

# Subject Title: Livelihood and Trade Skills

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## *Introduction*

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The livelihood and trade skills domain is meant to transform the prevocational learners into autonomous and productive citizens of the society. This domain will involve a strong component of applied technology. To achieve such a state, students must develop capabilities, resources and opportunities to pursue individual, business management and entrepreneurial goals. Prevocational studies are of great importance in the development of vocational and trade skills and may be used to develop the multiple intelligences of the prevocational learner. This syllabus provides the platform for students to unleash their creative potentials, gain useful knowledge about materials and develop skills in various common trades. As livelihood and trade skills relate to the income generation capabilities of the students, they will also learn basic entrepreneurial skills that they can use to gain a living and to generate employment. Apart from improving the employability of the learners, the knowledge and skills acquired in this strand will foster their trainability in the various trades in which they can pursue further and specialised vocational training. This domain will require the tactile and kinesthetic engagement of pupils. ICT will be used across the domain wherever applicable in the practice of the trades. Students will primarily be engaged in real life situations to make their learning more concrete and meaningful. The main stands of this domain are materials in the environment, tools and equipment, designing, processing and making, health and safety, planning, organizing and managing resources, technological practices and entrepreneurial skills.

The objectives of livelihood and trade skills are achieved through the following areas of learning/trades:

- (i) Basic technical drawing
- (ii) Designing skills
- (iii) Food and Nutrition
- (iv) Agriculture
- (v) Woodwork
- (vi) Metalwork
- (vii) Fashion and Fabrics
- (viii) Housekeeping
- (ix) Bicycle maintenance
- (x) Motorcycle maintenance
- (xi) Plumbing and pipe fitting
- (xii) Basic electricity
- (xiii) Workshop practices
- (xiv) New technological practices
- (xv) Entrepreneurial skills

ICT will be used across the areas where applicable.

### *The aims of the Livelihood and Trade Skills are to:*

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- To develop basic graphical skills.
- To demonstrate application of the design process.
- To develop basic culinary skills and knowledge of food and nutrition.
- To develop knowledge of plants and gardening practices.
- To develop basic knowledge and technical skills in wood and metal trades.
- To develop knowledge and skills in fashion and fabrics.
- To develop knowledge and skills of housekeeping.
- To develop the knowledge and technical skills of maintaining bicycles and motorcycles.
- To promote the development of knowledge and skills in plumbing and pipe fitting.
- To develop basic knowledge and skills in electrical work.
- To develop skills to manage and maintain work areas, tools and equipment.
- To develop general knowledge of new processing techniques.
- To promote safe work practices in the various trades.
- To demonstrate knowledge of entrepreneurial skills.
- To encourage the use of ICT in the trades.

## *Assessment objectives*

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The approach to be adopted in the assessment of livelihood and trade skills should demarcate from the current summative assessment practices. Assessment should be primarily used to aid teachers to determine the mastery level achieved by students and give them feedback to meet specific competencies in the various trades. The following assessment routes should be envisaged for assessing the livelihood and trade skills:

### **(a) Diagnostic and formative assessment**

These forms of assessment will be used in the teaching and learning process to allow the teachers to take ongoing remedial measures in the acquisition of knowledge and skills in the trades.

### **(b) Continuous assessment**

The continuous mode of assessment should be promoted in testing the trade skills. It will involve the constant and regular measurement of the level of attainment of students in generic competencies related to the areas of learning. It should also be viewed as an opportunity for students to compensate weaknesses in certain trades by others of their interest and strengths.

### ***Project-based assessment***

Viewing the fact that livelihood and trade skills involve mainly the acquisition of skills, the use of project-based assessment will be highly reliable and valid. The tools used should include practical work, portfolios and logbooks. Teachers on their part are recommended to develop observation and performance checklists based on specific competencies to assess the work of students. Project work should not only be used to assess specific competencies in the trades, but also through which students can synthesise all knowledge and skills acquired from the diverse areas into a main project. Such an integrated approach can be adopted to overcome time constraints and be planned at least once per school term according to set themes. The themes selected should generally be from the immediate context and concern of students. This will allow them to make sense of their learning and apply it to practical and real life situations similar to onwards working conditions.

# Curriculum content

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## Year 1

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<b>Basic Technical Drawings</b>	<ul style="list-style-type: none"><li>• Basic technical drafting</li><li>• Freehand sketching</li><li>• Oblique projection</li></ul>
<b>Food and Nutrition</b>	<ul style="list-style-type: none"><li>• Basic kitchen utensils</li><li>• The three food groups</li><li>• Techniques of measuring ingredients</li><li>• Food and hygiene</li><li>• Basic culinary skills</li><li>• Health and safety: general safety in the kitchen and safe use of basic kitchen utensils</li><li>• Application of basic culinary skills</li></ul>
<b>Agriculture</b>	<ul style="list-style-type: none"><li>• Anatomy of plants</li><li>• Germination of seeds</li><li>• Plant requirements</li><li>• Common gardening tools and equipment</li><li>• Health and safety: safe handling and storage of gardening tools and equipment</li></ul>
<b>Woodwork</b>	<ul style="list-style-type: none"><li>• Classification of wood into softwood and hardwood</li><li>• Properties and uses of common softwoods and hardwoods</li><li>• Basic hand tools in wood trade</li><li>• Health and safety: general safety in the workshop and safe use of basic hand tools</li><li>• Manufacture of simple wooden artefacts</li></ul>

<b>Metalwork</b>	<ul style="list-style-type: none"> <li>• Classification of metals into ferrous and non – ferrous metals</li> <li>• Properties and uses of common non – ferrous metals</li> <li>• Basic hand tools in working metals</li> <li>• Health and safety: safe use of basic hand tools</li> <li>• Manufacture of simple metal artefacts</li> </ul>
<b>Fabrics</b>	<ul style="list-style-type: none"> <li>• Classification of natural fibres</li> <li>• Properties and uses of plant fibres: cotton, jute, aloe and vacoas</li> <li>• Basic sewing equipment</li> <li>• Basic sewing stitches</li> <li>• Health and safety: general safety practices and safe use of sewing equipment</li> <li>• Application of basic sewing skills</li> </ul>
<b>Entrepreneurial Skills</b>	<ul style="list-style-type: none"> <li>• Classification of expenditure and revenue</li> <li>• Household expenditure</li> <li>• Savings and uses</li> </ul>

### ***ADDITIONAL NOTES TO TEACHERS***

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- The content of this syllabus should be taught using an integrated approach, principally through project work, discussions, hands-on activities, field trips, groupwork and presentations.
- Students are to use ICT (Word processing, presentation and simple graphic software) to formulate, communicate and present solutions wherever applicable. Students will also use the internet to access relevant resources.

# Curriculum content

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## Year 2

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<b>Basic Technical Drawings</b>	<ul style="list-style-type: none"><li>• Isometric projection</li><li>• Basic rendering techniques</li></ul>
<b>Food and Nutrition</b>	<ul style="list-style-type: none"><li>• Areas of a kitchen</li><li>• Common household equipment</li><li>• Food and health</li><li>• Fruits and vegetables</li><li>• Importance and uses of water and beverages</li><li>• Methods of cooking</li><li>• Health and safety: safe cooking practices</li><li>• Working on recipes</li><li>• Application of cooking methods</li></ul>
<b>Agriculture</b>	<ul style="list-style-type: none"><li>• Types of soils</li><li>• Soil fertility</li><li>• Composting</li><li>• Land preparation</li><li>• Sowing seeds in pockets</li><li>• Health and safety: safe gardening practices</li></ul>
<b>Woodwork</b>	<ul style="list-style-type: none"><li>• Manufactured boards</li><li>• Power tools and equipment in wood trade</li><li>• Finishing of wooden artefacts</li><li>• Health and safety: safe use of power tools and equipment and safety measures when applying finishes</li><li>• Manufacture of wooden artefacts</li></ul>

<b>Metalwork</b>	<ul style="list-style-type: none"> <li>• Properties and uses of common ferrous metals</li> <li>• Power tools and equipment in working metals</li> <li>• Finishing of metal artefacts</li> <li>• Health and safety: safe use of power tools and equipment and safety measures when applying finishes</li> <li>• Manufacture of simple metal artefacts</li> </ul>
<b>Fabrics</b>	<ul style="list-style-type: none"> <li>• Properties and uses of animal fibres: wool and silk</li> <li>• Basic clothes styles</li> <li>• Fabric designs and fabric textures</li> <li>• Decorative techniques: basic embroidery stitches and appliqué</li> <li>• Health and safety: safe work practices</li> <li>• Application of decorative techniques</li> </ul>
<b>Entrepreneurial Skills</b>	<ul style="list-style-type: none"> <li>• Classification of goods and services: consumer goods and producer goods</li> </ul>

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# Curriculum content

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## Year 3

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<b>Basic Technical Drawings</b>	<ul style="list-style-type: none"><li>• Orthographic projection</li><li>• Flow charts</li></ul>
<b>Food and Nutrition</b>	<ul style="list-style-type: none"><li>• Pulses, eggs, fish, cereals, meat, poultry, milk and cheese</li><li>• Safe storage of food</li><li>• Making of main dishes</li><li>• Health and safety: safe cooking practices during preparation of main dishes</li><li>• Decoration and garnishing techniques</li><li>• Food preservation techniques</li></ul>
<b>Agriculture</b>	<ul style="list-style-type: none"><li>• Caring for plants</li><li>• Use of fungicides and pesticides</li><li>• Preparation of seed beds and furrows</li><li>• Sowing seeds on seed beds and in furrows</li><li>• Plant propagation techniques: stem cutting and air layering</li><li>• Health and safety: safe gardening practices and safe handling of chemicals</li></ul>
<b>Woodwork</b>	<ul style="list-style-type: none"><li>• Methods of fixing wooden parts</li><li>• Manufacture of wooden artefacts</li><li>• Health and safety: safe work practices during manufacture of products</li></ul>
<b>Metalwork</b>	<ul style="list-style-type: none"><li>• Methods of fixing metal parts</li><li>• Manufacture of metal artefacts</li><li>• Health and safety: safe work practices during manufacture of products</li></ul>

<b>Fashion and Fabrics</b>	<ul style="list-style-type: none"> <li>• Properties and uses of man- made textile fibres</li> <li>• Basic garment processes: realisation of seams, hems, fastenings</li> <li>• Taking body measurements</li> <li>• Basic pattern drafting for textile items</li> <li>• Sewing machines</li> <li>• Designing and making simple textile item(s)</li> </ul>
<b>Housekeeping</b>	<ul style="list-style-type: none"> <li>• Types of home</li> <li>• Areas of a house</li> <li>• Types of accommodations</li> <li>• Personal hygiene and etiquette</li> <li>• Grooming</li> <li>• Flower arrangement and table setting</li> <li>• Health and safety: recognition of hazards at home</li> </ul>
<b>Bicycle maintenance</b>	<ul style="list-style-type: none"> <li>• Parts of a bicycle</li> <li>• Tools and equipment used in the maintenance of bicycles</li> <li>• Servicing different parts of a bicycle</li> <li>• Health and safety: safe work practices during servicing of bicycles</li> </ul>
<b>Plumbing and Pipe Fitting</b>	<ul style="list-style-type: none"> <li>• Sources and treatment of water</li> <li>• Common sanitary appliances in a domestic building</li> <li>• Hand and machine tools used in plumbing and pipe fitting</li> <li>• Cutting materials and pipes</li> <li>• Health and safety: safe work practices in plumbing and pipe fitting</li> </ul>
<b>Entrepreneurial Skills</b>	<ul style="list-style-type: none"> <li>• Time and resource management</li> <li>• Types of businesses</li> </ul>

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# Curriculum content

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## Year 4

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<b>Designing skills</b>	<ul style="list-style-type: none"><li>• The design process</li><li>• Using the design process to design and make artefacts</li></ul>
<b>Cookery</b>	<ul style="list-style-type: none"><li>• Planning a balanced meal</li><li>• Menu costing</li><li>• Bakery and pastry</li><li>• Health and safety: safe work practices in bakery and pastry</li></ul>
<b>Agriculture</b>	<ul style="list-style-type: none"><li>• Grafting techniques</li><li>• Hydroponics</li><li>• Setting up a kitchen garden</li><li>• Health and safety: safe gardening practices</li></ul>
<b>Workshop practices</b>	<ul style="list-style-type: none"><li>• Stock management</li><li>• General maintenance of hand and power tools and equipment</li><li>• Health and safety: safe work practices during maintenance</li><li>• Arrangement of storage spaces</li></ul>
<b>New technological practices</b>	<ul style="list-style-type: none"><li>• Introduction to new processing techniques: CAD/CAM, Laser cutting, TIG and MIG</li></ul>
<b>Design, Clothing and Textile</b>	<ul style="list-style-type: none"><li>• Colour and colour trends in fashion and textiles</li><li>• Basic fashion designing</li><li>• Planning a wardrobe for tropical climates</li><li>• Electric sewing machine</li><li>• Designing and making of textile items</li></ul>

<b>Housekeeping</b>	<ul style="list-style-type: none"> <li>• Elements of housekeeping</li> <li>• Care of textile items: washing techniques, care labeling and stain removal</li> <li>• Ironing and folding techniques for garments and textile items</li> <li>• Cleaning and maintenance of different types of surfaces</li> <li>• Bed making</li> <li>• Health and safety: safe ironing practices and safe handling of cleaning agents and chemicals</li> <li>• Introduction to First Aid</li> </ul>
<b>Motorcycle maintenance</b>	<ul style="list-style-type: none"> <li>• Parts and systems of a motorcycle</li> <li>• The engine of a motorcycle</li> <li>• Tools and equipment used in the maintenance of motorcycles</li> <li>• Servicing different systems of a motorcycle</li> <li>• Health and safety: safe work practices during servicing of motorcycles</li> </ul>
<b>Plumbing and Pipe Fitting</b>	<ul style="list-style-type: none"> <li>• Types and uses of cocks, taps and valves</li> <li>• Threading operation</li> <li>• Joining and fixing of pipes</li> <li>• Health and safety: safe work practices in plumbing and pipe fitting</li> </ul>
<b>Basic electricity</b>	<ul style="list-style-type: none"> <li>• Health and safety: application of the requirements of fundamental safety principles in electrical work</li> <li>• Identification of and practice with common electrician hand tools</li> <li>• Measurement of carbon/ceramic resistances, AC and DC voltages</li> <li>• Wiring: 2-pin and 3-pin plugs, radial socket outlet circuits, lighting circuits</li> <li>• Main components of a Consumer's Unit</li> </ul>
<b>Entrepreneurial Skills</b>	<ul style="list-style-type: none"> <li>• Introduction to different methods of production: job, batch and flow</li> <li>• Budget planning</li> <li>• Preparing simple cost sheets</li> <li>• Setting up a small enterprise</li> </ul>

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