) in civil engineering .	Experience in road construction plant operation is an added value.  Land surveying experience would be an added value  Experience in Construction work is an added value	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is an added value</li> </ul>	<p>Computer literacy</p> <ul style="list-style-type: none"> <li>• MS word</li> <li>• MS excel</li> <li>• PPT and</li> <li>• Internet</li> <li>• Computer Aided Design (Archcad, Autocad)</li> </ul>
6	<b>MASONRY WORKS</b>	<ul style="list-style-type: none"> <li>• Bachelor’s degree in civil engineering.</li> <li>• Advanced diploma ( A1) in civil engineering construction</li> </ul>	Experience in Construction work is an added value	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is an added value</li> </ul>	<p>Computer literacy</p> <ul style="list-style-type: none"> <li>• MS word</li> <li>• MS excel</li> <li>• PPT and</li> <li>• Internet</li> </ul>

		technology.				<ul style="list-style-type: none"> <li>• CAD (Computer Aided Design)</li> </ul>
7	<b>ROAD SIGNS, MARKING AND CRASH BARRIERS</b>	<ul style="list-style-type: none"> <li>• At least Advanced diploma in Highway engineering</li> <li>• At least Advanced diploma in Civil Engineering</li> </ul>	No experience required	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is an added value</li> </ul>	<p>Computer literacy</p> <ul style="list-style-type: none"> <li>• MS word</li> <li>• MS excel</li> <li>• PPT and</li> <li>• Internet</li> <li>• Computer Aided Design (Computer Aided Design)</li> </ul>
8	<b>ROAD ALIGNMENT SETTING</b>	<ul style="list-style-type: none"> <li>• Bachelor's degree in Civil Engineering</li> </ul>	Experience in Surveying would be an added value	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is</li> </ul>	<p>Computer literacy</p> <ul style="list-style-type: none"> <li>• MS word</li> </ul>

		<ul style="list-style-type: none"> <li>• At Least Advanced diploma in highway engineering</li> </ul>			an added value	<ul style="list-style-type: none"> <li>• MS excel</li> <li>• PPT and</li> <li>• Internet</li> <li>• Computer Aided Design(Computer Aided Design, Civil 3D)</li> </ul>
9	<b>RETAINING WALLS CONSTRUCTION</b>	At least A1 in civil engineering	Experience in Construction work is an added value	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is an added value</li> </ul>	<p>Computer literacy</p> <ul style="list-style-type: none"> <li>• MS word</li> <li>• MS excel</li> <li>• PPT and</li> <li>• Internet</li> <li>• Computer Aided Design (Computer Aided Design)</li> </ul>

10	<b>UNPAVED ROAD CONSTRUCTION</b>	<ul style="list-style-type: none"> <li>• At least Advanced diploma in Civil Engineering</li> <li>• At Least Advanced diploma in highway engineering</li> </ul>	Experience in Construction work is an added value	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is an added value</li> </ul>	<p>Computer literacy</p> <ul style="list-style-type: none"> <li>• MS word</li> <li>• MS excel</li> <li>• PPT and</li> <li>• Internet</li> <li>• Computer Aided Design</li> </ul>
11	<b>UNPAVED ROAD MAINTENANCE</b>	<ul style="list-style-type: none"> <li>• Bachelor's degree in Civil Engineering</li> <li>• At Least Advanced diploma in highway engineering</li> </ul>	Experience in Construction work is an added value	TVET related Teaching experience is an added value	<ul style="list-style-type: none"> <li>• Fluent in English.</li> <li>• Kinyarwanda and French is an added value</li> </ul>	<p>Computer literacy</p> <ul style="list-style-type: none"> <li>• MS word</li> <li>• MS excel</li> <li>• PPT and</li> <li>• Internet</li> <li>• Computer Aided Design</li> </ul>

## 1. Material Resources

### 1.1. Category 1: Machines, equipment and accessories

NO	Equipment	Specification	Unit Price [Rwf]	Quantity	Type of room	Module code	Learning hours
1	Wheelbarrow	<ul style="list-style-type: none"> <li>• Dimensions: 620mm(w) x 600)h) x 1400mm(l)</li> <li>• Weight: 4kg</li> <li>• Pan Capacity: 65litre</li> </ul>	50,000	20 Pieces	Workshop	PWODS301 PWOMW 301 PWORS 301 PWOFE301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
2	Excavator	<ul style="list-style-type: none"> <li>• Net Power: 13 HP</li> <li>• Operating Weight:2061 lb</li> <li>• Maximum Digging</li> </ul>	20,000,000	1	Construction Site	PWODS301 PWOMW	

		Depth:5.68 ft				<b>301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>3</b>	Tracked excavator	<ul style="list-style-type: none"> <li>• Net weight: 13000 kg</li> <li>• Digging depth: 5.5 m</li> <li>• Track width : 500m</li> <li>• Engine Power :66 kW (89.79 HP)</li> </ul>	<b>20,000,000</b>	<b>1</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>4</b>	Backhoe	<ul style="list-style-type: none"> <li>• Operating weight: 8370-10700 kg</li> <li>• Net power (ISO 9249) at</li> </ul>	<b>15,000,000</b>		<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b>	

		<p>2200 rpm: 65KW/89 hp</p> <ul style="list-style-type: none"> <li>• Cross power (SAE J1995) at 2200 rpm: 68.5KW/93 hp</li> </ul>				<p><b>PWORS 301</b></p> <p><b>PWOFE301</b></p> <p><b>PWOPR301</b></p> <p><b>PWOUM301</b></p> <p><b>PWOUC301</b></p> <p><b>PWORW301</b></p>	
5	Dragline excavator	<ul style="list-style-type: none"> <li>• Bucket Capability: 24 to 34 m3 (31 to 44 yd3)</li> <li>• Boom Length: 75 to 101 m (246 to 331 ft)</li> <li>• Working Weight – Approximate: 1 770 000 to 1 988 000 kg (3,902,000 to 4,382,000 lb)</li> </ul>			Workshop	<p><b>PWODS301</b></p> <p><b>PWOMW 301</b></p> <p><b>PWORS 301</b></p> <p><b>PWOFE301</b></p> <p><b>PWOPR301</b></p> <p><b>PWOUM301</b></p> <p><b>PWOUC301</b></p> <p><b>PWORW301</b></p>	

6	Rammer	<ul style="list-style-type: none"> <li>• Working mass : 70 kg</li> <li>• Speed : +- 15-18m/min</li> <li>• Blow/ Force : 14.8k</li> <li>• Foot: 280 mm x 330 mm</li> <li>• Frequency : 12 Hz</li> <li>• Amplitude: 65-75mm</li> </ul>			<b>Workshop</b>	<b>PWODS301</b>  <b>PWOMW 301</b>  <b>PWORS 301</b>  <b>PWOFE301</b>  <b>PWOHS301</b>  <b>PWOPR301</b>  <b>PWOUM301</b>  <b>PWOUC301</b>  <b>PWORW301</b>	
7	Trucks	<ul style="list-style-type: none"> <li>• Model No.: ZZ3257N3847N1</li> <li>• Horsepower: 336/371 HP</li> <li>• Transmission: HW19710</li> <li>• Cargo Body Size: 20 CBM</li> </ul>	<b>25,000,000</b>	<b>2</b>	<b>Workshop</b>	<b>PWODS301</b>  <b>PWOMW 301</b>  <b>PWORS 301</b>  <b>PWOFE301</b>  <b>PWOPR301</b>  <b>PWOUM301</b>	

						<b>PWOUC301</b> <b>PWORW301</b>	
<b>8</b>	Concrete mixer	<ul style="list-style-type: none"> <li>• Discharge capacity : 450L</li> <li>• Charging capacity: 720L</li> <li>• Productivity (m3/h): 14m3/h</li> <li>• Mixing barrel rotation speed (r/min)= 14</li> <li>• Mixing period(s)=40</li> <li>• Max aggregate diameter(mm)=80</li> <li>• Mixing Motor power(KW)5.5</li> <li>• Power/Hour(KW)= 4.5</li> </ul>	<b>7,000,000</b>	<b>2</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>9</b>	Bulldozer	<ul style="list-style-type: none"> <li>• Engine Model: Cat C3.6</li> <li>• Power – Net:80 HP</li> <li>• Operating Weight: 17855 Ib</li> </ul>	<b>30,000,000</b>	<b>1</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW301</b> <b>PWORS 301</b> <b>PWOFE301</b>	

						<b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>10</b>	Concrete vibrators	<ul style="list-style-type: none"> <li>• Type: Concrete Vibrator</li> <li>• Shotcrete Type: Semi-Dry</li> <li>• Machining Process: Hydraulic</li> <li>• Structure: Rotor Type</li> <li>• Vibrating Amplitude: 0.8-2.0m/Min</li> </ul>	<b>200,000</b>	<b>4</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW301</b> <b>PWORS301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>11</b>	First aid kit	<ul style="list-style-type: none"> <li>• <b>First Aid bag,UNICEF,blue,410x280x170mm: S0516110</b></li> </ul>	<b>150,000</b>	<b>10</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW301</b>	

		<ul style="list-style-type: none"> <li>• <b>Gloves,exam,nitrile,p wdfree,M,BOX-100: S0969025</b></li>   <li>• <b>Compress,paraffin,10 x10cm,ster/BOX-10: S0523050</b></li>   <li>• <b>Compress,gauze,10x10 cm,n/ster/PAC-100: S0523015</b></li>   <li>• <b>Medical tape,perforated,10cm x5m,roll1 : S0503020</b></li>   <li>• <b>Chlorhexidine conc. sol. 5%/BOT-100ml</b></li> </ul>				<b>PWORS 301</b>  <b>PWOFE301</b>  <b>PWOHS301</b>  <b>PWOPR301</b>  <b>PWOUM301</b>  <b>PWOUC301</b>  <b>PWORW301</b>  <b>PWOTD301</b>	
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		<p style="text-align: center;"><b>:S1531510</b></p> <ul style="list-style-type: none"> <li>• <b>Ibuprofen 200mg tabs/PAC 10x10 : S1533010</b></li> <li>• <b>Medical tape,2.5cmx5m,roll : S0503015</b></li> <li>• <b>Bandage,elastic,7.5cm x5m,roll : S0512015</b></li> <li>• <b>Bandage,gauze,8cmx4 m,roll : S0512025</b></li> <li>• <b>Blanket,survival,220x</b></li> </ul>					
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		<p><b>140cm: S0572510</b></p> <ul style="list-style-type: none"> <li>• <b>Soap,toilet,bar,approx .100-110g,wrapped: S0552000</b></li>   <li>• <b>Compress,gauze,10x10 cm,ster/PAC-5: S0523055</b></li>   <li>• <b>Forceps,dressing,stan dard,155mm,str : S0721000</b></li>   <li>• <b>Scissors,Deaver,140m m,str,s/b : S0773500</b></li> </ul>					
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		<ul style="list-style-type: none"> <li>• <b>Pin, safety, medium size/PAC-12 : S0539000</b></li> <li>• <b>Scalpel blade,ster,disp,no.22 : S0746510</b></li> <li>• <b>Forceps,artery,Kocher ,140mm,str: S0726000</b></li> <li>• <b>Tetracycline eye ointment 1%/TBE-5g: S1510000</b></li> </ul>					
<b>12</b>	Excavators (with hydraulic hummer)	<ul style="list-style-type: none"> <li>• Model: JTB400</li> <li>• Body Weight(KG):50</li> <li>• Working flow rate</li> </ul>	<b>20,000,000</b>	<b>1</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW</b>	

		(L/min):20-40 <ul style="list-style-type: none"> <li>Working Pressure(Bar):90-120</li> <li>Impact rate(bpm):700-1200</li> <li>Excavator Weight(ton):0.8-2</li> </ul>				<b>301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>13</b>	Compressor	<ul style="list-style-type: none"> <li><b>Performance (cfm): 0-5 at 70 to 90 pounds per square inch (psi)</b></li> </ul>	<b>15,000,000</b>	<b>1</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b>	

						<b>PWORW301</b>	
<b>14</b>	Wheel loader	<ul style="list-style-type: none"> <li>• Model : Standard Lift</li> <li>• Engine: 93 KW(1600HP)</li> <li>• Breakout force : 961 KN</li> <li>• Operating weight : 184 tons</li> <li>• Static tipping Load : 102 tons</li> <li>• Bucket capacity: 23m<sup>3</sup></li> </ul>	<b>60,000,000</b>	<b>1</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>15</b>	Compactors	<ul style="list-style-type: none"> <li>• Model : FS-RM75</li> <li>• Centrifugal Force: 14KN</li> <li>• Power: 4.0/5.5HP</li> <li>• Grinding Wheel Type: Sheep Foot Roller</li> </ul>	<b>60,000,000</b>	<b>1</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW301</b> <b>PWORS 301</b> <b>PWOFE301</b>	

						<b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>16</b>	Grader	<ul style="list-style-type: none"> <li>• Weight : 15400 kg</li> <li>• Engine Power : 140 KW</li> <li>• Transmission : 6 gears</li> <li>• Axle ratio: 17.8</li> <li>• Tire diameter : 1.25 m</li> </ul>	<b>300,000,000</b>	<b>1</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW301</b> <b>PWORS301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>17</b>	Theodolite	<ul style="list-style-type: none"> <li>• Model Number : ET – 202L ( Laser Plummet)</li> <li>• Display panel : Double side</li> </ul>	<b>8,000,000</b>	<b>5</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW301</b>	

		<ul style="list-style-type: none"> <li>• Usage: Alignment of lines, Levels angle</li> <li>• Brand :ASI-ROBUST MAKE</li> </ul>				<b>PWORS 301</b> <b>PWOF301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>18</b>	Dumpy level	<ul style="list-style-type: none"> <li>• Length: 200mm.</li> <li>• Magnification: 22x.</li> <li>• Objective Lens: 30mm.</li> <li>• Relative Brightness: 1.9.</li> <li>• Field of View: 1° 30'</li> <li>• Resolving Power: 4.0"</li> <li>• Minimum Focus: 0.5m.</li> <li>• Circular Level Sensitivity: 10' /2mm.</li> </ul>	<b>500,000</b>	<b>5</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b> <b>PWORS 301</b> <b>PWOF301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	

19	Digit level	<ul style="list-style-type: none"> <li>• Height Accuracy (Electronic):. 1mm (With Fiberglass RAB-Code Staves) Standard deviation for 1km double runs leveling</li> <li>• Display resolution (Height): .0001 / .001m</li> <li>• Measuring Range: 1.6 to 100m</li> <li>• Magnification : 32x</li> <li>• Compensato: Pendulum compensator with magnetic damping system</li> </ul>	50,000	10	Workshop	<b>PWODS301</b>  <b>PWOMW 301</b>  <b>PWORS 301</b>  <b>PWOFE301</b>  <b>PWOPR301</b>  <b>PWOUM301</b>  <b>PWOUC301</b>  <b>PWORW301</b>  <b>PWOTD301</b>	
20	Total station	<ul style="list-style-type: none"> <li>• Model: Sokkia iM 55/Sokkia IM52 Total Station</li> <li>• Display Resolution: 1"/5"</li> </ul>	20,000,000	2	Workshop	<b>PWODS301</b>  <b>PWOMW</b>	

		<p>(0.0002 / 0.001gon, 0.005 / 0.02mil)</p> <ul style="list-style-type: none"> <li>• Accuracy (ISO 17123-3:2001): 5"(IM-55)/2" (IM52)</li> <li>• Dual Axis Compensator: Working range ±6' (±111 mgon)</li> </ul>				<p><b>301</b></p> <p><b>PWORS 301</b></p> <p><b>PWOFE301</b></p> <p><b>PWOPR301</b></p> <p><b>PWOUM301</b></p> <p><b>PWOUC301</b></p> <p><b>PWORW301</b></p>	
<b>21</b>	Mortar mixer	<ul style="list-style-type: none"> <li>• Dimensions (l x w x h): 530 x 390 x 715 mm</li> <li>• Speeds (rpm) Low, High: Paddle: 140 ± 5, 285 ± 10 Mixing Head: 62 ± 5, 125 ± 10</li> <li>• Rated Power: 180 W</li> <li>• Bowl Capacity: 5 litres approx.</li> <li>• Weight: 54 kg</li> </ul>	<b>3,000,000</b>	<b>2</b>	<b>Workshop</b>	<p><b>PWODS301</b></p> <p><b>PWOMW 301</b></p> <p><b>PWORS 301</b></p> <p><b>PWOFE301</b></p> <p><b>PWOPR301</b></p> <p><b>PWOUM301</b></p> <p><b>PWOUC301</b></p> <p><b>PWORW301</b></p>	

<b>22</b>	Sprayer gun	<ul style="list-style-type: none"> <li>• Body Material: Aluminum</li> <li>• Air Pressure (psi): 50-70 psi</li> <li>• Cup Capacity (ml): 600 ml</li> <li>• Nozzle Size (mm): 1.3 mm, 1.4 mm</li> <li>• Air Consumption (cfm): 5 to 6</li> </ul>	<b>200,000</b>	<b>3</b>	<b>Workshop</b>	<b>PWODS301</b>  <b>PWOMW 301</b>  <b>PWORS 301</b>  <b>PWOF301</b>  <b>PWOPR301</b>  <b>PWOUM301</b>  <b>PWOUC301</b>  <b>PWORW301</b>	
<b>23</b>	GPS	<ul style="list-style-type: none"> <li>• Receiver type: Multichannel (12-CH, SBAS 1-CH) all-in-view</li> <li>• Frequency: 1575.42MHz ± 1MHz (C/A code)</li> <li>• Sensitivity: -135dBm for acquisition, -138dBm for tracking</li> <li>• Accuracy: 30m 2DRMS (C/A code, HDOP≤4, SA OFF) 7m 2DRMS when</li> </ul>	<b>1,000,000</b>	<b>2</b>	<b>Workshop</b>	<b>PWODS301</b>  <b>PWOMW 301</b>  <b>PWORS 301</b>  <b>PWOF301</b>  <b>PWOPR301</b>  <b>PWOUM301</b>	

		SBAS corre				PWOUC301 PWORW301	
24	DGPS and accessories	<ul style="list-style-type: none"> <li>Receiver type: Multichannel (12-CH, SBAS 1-CH) all-in-view</li> <li>Frequency: 1575.42MHz±1MHz (C/A code)</li> <li>Sensitivity: -135dBm for tracking</li> <li>Accuracy: 13m 2DRMS (C/A code, HDOP≤4, SA OFF) 5m 2DRMS when DGPS corrected 7m 2DRMS when SBAS corrected</li> </ul>	5,000,000	2	Workshop	PWODS301 PWOMW301 PWORS 301 PWOFE301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
25	Reflector jacket	<ul style="list-style-type: none"> <li>Size : Different sizes</li> </ul>	5,000	50	Workshop	PWODS301 PWOMW301 PWORS 301 PWOFE301	

						<b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>26</b>	Grinder	<ul style="list-style-type: none"> <li>• Model Code : CAG 125</li> <li>• Operating Voltage:230V 50Hz</li> <li>• Power:950 W</li> <li>• Speed (No Load):11000 rpm</li> <li>• Weight:1.8 Kg</li> </ul>	<b>150,000</b>	<b>4</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>27</b>	Bending machine	<ul style="list-style-type: none"> <li>• Length of the usable section/mm: 1000-6000</li> <li>• Largest section size /mm: 200x200</li> </ul>	<b>3,000,000</b>	<b>1</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b>	

		<ul style="list-style-type: none"> <li>• Maximum applied force/KN: 390</li> <li>• Maximum bending force/KN: 570</li> <li>• Maximum bending torque/KN.m:16</li> </ul>				<b>PWORS 301</b> <b>PWOF301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
<b>28</b>	Angle grinder	<ul style="list-style-type: none"> <li>• Weight :2.2 kg</li> <li>• Length: 285 mm</li> <li>• Height: 80mm</li> <li>• Max.Disc Diameter: 115 mm</li> </ul>	<b>200,000</b>	<b>5</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b> <b>PWORS 301</b> <b>PWOF301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	

29	Paver	<ul style="list-style-type: none"> <li>• <b>Automation Grade:Automatic</b></li> <li>• <b>Capacity:150 sq. mtr. / hour</b></li> <li>• <b>Carriage Travel Drive:5 HP Brake Motor, 1500 rpm, 3 Phase, 50 Hz</b></li> <li>• <b>Finishing Roll Drive:5 HP Electric Geared Motor</b></li> </ul>	3,000,000,000	1	Construction site	<b>PWODS301</b> <b>PWOMW 301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
30	Forklifts	<ul style="list-style-type: none"> <li>• <b>Model:</b> HH30(Z)-W1-D, HH30(Z)-N1-D</li> <li>• <b>Rated Capacity:</b> 3000KG</li> <li>• <b>Transmission:</b> Automatic or Manuel</li> <li>• <b>Engine:</b> ISUZU C240PKJ (Euro III) or XINCHAI 490BPG</li> <li>• <b>Mast:</b> 3M Lift Height, Duplex Mast</li> <li>• <b>Tires:</b> Pnumatic Tyres</li> <li>• <b>Fork size:</b> 1070*125*45mm</li> </ul>	60,000,000	2	Construction Site and Workshop	<b>PWODS301</b> <b>PWOMW 301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b>	

						<b>PWORW301</b>	
31	Hilti machine	<ul style="list-style-type: none"> <li>• Model: TE 500</li> <li>• Weight: 5600 g</li> <li>• Input power: 1100 W</li> </ul>	<b>200,000</b>	<b>5</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW301</b> <b>PWORS301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
32	Digital camera	<ul style="list-style-type: none"> <li>• Camera type : Super VGA SensiCam</li> <li>• Sensor type: CCD-interline progressive scan</li> <li>• Number of pixel 1280(h)x 1024(v)</li> </ul>	<b>300,000</b>	<b>10</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW301</b> <b>PWORS301</b> <b>PWOFE301</b> <b>PWOPR301</b>	

						<b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
33	Computer	<ul style="list-style-type: none"> <li>• Operating system:Windows 8.164 bit</li> <li>• Processor: i7</li> <li>• Memory:16GB DDR3-1600MHz</li> <li>• Hard drive:1TB 7200 RPM SATA</li> </ul>	<b>1,000,000</b>	<b>30</b>	<b>Computer lab</b>	<b>PWODS301</b> <b>PWOMW301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b> <b>PWOTD301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b>	

						<b>PWOUC301</b> <b>PWORW301</b>	
34	Projector	<ul style="list-style-type: none"> <li>• Projection system: DLP</li> <li>• Panel: DMDXGAX1</li> <li>• Resolution: 1024pixelsx768pixels</li> <li>• Brightness: 1000 ANSI Lumens</li> </ul>	<b>500,000</b>	<b>2</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOHS301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b> <b>PWOTD301</b>	
35	Hoes	<ul style="list-style-type: none"> <li>• Model Number:70016</li> <li>• Shape:Digging Hoe</li> <li>• Model Number:70016</li> </ul>	<b>3,000</b>	<b>50</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b>	

		<ul style="list-style-type: none"> <li>• Head Material:Carbon steel</li> <li>• Handle Material:Wood</li> <li>• Type:HEAVY DUT</li> </ul>				<b>PWORS 301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
36	Pickaxe	<ul style="list-style-type: none"> <li>• Quality: No excess metal, no dents.</li> <li>• Hole diameter: Front side 36mm, backside 40mm</li> <li>• Rockwell hardness C (HRC):35 minimum to 48 maximum in hardened zone of the blade.</li> </ul>	<b>2,500</b>	<b>50</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b> <b>PWORS 301</b> <b>PWOFE301</b> <b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	

37	Ambulance	<ul style="list-style-type: none"> <li>• Breadth: 4.19 meters</li> <li>• Draught ( design) : 1.20 meters</li> <li>• Draught ( cruising) : 0.90 meters</li> <li>• Service speed (max): 60 sea miles/hour</li> <li>• Course distance: 300 sea miles</li> <li>• Propeller: 2 screws</li> <li>• Propulsion system: ASD12B1L Arneson</li> </ul>	<b>50,000,000</b>	<b>1</b>	<b>Workshop</b>	<b>PWODS301</b>  <b>PWOMW301</b>  <b>PWORS 301</b>  <b>PWOFE301</b>  <b>PWOHS301</b>  <b>PWOPR301</b>  <b>PWOUM301</b>  <b>PWOUC301</b>  <b>PWORW301</b>  <b>PWOTD301</b>	
38	Fire extinguisher	<ul style="list-style-type: none"> <li>• 50 lb. (22.7 kg) Tank Size: intended for mid-scale fire protection needs</li> <li>• Operating Temperature Range: -40° to 120°F (-40° to 49°C)</li> <li>• Discharge Time 36 sec., discharge range 25-35 ft. (7.6-10.7 m)</li> </ul>	<b>10,000</b>	<b>10</b>	<b>Workshop</b>	<b>PWODS301</b>  <b>PWOMW301</b>  <b>PWORS 301</b>  <b>PWOFE301</b>  <b>PWOHS301</b>	

		<ul style="list-style-type: none"> <li>• Hose Length: 25 ft. (7.6 m)</li> <li>• Unit Height x Width x Depth: 46.25" x 23" x 23" (117 x 58.4 x 58.4 cm)</li> <li>• Shipping weight: 140 lb. (63.6 kg)</li> <li>• Semi Pneumatic Rubber Wheels</li> </ul>				<b>PWOPR301</b> <b>PWOUM301</b> <b>PWOUC301</b> <b>PWORW301</b>	
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### 1.2. Category 3: Tools

NO	Tools	Specification	Unit price ( Rwf)	Quantity	Type of room	Module code	Learning hours
1	<b>Spade</b>	DIMENSION: 1 m Approx (Handle Length)  weight: 1-2 Kg	<b>5000</b>	<b>25</b>	workshop	PWODS301  PWOF301  PWOMW301	

		Material : steel				PWORA301 PWORW301 PWOU301	
2	<b>Trowel</b>	<ul style="list-style-type: none"> <li>• brick trowel with wooden handle: 15.24cm or 25.4cm.</li> <li>• material: carbon steel /stainless steel. 1.4mm</li> </ul>	2000	30	workshop	PWODS301 PWOMW301 PWORW301	
3	<b>Hoe</b>	<ul style="list-style-type: none"> <li>• Shree rattan digging hoe(materials of metal)</li> <li>• grubbing hoe ( size of 6 inch wide, Made with premium grade steel and wood)</li> </ul>	5000	25	workshop	PWODS301 PWOF301 PWOMW301 PWORW301 PWOU301	

		<ul style="list-style-type: none"> <li>• 4 inch grubbing hoe( materials of premium grade steel and wood)</li> </ul>				PWOUM301	
4	<b>Tape measure</b>	<ul style="list-style-type: none"> <li>• Material: Stainley33-553 tape measure</li> <li>• Length: 5m</li> <li>• Width : 25mm blade)</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>• Material : Steel tape</li> <li>• color: red/black,</li> <li>• length 5m and</li> <li>• width16mm)</li> </ul>	1000	30	workshop	PWOMW301 PWORW301 PWODS301 PWOFE301 PWORS301 RWORA301 PWouc301	
5	<b>T square</b>	Metal Engineers Try Square Material: Metal Thickness: 10mm/0.4 inch Length: 30cm/12 inch	5000	12	workshop	PWOMW301 PWODS301	

		Handle Length: 12.5cm/4.9 inch Centimeter ruler marking on both sides				PWORW301  PWOTD301	
6	<b>Pick Axes</b>	<ul style="list-style-type: none"> <li>Pick Axe Beech Wood Shaft Wooden Handle 7lb Pick Head for garden digging tool.</li> <li>material :7Lb Pick Axe steel head complete with heavy duty <b>Beech</b> <b>Wood</b> Handle/ Shaft</li> <li><b>size: Beech</b> <b>Wood</b> Handle/ Shaft90cm (36in) and 1 PICKAXE7 Lb. Forged steel head</li> </ul>	10,000	12	workshop	PWODS301  PWOFE301  PWOMW301  PWORW301	

7	<b>Forked hoe</b>	<p>Canterbury Hoe Fork, Forged 3 Tines.</p> <ul style="list-style-type: none"> <li>• Material: high grade carbon steel.</li> <li>• Head dimension: long: 12-1/2 inch and wide: 6-3/4 inch</li> </ul> <p>Weight: 1.4 kg</p> <p style="text-align: center;">or</p> <p>Digging Fork Hoe Height: 22 cm; Width: 14 cm; Weight: 1.4 kg, 110 cm wooden handle tool.</p>	5000	25	workshop	PWOF301	
8	<b>Hammer</b>	2.5 kg hammer	7000	25	workshop	PWORW301  PWOU301  PWOU301	

						PWODS301 PWOFE301 PWORA301	
9	<b>Long tape measure</b>	<ul style="list-style-type: none"> <li>• Large Tape Measure Engineer, Super</li> <li>• material: Steel</li> <li>• length 50m,</li> <li>• width 10mm</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>• TPM-50C tape</li> <li>• length 50m,</li> <li>• width 13mm,</li> <li>• materials glass fiber</li> </ul>	30,000	8	workshop	PWOMW301 PWORW301 PWOU301 PWOFE301 PWORS301 PWORA301	
10	<b>Marking tape</b>	Hazard red & white marking tape	10,000	10	workshop	PWOMW301	

		<ul style="list-style-type: none"> <li>length 33m,</li> <li>width 50mm,</li> <li>color: red and white.</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>TESA 60760 marking tape</li> <li>Color: red/white</li> <li>length 33m,</li> <li>width 50mm.</li> </ul>				PWORW301	
11	<b>Calibrated spirit level</b>	<ul style="list-style-type: none"> <li>Material : Good quality aluminum body spirit level.</li> <li>Length: 600 mm</li> <li>includes 3 vials: horizontal, vertical,</li> </ul>	5000	30	workshop	PWODS301 PWOMW301 PWORW301	

		and 45° angle.					
12	<b>Plumb bob</b>	<ul style="list-style-type: none"> <li>• Material: full brass</li> <li>• weight 100 gram)</li> </ul>	10,000	12	workshop	PWOMW301	
13	<b>Machete</b>	<ul style="list-style-type: none"> <li>• Material: Steel blade and Wooden Handle</li> <li>• Length: 18 inches</li> <li>• Item Code: CMW318</li> </ul>	3000	25	workshop	PWODS301  PWOFE301  PWOMW301	
14	<b>Hack saw</b>	<ul style="list-style-type: none"> <li>• Material: Steel frame.</li> <li>• Grip: Rubber grip, hard and comfortable.</li> <li>• Heigh : 98mm</li> <li>• Length:355mm</li> </ul>	5500	20	workshop		
15	<b>Hand saw</b>	<b>Steel Powerful Hand Saw 300mm (12 inch)</b> <ul style="list-style-type: none"> <li>• material: hardened steel</li> </ul>	10000	25	workshop		

		<ul style="list-style-type: none"> <li>• wood/ plastic handle</li> <li>• Blade length: 12 inch</li> <li>• weight: 256 g</li> </ul>					
16	<b>Wire brushes</b>	<ul style="list-style-type: none"> <li>• Type: Heavy duty brush</li> <li>• Bristle material: Steel</li> <li>• Bristle length: 37mm</li> <li>• Number of rows: 4</li> <li>• Brush depth: 290mm</li> </ul>	5000	30	workshop	PWOMW301 PWORW301 PWOU301	
17	<b>Paint scrapper</b>	<ul style="list-style-type: none"> <li>• Blade Width: 3inch</li> <li>• Blade Material: High Carbon Steel</li> <li>• Handle Material: Nylon</li> <li>• Stiff Blade,</li> </ul>	4000	25	workshop	PWORS301	

18	<b>Marker pen</b>	<ul style="list-style-type: none"> <li>• Marker: Tip: round; 3mm</li> <li>• <u>Color: black, blue, red, green</u></li> </ul>		10 boxes	workshop	PWOF301 PWOMW301	
19	<b>Wooden floats</b>	<ul style="list-style-type: none"> <li>• Material: wood</li> <li>• Size: 280mm x 140mm x 70mm</li> </ul>	2000	25	workshop	PWOMW301	
20	<b>Steel float</b>	<ul style="list-style-type: none"> <li>• Material: Stainless steel</li> <li>• Size: 280 x 130 mm</li> <li>• Weight: 0.46 kg</li> </ul>	5000	25	workshop		
21	<b>Claw bar</b>	<ul style="list-style-type: none"> <li>• Type: Both slotted claw and chisel ends are polished</li> <li>• Material: High carbon steel</li> </ul> <p>Size: 59 cm</p>		15	workshop	PWOUM301	
22	<b>Rake</b>	<ul style="list-style-type: none"> <li>• Material: Hot forged</li> </ul>	6000	20	workshop	6000	

		carbon steel					
		<ul style="list-style-type: none"> <li>• Size: 12 teeth</li> </ul>					
23	<b>Scriber</b>	<ul style="list-style-type: none"> <li>• Tip Diameter 4mm</li> <li>• Tip format round</li> <li>• Length 240mm</li> </ul>	5000	25	workshop	PWOTD301	
24	<b>Sledge hammer</b>	7.5 kg hammer	15500	10	workshop	PWOMW301 PWORW301 PWODS301 PWORA301	
25	<b>Pliers</b>	<ul style="list-style-type: none"> <li>• Material: Plastic coated handles Ideal for cutting edges on hard, medium &amp; soft wire Head</li> </ul>	5000	25	workshop	PWOMW301 PWORW301	

		<ul style="list-style-type: none"> <li>• Great for twisting &amp; cutting binding wire</li> <li>• Cutting edges approx. 61 HRC</li> </ul> <p>Cut Capacities Wire</p> <ul style="list-style-type: none"> <li>• Diameter: soft wire 4.0mm, med/ hard Wire 3.5mm, hard wire 2.8mm</li> </ul>					
26	<b>Rulers</b>	<ul style="list-style-type: none"> <li>• Material: Stainless steel</li> <li>• Type: Metric and Imperial Graduation; With conversion table on the back side</li> <li>• Length: 12 in(300mm)</li> </ul>	2500	25	workshop	PWOTD301	
27	<b>Chalk line</b>	<ul style="list-style-type: none"> <li>• Plastic line level with accuracy of 1mm/m</li> <li>• Net weight: 115 g</li> </ul>	9500	10 box set	workshop	PWOMW301	

		Length: 30 m					
28	<b>Triangles set</b>	Name: plastic ruler set Material : plastic Function : multi function Usage: school stationery	200,000	2	workshop	PWOTD301	
29	<b>Ranging rods</b>	rods diameter 30 mm long 2 m or 3 m l, painted with alternating bands, such as red and white, red and yellow, or black and white.	500,000	100	workshop	PWOMW301 PWORA301 PWOU301	
30	<b>Broom</b>	<ul style="list-style-type: none"> <li>• Material: plastic and wood</li> <li>• Size: medium</li> <li>• Height:1-1.5m</li> <li>• Color: any</li> </ul>	3000	25	workshop	PWOMW301 PWORW301 PWOU301	

31	<b>Steel square</b>	Material: stainless tape aluminum alloy base  Length of tape: 500mm  Base of 155mm	10,000	20	workshop	PWOMW301  PWORW301  PWOTD301  PWORA301	
32	<b>Straight edge</b>	<ul style="list-style-type: none"> <li>• Type: Lightweight and accurate straight edge</li> <li>• Material: Steel</li> <li>• Gauge: 1.5mm</li> </ul> Size: (40 X 40)mm	5000	60m	workshop	PWOMW301	
33	<b>Screw drivers</b>	Mixed sizes and shapes	20000	1set	workshop	PWORS301	
34	<b>Shovel</b>	Head material : Aluminium Alloy  Handle material : wood  Shape : sharp spade  Size: 30*24cm	5000	20	workshop	PWOF301  PWOMW301  PWOU301  PWOU301	

35	<b>Cutting knife</b>	<ul style="list-style-type: none"> <li>• knife sheath/chef knife</li> <li>• material: Rugged, forget tempered steel blade</li> </ul> Plastic dipped handle for comfort Sharped edge	14000	25	workshop	PWOUM301	
36	<b>Chisels</b>	<ul style="list-style-type: none"> <li>• Type: Masonry chisel</li> <li>• Blade material: Chrome Vanadium steel</li> <li>• Size: Blade width: 23mm</li> </ul>	3500	25	workshop	PWOUM301 PWOMW301 PWORW301	
37	<b>Traffic cone</b>	<b>size : 18 inch in height</b>	5,000	40	workshop	PWOUM301	

		<p>Base size: <b>15-1/4-inches.</b></p> <p>Hole diameter at top: 1-1/4-inches.</p> <p>Cone diameter at top: 2-3/16-inches.</p>					
38	<b>Ink pen</b>	<p>size : 5.5 inch</p> <p>weight: 21g</p> <p>content: 5 X Ballpoint Pens 5 x Refills</p>	5,000	20 boxes	workshop	<p>PWOTD301</p> <p>PWOMW301</p>	
39	<b>Compass</b>	<ul style="list-style-type: none"> <li>• Material: Polypropylene handle, No. 45 steel zinc alloy</li> <li>• Type: 25x90cm, 40x150cm (optional) Maximum radius of approximately:</li> </ul>	50,000	25	workshop	PWOTD301	

		75cm  Color: orange					
40	<b>Divider</b>	Material: Carbon steel Expand Size: 100mm	10,000	12	workshop	PWOTD301	
41	<b>Pencil sharpener</b>	size: 8mm diameter  height: 85mm  width: 54mm  weight : 3g  Sharp blade for long lastin  color: yellow, blue , green and red	5,000	1 boxes	workshop	PWOTD301	
42	<b>Drawing pencils</b>	type: standard pencil  body material: wood  material: carbon  weigh: 6.6g	5,000	50 boxes	workshop	PWOTD301	

		size: 0.5mm color: black usage: drawing shape: round					
43	Claw hammer	<ul style="list-style-type: none"> <li>• Metal handle claw hammer</li> <li>• Head Material : High carbon steel, forged steel head hardened</li> </ul>	7000	25	workshop	PWOMW301 PWORW301	

### 1.3. Category 3: Security materials

N°	Name and description	Specifications	Price	Quantity	Type of room	Module code	Learning hours
1	<b>PPE (Dust mask, Overall, gloves, helmet,</b>	<ul style="list-style-type: none"> <li>• . Dust mask: Model ( MH-D-103), Material ( non woven), Number of layers(3)</li> <li>• Overall: Model( DW-D59FA-O)</li> </ul>	<b>150,000</b>	<b>10 kits</b>	<b>Workshop</b>	<b>PWODS301</b> <b>PWOMW 301</b>	

	safety shoes, warning sign, warning tape)	<ul style="list-style-type: none"> <li>Gloves: Natural Rubber latex-ISO11193-1:2002, type1</li> <li>Helmet: Brand ( AKTION), Model Name(Safety Helmet RV-H21 Nape Type - Grey (Pack of 1), Model Number(SH004)</li> <li>Safety shoes(Penetration mid-sole, Steel or plastic Toe caps, Removable EVA Insole, Cushioned heel, Penetration Mid-sole, Padded collar, Heat and slip-resistant sole</li> <li>Warning sign Warning tape (<b>Length:</b>100m <b>Colour:</b> Red and white <b>Material: Plastic)</b></li> </ul>				<b>PWORS 301</b>  <b>PWOFE301</b>  <b>PWOHS301</b>  <b>PWOPR301</b>  <b>PWOUM301</b>  <b>PWOUC301</b>  <b>PWORW301</b>  <b>PWOTD301</b>	
2	Fire extinguisher( powder)	<ul style="list-style-type: none"> <li>Fire Rating 34 A 233 B C.</li> <li>Extinguishing agent EPW 18462(ABC Favorit Teritia).</li> <li>ABC powder MAP 20%.</li> <li>PROPELLANT Dehumidified air or N2,15 Bar at 20<sup>0</sup> C</li> </ul>	50,000	5	Workshop	PWODS301  PWOFE301  PWOMW301  PWORS301 PWOHS301 PWOPR301	

						PWOUM301 PWOU301 PWORW301 PWOTD301	
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**1.4. Category 4: Consumables and raw materials**

SN	Name and description	Specification	Price/Unit	Quantity	Type of room	Module Code	Learning hour (s)
1.	Marker pen (All Modules)	<b>Constituent:</b> consists of a container (glass, aluminum or plastic) and a core of an absorbent material	5000	50	Workshop Classroom and office.	PWODS301 PWOF301 PWOMW301 PWORS301	

						PWORA301 PWOTD301 PWOHS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
2.	Chalks (All modules)	<p><b>Colors:</b> white &amp; Yellow)</p> <p><b>Shape:</b> cylindrical, extruded</p> <p><b>Length:</b> 80 mm, <b>diameter :</b>10 mm.</p> <p><b>Material:</b> 60% Calcium carbonate, 29% Talcum Powder, 11% Bentonite</p>	5000	50	Workshop	PWODS301  PWOFE301  PWOMW301  PWORS301 PWORA301 PWOTD301 PWOHS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	

3.	Blackboard	<p><b>Size:</b> (6*1.2) m</p> <p><b>Color:</b> Black / Green</p>	1000,000	2	Classroom	PWODS301 PWOFE301 PWOMW301 PWORS301 PWORA301 PWOTD301 PWOHS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
4	Lubricants	<p><b>Material:</b> 80–90% petroleum hydrocarbon distillate with 10–20% additives to impart specific properties to the oil.</p> <p><b>State:</b> Viscous</p> <p><b>Color:</b> white, gray, black, silver, blue,</p>	15,000	10	Workshop/Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOPR301 PWOUN301	

		green, red, purple, and every variation of brown, from golden honey to dark, earth tones.				PWOUC301 PWORW301	
5	Cement,	CIMERWA:42.5 CIMERWA:32.5 CIMERWA:22.5	12000	50	Workshop/Store	PWODS301 PWOMW301 PWORS301 PWOPR301 PWORW301	
6	Stones,	Material: is a mass of <b>hard, compacted mineral</b> . Size: Cobbles, ranging in size from <b>64 mm to 256 mm</b> , are a size larger than coarse gravel.	60000	5	Workshop/Store	PWODS301 PWOMW301 PWORS301 PWOPR301 PWOUN301 PWOUC301 PWORW301	

7	Sand,	Stainless steel Effective D10 :0.83mm D30:1.1mm Mean size D50:1.4mm D60:1.5mm	60000	5	Workshop/Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWORA301 PWOTD301 PWOHS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
8	Water	<b>Colour:</b> Colourless <b>State:</b> Liquid <b>Density:</b> 1 g/cm <sup>3</sup>	1000		Workshop, classroom and office	PWODS301 PWOMW301 PWORS301 PWOHS301 PWOPR301 PWOUN301	

						PWOUC301 PWORW301	
9	Nails	<p><b>Size:</b>5mm,6mm,8mm,10mm,12 mm,</p> <p><b>Material:</b> Steel</p> <p><b>Colour:</b> Grey</p>	2500	200 kg	Workshop/Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOPR301 PWOUN301 PWOUC301 PWORW301	
10	Aggregate	<p><b>Materials:</b> raw materials those are produced from natural sources and extracted from pits and quarries, <b>Size:</b> 9.5mm and 37.5mm in diameter.</p> <p>Typically, the most common size of aggregate used in construction is 20mm.</p>	60,000	10 Trucks	Workshop/Store	PWODS301 PWOMW301 PWORS301 PWOPR301 PWOUN301 PWOUC301	

						PWORW301	
11	Lubricants	<p><b>Material:</b> 80–90% petroleum hydrocarbon distillate with 10–20% additives to impart specific properties to the oil.</p> <p><b>State:</b> Viscous</p> <p><b>Color:</b> white, gray, black, silver, blue, green, red, purple, and every variation of brown, from golden honey to dark, earth tones.</p>	15,000	10 L	Workshop/Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
12	Steel bar	<p><b>Material:</b> Stainless steel</p> <p><b>Colour:</b> Silver or Grey</p> <p><b>Shape:</b> Round, Square, and Flat bars.</p> <p><b>Size:</b> 8mm, 10mm, 12mm, 16mm, 20mm, 25mm, 32mm, 36mm (Dia)</p>	15,000	100	Workshop/Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOPR301	

		meter) Length:				PWOUM301 PWOU301 PWORW301	
13	Building line	Material: Plastic Colours: Green, Red Orange and Yellow	500	50	Workshop/Store	PWODS301 PWOF301 PWOMW301 PWORS301 PWOPR301 PWOUM301 PWOU301 PWORW301	
14	Books	<ul style="list-style-type: none"> <li>Engineering Books Especially highway books</li> </ul>	2,000,000	ff	Library	PWODS301 PWOF301 PWOMW301 PWORS301 PWOHS301	

						PWOPR301 PWOUN301 PWOUN301 PWORW301	
15	Chalks	<p><b>Colors:</b> white &amp; Yellow)</p> <p><b>Shape:</b> cylindrical, extruded</p> <p><b>Length:</b> 80 mm, <b>diameter :</b>10 mm.</p> <p><b>Material:</b> 60% Calcium carbonate, 29% Talcum Powder, 11% Bentonite.</p>	5000	50	Workshop/Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
16	Pegs	<ul style="list-style-type: none"> <li>• Material: Timber and Wood.</li> <li>• Size: 2.5 cm</li> <li>• Shape: square</li> </ul>	1000	900	Workshop/Store	PWODS301 PWOFE301 PWOMW301	

						PWORS301 PWOHS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
17	profile board	<ul style="list-style-type: none"> <li>• Material: Timber and Wood.</li> <li>• Size: 5 cm</li> <li>• Shape: square</li> </ul>	1000	500	Workshop/Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
18	admixtures	<ul style="list-style-type: none"> <li>• Slump retention polycarboxylate super plasticizer</li> </ul>	1,000,000	ff	Workshop/store	PWODS301 PWOMW301	

		<ul style="list-style-type: none"> <li>• Poly Carboxylate Ether</li> <li>• Polycarboxylate Ether (PCE); Hyper Plasticizers</li> <li>• Polycarboxylic Acid Ether (PCA); Polycarboxylic Acid Super plasticizer</li> <li>• Water Reducing Agent; Water Reducing Admixture.</li> </ul>				PWORS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
19	pipes	<b>Material:</b> PVC <b>Thickness :</b> 2”	7,000	20	Workshop	PWODS301 PWOMW301 PWOPR301	

						PWOUM301 PWOU301 PWORW301	
20	builder's line	<p><b>Material:</b> Cotton, Nylon, Polyethylene</p> <p><b>Colour:</b> Orange, White, Red, Green, Blue.</p> <p><b>Length:</b> 15m (50ft), 20m (65ft), 60m (195ft), 125m (410ft), 470m (1540ft)</p>	500	100	Workshop	PWODS301  PWOF301  PWOMW301  PWORS301 PWOPR301 PWOUM301 PWOU301 PWORW301	
21	bricks	<ul style="list-style-type: none"> <li>• Building Brick C 62.</li> <li>• Hollow Brick C 652</li> <li>• Pedestrian and Light Traffic</li> </ul>	20,000	50	Workshop	PWODS301  PWOMW301  PWOPR301 PWORW301	

		<p>Paving Brick C 902.</p> <ul style="list-style-type: none"> <li>• Heavy Vehicular Paving Brick C 1272.</li> </ul>					
22	Scotch	<ul style="list-style-type: none"> <li>• Light packaging-use OPP Tape, or adhesive tape transparent, roll 54g</li> <li>• Unit: piece</li> </ul>	3000	4	Workshop and Store	PWORS301 PWOPR301	
23	pavers	<ul style="list-style-type: none"> <li>• Ideal to overlay or create a new patio or walkway</li> <li>• Classic brick color tones</li> <li>• Classic square shape with smooth surface</li> <li>• Subtle blend of gray color tones</li> <li>• Classic, easy-to-install rectangular shape</li> </ul>	2,000	1,000	Workshop	PWODS301 PWOMW301 PWOPR301	

24	screws	<ul style="list-style-type: none"> <li>• Drywall Screw</li> <li>• Masonry Screw</li> <li>• Sheet metal Screw</li> </ul>	5,000	25	Store	PWORS301	
25	Paraffin	puriss., meets analytical specification of Ph. Eur., BP, viscous liquid	70,000	4	Store	PWORS301	
26	thinner	<ul style="list-style-type: none"> <li>• Low VOC</li> <li>• Fast Evaporation Rate</li> <li>• Enhances Adhesion to Plastic Substrates</li> <li>• Highly Miscible with Other Common Organic Solvents</li> <li>• Compatible with most substrates used in electronic</li> </ul>	60,000	4	Store	PWORS301	

		parts and enclosures					
27	binding wires	<ul style="list-style-type: none"> <li>• Should be 16 or 18 gauge annealed wire conforming to IS 280.</li> <li>• It shall be free from rust, oil, paint, grease, loose mill scale or any type.</li> <li>• The Tensile Strength: 250-430 N/mm<sup>2</sup>.</li> </ul>	200	50 Kg	Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
28	murrum	<ul style="list-style-type: none"> <li>• Deep weathered layer form which silica has been leached.</li> <li>• There is no humus, but an accumulation of Aluminium and iron oxides and hydroxides.</li> <li>• Reddish in color &amp; is imparted by the iron</li> </ul>	3,000	20 m <sup>3</sup>	Dumping site	PWODS301 PWOFE301 PWOPR301 PWOUN301 PWOUN301	

		compounds.					
29	honey combs	<ul style="list-style-type: none"> <li>• Concrete Honeycombs</li> <li>• Thermoplastic Honeycombs.</li> <li>• Stainless Steel Honeycombs</li> </ul>	1,000	1,000	Store	PWOPR301 PWORW301	
30	hollow tubes	<ul style="list-style-type: none"> <li>• <b>Material:</b> Stainless Steel Beam</li> <li>• <b>Shape:</b> Round</li> <li>• <b>Size:</b> 10 cm diameter</li> </ul>	15,000	100	workshop	PWODS301 PWOMW301 PWORS301 PWOPR301 PWORW301	
31	grasses	<ul style="list-style-type: none"> <li>• Feather Reed Grass</li> <li>• Fountain Grass</li> <li>• Little Bluestem.</li> </ul>	800,000	ff	workshop	PWODS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	

32	flowers	<ul style="list-style-type: none"> <li>• Pea Plant</li> <li>• Garden Pea</li> </ul>	500,000	ff	Construction site	PWODS301 PWOPR301 PWORW301	
33	geotextile membrane	<ul style="list-style-type: none"> <li>• non-woven geotextile</li> <li>• woven geotextile</li> <li>• HDPE Geomembrane</li> <li>• LLDPE Geomembrane</li> </ul>	50,000	10 m <sup>2</sup>	Workshop	PWODS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
34	Gabion basket	<ul style="list-style-type: none"> <li>• The fabric of the gabions shall be triple twisted hexagonal woven steel wire mesh.</li> <li>• The wire shall be galvanized before weaving.</li> </ul>	200,000	5	Workshop	PWORW301 PWOPR301	

		<ul style="list-style-type: none"> <li>• All wire used in the manufacture and tying of gabion shall comply with the BS.1052: 1980 "Mild steel wire for general engineering purposes.</li> <li>• Shall be galvanized in accordance with BS 443: 1982 "Specifications for testing zinc coatings on steel wire and for quality requirements."</li> </ul>					
35	manure	<ul style="list-style-type: none"> <li>• Farmyard manure (FYM)</li> </ul>	10,000	10 m <sup>3</sup>	Construction site	PWOPR301 PWORW301	

36	Chalk lime	<ul style="list-style-type: none"> <li>• BY 290345951.001-2019 "Finely ground chalk.</li> <li>• Mass content of calcium carbonate (CaCO<sub>3</sub>), % not less than 86.</li> <li>• Mass content of moisture, % no more than 1.0</li> <li>• Mass content of residue insoluble in hydrochloric acid, % no more than 5.0</li> </ul>	20,000	10 Bags	Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
37	Geogrid	<ul style="list-style-type: none"> <li>• Triangular geogrid has the same tensile strengths of 10 kN/m in the diagonal direction, X</li> <li>• Cross machine direction, C. On the other hand, biaxial geogrid has</li> </ul>	20,000	5 m <sup>2</sup>	Store	PWODS301 PWOMW301 PWOPR301 PWOUN301 PWOUN301	

		different tensile strengths; 34 kN/m in machine direction, M, and 43 kN/m in cross machine direction, C.				PWORW301	
38	Burner	<ul style="list-style-type: none"> <li>• Heavy Duty Cooker - 2 Burners - Gas - Single Unit - 70cm Deep.</li> <li>• Best selling various specifications sunny burner gas stove 5 burner gas cooker modern novel design home appliance gas stove oven</li> <li>• 30L NTRL/CSA Certified Convection Oven (13x12x12, 250C) w/ Digital Temperature</li> </ul>	5,000,000	2	Workshop	PWODS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	

		Controller - BPG-7032					
39	Quarry Dust	<ul style="list-style-type: none"> <li>• Consistency test: 33 %</li> <li>• Fineness test: 4%</li> <li>• Specific gravity:3.2%</li> <li>• Water Absorption:0.5 %</li> </ul>	20,000	10 m <sup>3</sup>	Dumping site	PWOMW301 PWORS301 PWOPR301 PWOUN301 PWOUN301 PWORW301	
40	paint	<ul style="list-style-type: none"> <li>• Alkyd enamel outdoor Alkyd mixed paint bright industrial anti-corrosive metallic paint</li> <li>• High Quality Material anti-static floor Epoxy Floor Coating Paint floor epoxy paints</li> <li>• High quality anticorrosive strong</li> </ul>	12,000	30L	Store	PWORS301 PWOHS301 PWOPR301 PWORW301	

		<p>adhesion alkyd paint alkyd paint anti rust liquid coatings Iron surface</p> <ul style="list-style-type: none"> <li>• Rust Proof Metal Spray Paint Waterborne Paint Primer Alkyd Based Coating Anticorrosive Industrial Water-based Paint</li> </ul>					
<b>41</b>	Sign posts	<ul style="list-style-type: none"> <li>• Material: 100 % Stainless steel</li> <li>• Shape: round</li> <li>• Size: 10 cm</li> </ul>	50,000	25	Store	PWORS301 PWOPR301	
<b>42</b>	Papers	<ul style="list-style-type: none"> <li>• Material: 100% wood pulp</li> <li>• Size: A4,</li> <li>• Letter size(8.5"x11"),</li> </ul>	6,000	25	Store	PWODS301 PWOFE301 PWOMW301	

		<ul style="list-style-type: none"> <li>• Legal size(8.5"x14")</li> <li>• Whiteness: 98-100%</li> </ul> Packing: 500 sheets per ream				PWORS301 PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
43	Rubbers	<ul style="list-style-type: none"> <li>✓ <b>Rubber</b> Materials and Products</li> <li>✓ <b>Rubber</b> Damper</li> <li>✓ <b>Rubber</b> Seal</li> <li>✓ Silica <b>Rubber</b></li> <li>✓ Magnetic <b>Rubber</b></li> </ul>	200	100	Store	PWOPR301 PWOTD301	
44	Pencils	<ul style="list-style-type: none"> <li>✓ High quality Yellow Black Standard Pencils .Custom HB Pencil Red Board Wood Yellow Body Children Pencil with Eraser.</li> <li>✓ 7 Inch Factory Direct Wholesale Natural</li> </ul>	200	100	Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301 PWOPR301	

		Wood HB Lead Pencils with Best Price				PWOUM301 PWOU301 PWORW301	
45	Flip chart	<ul style="list-style-type: none"> <li>✓ KBW 40x28 Height Adjustable Flipchart Easel Board Magnetic Tripod Stand Whiteboard Dry Erase Easel Board for Office Home School</li> <li>✓ 7.9-22B1 Dry erase whiteboard magnetic back white magnetic board magnetic whiteboard sticker</li> </ul>	50,000	4	Workshop Classroom and store.	PWODS301 PWOF301 PWOMW301 PWORS301 PWOHS301 PWOPR301 PWOUM301 PWOU301 PWORW301	

46	Masking tape	<ul style="list-style-type: none"> <li>✓ PTFE Adhesive Tape Smooth Surface High Adhesive F7025</li> <li>✓ PTFE Adhesive Tape Smooth Surface High Adhesive 6 Mil</li> </ul>	60,000	2	Store	PWOHS301 PWOPR301	
47	Lead mine	<ul style="list-style-type: none"> <li>✓ E-motion pure black twist pencil, 1.4 mm black.</li> <li>✓ Mechanical pencil Grip matic 1377, 0.7 mm</li> <li>✓ Mechanical pencil Grip 2011,0.7 mm silver</li> </ul>	1,000	50	Store	PWOPR301 PWOTD301	
48	Ink	<b>SPRAYON STENCIL SPRAY          INKS          MARSH STENCIL SPRAY          INKS          SPRAYON &amp; MARSH          STENCIL INKS;          Characteristics; Stencils.</b>	100,000	ff	Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301	

		<p><b>Surfaces; #42M;</b></p> <p><b>Characteristics;</b> Stencils.</p> <p><b>Surfaces;</b> Porous, Non-Porous Metal (drums), Lumber, Wood, Concrete, Rubber.</p> <p><b>Application;</b> Stencil - Foam, Rubber, Fountain Roller, Hand Stamp.</p> <p><b>Drying Time;</b> 2 Minutes.</p> <p><b>Colors:</b> Black, Red, Yellow, White, Green, Orange, Med Blue, Dark Blue.</p> <p><b>Application;</b> Aerosol Can.</p> <p><b>Drying Time;</b> 15 - 30 Seconds.</p> <p><b>Colors:</b> Black, Blue, Red, Yellow, White</p>				PWOPR301 PWOU301 PWOU301 PWORW301  PWOTD301	
49	eraser	<p><b>General Description:</b></p> <p>Eraser, soft, for pencil, box of 20</p> <p><b>Technical Specifications:</b></p>	300	100	Store	PWOPR301 PWOTD301	

		<p>Eraser, soft, white, synthetic or natural rubber, non-toxic, dimensions are 30 x 20 x 10mm. The eraser is able to remove pencil marks without staining and erode at a uniform rate.</p> <p><b>Weight and Volume:</b> Estimated weight: 0.250kg Estimated volume: 0.188cdm</p> <p><b>Packaging and labeling:</b> One box of 20 erasers, over-packed with 5 boxes (each of 20 erasers, i.e. 100 erasers in all).</p>					
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## 1. Training facilities

### 2.1. Furniture and office materials

SN	Name and description	Specification	Unity price	Quantity	Type of room	Module Code	Learning hour (s)
1	Laptop and its accessoires	<p><b>CPU:</b> Up to 11th Generation Intel Core i9-11980HK</p> <p><b>Graphics:</b> Up to NVIDIA GeForce RTX 3060 6GB GDDR6</p> <p><b>RAM:</b> Up to 64GB DDR4-3200MHz</p> <p><b>Screen:</b> 17.0" FHD+ (1920 x 1200) Infinity Edge Non-Touch Anti-Glare 500-Nit – 17.0" UHD+ (3840 x 2400) Infinity Edge Touch Anti-Reflective 500-Nit</p> <p><b>Storage:</b> Up to 4TB M.2 PCIe NVMe</p>	700,00	26	Computer Lab	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
2	Desktop & its accessories	<ul style="list-style-type: none"> <li>• Model No. K-21.504</li> <li>• Memory Type: DDR3</li> <li>• Use: Home/Commercial/Game</li> </ul>	395,373	3	Office room	PWODS301 PWOFE301 PWOMW301	

		<ul style="list-style-type: none"> <li>• CPU Frequency: 2.5-3.0GHz</li> <li>• Keywords: All in One PC</li> <li>• Colour: Black</li> <li>• Interface Type: HDMI, VGA, USB</li> <li>• Display Ratio: 16:9</li> <li>• Processor Series: Intel Core I7</li> <li>• Memory: &gt;4G</li> <li>• Hard Disk: SSD 500 GB</li> <li>• Display Resolution: 1920X1080 Power: 100-240V AC 50/60Hz</li> <li>• Output: 12V DC 6A 60W</li> <li>• Dimension: 60*15*45</li> <li>• Trademark: Kuai</li> </ul>				PWORS301 PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
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3	File box	<ul style="list-style-type: none"> <li>• Type: Display Book</li> <li>• Material: Plastic</li> <li>• Type Document Bag: Multiply</li> <li>• Size: A4</li> <li>• Feature: Label</li> <li>• Usage: Data Book</li> <li>• Model No. 5005</li> <li>• Colour: Assorted</li> <li>• Lock: Without Lock</li> <li>• Zipper: Without Zipper</li> <li>• Material: Plastic</li> <li>• Thickness: 0.6/0.03mm</li> </ul>	2500	25	Office room	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
4	Printer	<ul style="list-style-type: none"> <li>• Model no. all in one copier, printer and fax-0350</li> <li>• Function: print, copy, scan and fax</li> <li>• Without network printing</li> </ul>	700,000	2	Office room	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301 PWOPR301	

		<ul style="list-style-type: none"> <li>• Max printable size: A4</li> <li>• Laser type.</li> </ul>				PWOUUM301 PWOUUC301 PWORW301	
5	Paper	<ul style="list-style-type: none"> <li>• Material: 100% wood pulp</li> <li>• Size: A4,</li> <li>• Letter size(8.5"x11"),</li> <li>• Legal size(8.5"x14")</li> <li>• Whiteness: 98-100%</li> <li>• Packing: 500 sheets per ream</li> </ul>	6500	20	Office room	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301 PWOPR301 PWOUUM301 PWOUUC301 PWORW301	
6	Office table	<ul style="list-style-type: none"> <li>• Usage: office room/</li> <li>• Material: MDF</li> <li>• Color: woody</li> <li>• Style: Modern</li> <li>• Folded: Unfolded</li> <li>• Size:</li> </ul>	600,000	4	Office room	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301	

		<p>1200W*600d*750hmm</p> <ul style="list-style-type: none"> <li>• Drawers: 3 Drawers</li> </ul>				<p>PWOPR301  PWOUUM301  PWOUUC301  PWORW301</p>	
7	Chair	<ul style="list-style-type: none"> <li>• Model no. HY-128B</li> <li>• Rotary</li> <li>• Material: Genuine leather</li> <li>• Modern style</li> <li>• Dimension: 78*32*58 cm</li> </ul>	95,900	4	Office room	<p>PWODS301  PWOFE301  PWOMW301  PWORS301  PWOHS301  PWOPR301  PWOUUM301  PWOUUC301  PWORW301</p>	
8	Power extension cable(	<ul style="list-style-type: none"> <li>• Mode no. SR 530</li> <li>• Color: White</li> <li>• Cable length: 2 m</li> <li>• Hole digits: 6</li> <li>• Material: PC+ABS</li> </ul>	7000	12	Office room	<p>PWODS301  PWOFE301  PWOMW301  PWORS301</p>	

		<ul style="list-style-type: none"> <li>• Dimension: 370*70.5*43mm</li> </ul>				PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
9	Documents Shelf cupboard	<ul style="list-style-type: none"> <li>• Mode no. SZ-FC017</li> <li>• Condition: New</li> <li>• Wood style: woody</li> <li>• Material: wood</li> <li>• Door: 2</li> <li>• Length and width: (1.8*4)m</li> </ul>	418,250	7	Office room and Store	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
10	Pen	<ul style="list-style-type: none"> <li>• Mark: Bic</li> <li>• Colour: blue and red</li> <li>• Material: Plastic</li> <li>• Inner box: 50 pcs</li> </ul>	200	20 boxes	Office room	PWODS301 PWOFE301 PWOMW301	

						PWORS301 PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
11	Pencil	<ul style="list-style-type: none"> <li>• Body material: wood</li> <li>• Body colour: multiple</li> <li>• Lead diameter: 2.65mm</li> <li>• Dimension: 7 inches.</li> </ul>	150	25 pcs	Office room	PWODS301  PWOFE301  PWOMW301  PWORS301 PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
12	Marker	<ul style="list-style-type: none"> <li>• Color: Multi colour</li> <li>• Hardness: Medium soft</li> <li>• Ink type: Dry Erase</li> <li>• Point diameter: 4.5 mm</li> </ul>	300	5 boxes	Office room Class room Workshop	PWODS301  PWOFE301	

		<ul style="list-style-type: none"> <li>• Size: normal</li> <li>• Material: Plastic(polypropylene)</li> <li>• Dimension: 142*15mm</li> </ul>				PWOMW301 PWORS301 PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301	
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**1. Didactic materials**

<b>S/N</b>	<b>Name and description</b>	<b>Specifications</b>	<b>Unit price</b>	<b>Quantity</b>	<b>Type of room</b>	<b>Module code</b>	<b>Learning hours</b>
1	Cement	CIMERWA:42.5 CIMERWA:32.5 CIMERWA:22.5	12000	1bag	Workshop	PWODS301 PWOFE301 PWOMW 301 PWORA 301	

						PWORS 301 PWORW301 PWOUM301 PWOUS301 PWOPR301 PWOTD301	
2	Stones	Material: is a mass of <b>hard, compacted mineral</b> . Size: Cobbles, ranging in size from <b>64 mm to 256 mm</b> , are a size larger than coarse gravel.	60000	1	Workshop	PWODS301 PWOMW 301 PWOPR301 PWORS 301 PWORW301	

3	Sand	Stainless steel Effective D10 :0.83mm D30:1.1mm Mean size D50:1.4mm D60:1.5mm	300000	20m <sup>3</sup>	Workshop	PWODS301  PWOMW 301 P  PWORS 301  PWOPR301  PWORW301	
4	Water,	<b>Colour:</b> Colourless  State: Liquid  <b>Density:</b> 1 g/cm <sup>3</sup>	100	0.02m <sup>3</sup>	Workshop	PWODS301,  PWOMW 301,  PWOPR301  PWORW301	

						PWORS301	
5	Aggregate	<p><b>Materials:</b> raw materials that are produced from natural sources and extracted from pits and quarries,</p> <p><b>Size:</b> 9.5mm and 37.5mm in diameter. Typically, the most common size of aggregate used in construction is 20mm.</p>	20000	5m <sup>3</sup>		PWODS301, PWOMW 301, PWOPR301  PWORW301  PWORS301	
6	Lubricants	<p><b>Material:</b> 80–90% petroleum hydrocarbon distillate with 10–20% additives to impart specific properties to the</p>	15000	20L	Workshop	PWODS301  PWOFE301  PWOMW 301	

		oil. <b>State:</b> Viscous <b>Color:</b> white, gray, black, silver, blue, green, red, purple, and every variation of brown, from golden honey to dark, earth tones.				PWORA 301  PWORS 301 PWORW301 PWOUN301 PWOUS301 PWOPR301	
7	Steel bar	<b>Material:</b> Stainless steel <b>Colour:</b> Silver or Grey <b>Shape:</b> Round, Square, and Flat bars. <b>Size:</b> 8mm, 10mm, 12mm, 16mm, 20mm, 25mm, 32mm, 36mm (Di	16000	12m	Workshop	PWODS301, PWOMW 3001, PWOPR301, PWORW301	

		ameter) Length:					
8	Timber	<p><b>Cross-section:</b> pith or medulla, heartwood, sapwood, cambium layer, medullary rays, and the bark.</p> <p><b>Length:</b> 2.4, 3.0, 3.6, 4.2, 4.8, 5.4 &amp; 6.0m.</p> <p><b>stress grade:</b></p> <p><b>The moisture content of seasoned:</b> range from as low as 25% to as high as 100%.</p> <p><b>The moisture content of unseasoned:</b> ranges from 10% to 15%.</p>	5000	1pc		PWODS301 PWOMW 3001, PWOFE301, PWOPR301	
9	Building line	Material: Plastic	500	5pcs	Workshop	PWODS301, PWOFE301,	

		Colours: Green, Red Orange and Yellow				PWOMW 301 PWORA 301 PWORS 301 PWORW301 PWOUM301 PWOUS301 PWOPR301	
10	Fuel	State: Liquid Gas	2000	20L	>120 >120 70	Workshop PWOFE301, -20 PWOMW 3001, -20 PWODS301, -15 to -34 PWOMW 3001 PWORA 301 PWORS 3001 PWORW301	

						PWOUM301 PWOUS301 PWOPR301	
11	Nails	Size:5mm,6mm,8mm ,10mm,12mm Material: Steel Colour: Grey	2500	1kg	Workshop	PWOF301, PWOMW 3001, PWOMW 3001 PWOPR301 PWORW301 PWOUS301	
12	Warning tape	<b>Length:</b> 100m <b>Colour:</b> Red and white <b>Material: Plastic</b>	10000	1roll	Workshop	PWOF301, PWOMW 3001, PWODS301 PWODS301 PWOF301	

						PWOMW 301 PWORA 301 PWORS 301 PWORW301 PWOU301 PWOUS301 PWOHS301 PWOPR301	
13	Books	Engineering Books Especially highway books	200000 0	FF	Workshop	PWOF301 PWODS301 PWOF301 PWOMW 301 PWORA 301 PWORS 301	

						PWORW301 PWOUM301 PWOUS301 PWOHS301 PWOPR301	
14	Pen	Material: Plastic Colour: Red, blue, black, ... Mark: Bic Inner box:50pcs	200	5	Workshop	PWOF301 PWODS301 PWOF301 PWOMW 301 PWORA 301 PWORS 301 PWORW301 PWOUM301 PWOUS301	

						PWOHS301 PWOPR301	
15	Notebook	Cutting book Appeal book Register Class diary	2000	5	Workshop	PWODS301 PWOFE301 PWOMW 301 PWORA 301 PWORS 301 PWORW301 PWOUN301 PWOUS301 PWOHS301 PWOPR301 PWOFE301	

16	Marker pen	<b>Constituent:</b> consists of a container (glass, aluminum or plastic) and a core of an absorbent material	5000	5	Workshop	PWOF301 PWODS301 PWOF301 PWOMW 301 PWORA 301 PWORS 301 PWORW301 PWOUN301 PWOUS301 PWOHS301 PWOPR301	
17	Chalks	<b>Colors:</b> white & Yellow) <b>Shape:</b> cylindrical, extruded <b>Length:</b> 80 mm, <b>diameter :</b> 10 mm.	5000	1box	Workshop	PWOF301 PWODS301 PWOMW 301	

		<b>Material:</b> 60% Calcium carbonate, 29% Talcum Powder, 11% Bentonite.				PWORA 301 PWORS 301 PWORW301 PWOUM301 PWOUS301 PWOHS301 PWOPR301	
18	Pegs	Material: Timber/Wood. Size: 2.5 cm Shape: square	1000	10PCS	Workshop	PWOMW 301 PWODS301 PWOFE301 PWOMW 301 PWORA 301 PWORS 301 PWORW301	

						PWOUM301 PWOUS301 PWOPR301	
19	Pavers	<ul style="list-style-type: none"> <li>• Ideal to overlay or create a new patio or walkway</li> <li>• Classic brick color tones</li> <li>• Classic square shape with smooth surface</li> <li>• Subtle blend of gray color tones</li> <li>• Classic, easy-to-install rectangular shape</li> </ul>	1000	50	Workshop	PWODS301 PWOPR301 PWOMW 301	

20	Road paints	State:Fluid Colours:Red,Blue,Yellow,Black ,.....	12000	4buckets	Workshop	PWORS 3001	
21	Paraffin	puriss., meets analytical specification of Ph. Eur., BP, viscous liquid	70000	5	Workshop	PWOF301, PWOMW 3001, PWODS301, PWOMW 3001 PWORA 301  PWORS 3001 PWORW301 PWOUN301  PWOUS301	

22	Thinner	<ul style="list-style-type: none"> <li>• Low VOC</li> <li>• Fast Evaporation Rate</li> <li>• Enhances Adhesion to Plastic Substrates</li> <li>• Highly Miscible with Other Common Organic Solvents</li> <li>• Compatible with most substrates used in electronic parts and enclosures</li> </ul>	60000	5	Workshop	PWORS 3001	
23	Honey combs	<ul style="list-style-type: none"> <li>• Concrete Honeycombs</li> <li>• Thermoplastic Honeycombs.</li> <li>• Stainless Steel Honeycombs</li> </ul>	1000	100	Workshop	PWORW301	

**2. Audio-visual materials**

No	Name and description	Specifications		Quantity	Type of room	Module code
1	<b>Projector</b>	<ul style="list-style-type: none"> <li>• Brightness 3,600 ANSI Lumens</li> <li>• Resolution 800x600</li> <li>• Aspect Ratio 4:3 (SVGA)</li> <li>• Contrast 20,000:1 (full on/off)</li> <li>• Display Type DLP x 1</li> <li>• Color Processing 10-bit</li> <li>• Video Modes 720p, 1080i, 1080p/60, 1080p/24, 1080p/50, 576i, 576p, 480p, 480i</li> <li>• Data Modes MAX 1920x1200</li> <li>• Lamp Life 4,000 hours / 10,000 hours (Eco)</li> <li>• Lamp Model MC. JPV11.001</li> </ul>	700,000	1	Classroom	PWODS301  PWOF301  PWOMW301  PWORS301 PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301

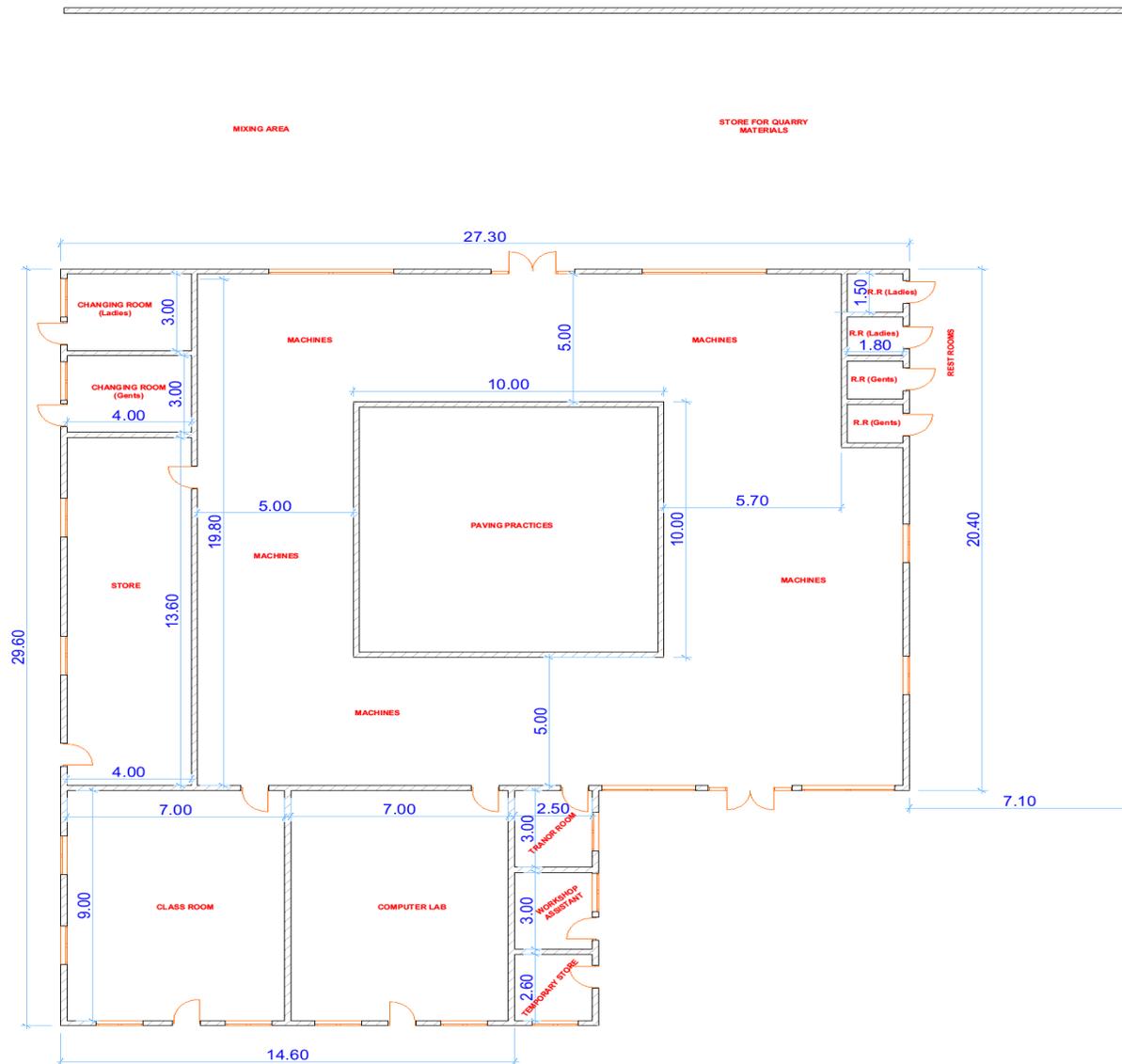
		<ul style="list-style-type: none"> <li>• Digital Zoom Yes</li> <li>• Power 240 Watts 100V - 240V</li> <li>• Size 11 cm x 31 cm x 24 cm</li> </ul>				
2	<b>Projector board screen</b>	<ul style="list-style-type: none"> <li>• Length: 2m</li> <li>• Height: 1.5m</li> <li>• Colour: white</li> </ul>	300,000	1	<ul style="list-style-type: none"> <li>• Classroom</li> <li>• Workshop</li> </ul>	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301 PWOPR301 PWOUN301 PWOUN301 PWORW301
3	<b>Laptop</b>	<ul style="list-style-type: none"> <li>• 6200U CPU @ 2.30GHz 2.40 GHz</li> <li>• Installed RAM:8.00 GB (7.89 GB usable)</li> <li>• System type: 64-bit operating system, x64-based processor</li> <li>• RAM: 500 GB</li> </ul>	700,000	2	<ul style="list-style-type: none"> <li>• Classroom</li> <li>• Workshop</li> </ul>	PWODS301 PWOFE301 PWOMW301 PWORS301 PWOHS301

						PWOPR301 PWOUM301 PWOUC301 PWORW301
4	<b>Guiding drawings/ Chart wall</b>	<ul style="list-style-type: none"> <li>• Different sizes</li> <li>• Different colours</li> </ul>	200,000	10	<ul style="list-style-type: none"> <li>• Classroom</li> <li>• Workshop</li> </ul>	PWODS301 PWOMW 301 PWORS 301 PWOFE301 PWOHS301 PWOPR301 PWOUM301 PWOUC301 PWORW301 PWOTD301

#### **2.4. Infrastructures**

This level will need two kinds of the workshops one for competencies related to public works and another one related to processing.

The illustration bellow shows each workshop and its components:



**Proposed Workshop layout for  
Public Works**



**Recommendation for this documents:**

1. Entry requirements has to be revised refer to level descriptors
2. Items in yellow and green must be adjusted and removed for red
3. Compentancy named ruminant slaughter can change to assistant ruminant slaughter
4. Total credits for this curriculum must be adjusted to 80 credits
5. Missing components must be inserted for some illustration layaout
6. Learning hours must be inserted
7. Harmonise module codes in all documents