

NATIONAL SKILLS COMPETITION

Competitions Sub-Committee

CARPENTRY (BCC#3)

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INTRODUCTION

WorldSkills Jamaica, by a resolution of the National Organizing Committee and in accordance with the Constitution, the Standing Orders and the Competition Rules, has adopted the following minimum requirements for this skill for the National Skills Competition.

The Technical Description consists of the following:

- Section 1 – Technical/Competition Description (TD)
- Section 2 – Project Design Criteria (PD)
- Section 3 – Skill Management Procedures (SM)
- Section 4 – Workshop Setup (WS)
- Section 5 – Infrastructure List (IL)
- Section 6 – Appendices

Effective 01.04.07

Grace Mclean (GM)

Chairman, Competition Committee

01.04.07

Daphne Simmonds

Co-Chair

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The National Skills Competitions Sub-Committee has adopted the following minimum requirements for applicants' entry in the WorldSkills Jamaica Competition.

The effective date will be that date on which this document is issued, and is subject to change by the World Skills Jamaica Competition National Organizing Committee.

1. NAME AND DESCRIPTION OF SKILL

1.1 The name of the skill is:

1.1.1. Carpentry

1.2 Carpentry covers the setting out and construction of wooden roof-structures and other wooden structures of conventional and modern design.

1.3 **This technical description must be known to every candidate.**

1.4 Words implying masculine gender only shall include the feminine gender

2. SCOPE OF WORK OF THE COMPETITION

2.1 The test project consists only of practical work and drawing.

2.2 The theoretical knowledge is limited to that necessary to carry out the practical work.

2.3 The test project will be in modular form. Modular design means that the project consists of three parts that could be assembled together

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2.4 One (1) 3-D drawing should be provided to give a basic impression of the project.

The drawing will show the fully assembled test project with no dimensions.

2.1. PRACTICAL WORK

2.5.1 The competitor has to carry out, independently, the following tasks:

- Setting out and constructing structures
- Constructing roof-dormers and adjusting them to the main roof
- Constructing supporting hip and valley rafters on polygonal, rectangular circular and/or square roof layouts, with the same pitch or several different pitches circular and/or square roof layouts, with the same pitch or several different pitches
- Constructing tower roofs and adjusting them to the general roof design
- Other wooden structures
- Circular and detailed work

2.5.2 The appropriate technical skills are:

- Setting out a complete roof or other structure with horizontal and upright projections
- Setting out the supporting structure
- Determining all measurements, lengths, sections, angles, mitres etc., necessary for carrying out the test project
- Drawing the actual measurements and angles on to the pieces of timber
- Manufacturing the parts (joining)
- Assembling and fastening all components of the structure (erecting)

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3. SKILL MANAGEMENT PROCEDURES (SM)

3.1. DOCUMENTS REQUIRED

3.1.1 The Chief Expert will have available a current copy of all documents associated with this skill for the Competition.

3.1.2 The documents required are:

- Technical Description
- Competition Rules
- Health and Safety documents
- QAMS – all documents
- Any other documents referred to in the documents listed above.

3.1.3 While it is understood that the Chief Expert will have a copy of these documents in there shall also be a complete set that is available for the experts and other competition workers.

3.1.4 The Chief Expert is expected to have a sound knowledge of the requirements and procedures specified in the documentation.

3.1.5 The Jury President is expected to have a thorough knowledge and understanding of the requirements and procedures specified in the documentation.

3.2. PRE-COMPETITION RESPONSIBILITIES

3.2.1 In the period between one National Skills Competition and the next, the elected Chief Expert is responsible to ensure that the requirements of Section 2 – Project Design Criteria are complied with.

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3.3. SKILL MANAGEMENT PROCEDURES FOR THE CHIEF EXPERTS

The following speaks to procedures prior to and during the Competition

3.3.1 The procedures specified below must be adhered to.

3.3.2 On arrival at the Competition site for the first time, the Chief Expert must:

- Welcome the experts and ensure introductions are made
- Inform them of their duties and responsibilities in terms of the Competition Rules and Standing Orders
- Ensure that the project is endorsed by all the experts and that a copy is signed by all the experts

3.3.3 The Chief Expert will then divide the experts into teams for the following activities:

- Verify that the material on site is appropriate and sufficient
- Verify again that the quantities of material as specified on the material list is accurate
- Develop a program for the competitors to complete the modules
- Develop timetables for activities
- Set up equipment
- Confirm that the layout, work areas and equipment are in accordance with the workshop setup requirements
- Confirm that all machinery/equipment is in a safe working order
- Confirm that all workstations/machinery/equipment are in accordance with the plan, and that they are numbered
- Confirm that there is sufficient illumination
- Confirm that there is sufficient space for the competitors to work efficiently
- Confirm that the barriers are far enough removed from the competitors to ensure that there will be no interference, and if they are not, set up a roster among the experts to police the area during the Competition

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- If necessary, set up duty rosters for activities during the Competition – e.g. keeping watch during lunch, preventing access of unauthorised persons, etc
- 3.3.4 The Chief Expert will then divide the experts into teams for purpose of marking and setting up marking schedules in accordance with the requirements.
- 3.3.5 Suggestions and comments for the revision and improvement of the Technical Description are to be provided to the Deputy Chief Expert in writing. The Deputy Chief Expert will reduce the information to a single typed document ready for discussion by all experts. Prior to leaving the Competition site, the Chief Expert, the Deputy Chief Expert and the Jury President will facilitate the discussion and revision of the Technical Description.
- 3.3.6 At any time that a unanimous decision is not achieved within a reasonable time, the Chief Expert will put the matter under discussion to the vote. A majority will be 50% of the experts present plus one. This decision will be final. In the event that an expert is absent at the time that the vote takes place, he/she has the right to be informed of the decision but the matter will not be raised again or voted upon again. The exception to this majority rule will be in the case of approval of the changes to the Technical Description, where the majority of 80% is required.
- 3.3.7 In the event that an extension of time is requested for the Competition to exceed the allotted hours, the matter must be discussed with the Jury President. All possible alternative solutions must be investigated before approval of an extension of time is requested, or will be approved.
- 3.3.8 Prior to the end of the Competition, the Jury President will facilitate the selection of the Chief Expert and Deputy Chief Expert for the next national Skills Competition.
- 3.3.9 Experts are eligible for selection as a Chief Expert if they:

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- Have attended the National Skills Competition at least twice before (if less than 4 experts have been to the National Skills Competition before, this criterion may be relaxed at the discretion of the Jury President)
- Demonstrate a high degree of expertise in the skill
- Demonstrate leadership qualities.
- Are competent using a computer and the Internet – specifically to facilitate the Discussion Forum for their skill category.

3.3.10 The process by which selection will take place is by secret ballot and is as follows:

- Each expert present will list their choice of three experts in order of preference
- The Jury President will allocate a score of three (3) points to each expert's first preference, two (2) points to the second preference and one (1) point to the third preference
- The Jury President will then calculate total scores and announce the three highest scoring experts
- The expert with the highest score will be appointed Chief Expert for the next National Skills Competition
- If the first choice cannot attend, then the second choice will be Chief Expert
- If the first and second choice cannot attend, then the third choice will attend
- If none of the choices can attend, then the jury president will appoint, or facilitate the appointment of a Chief Expert
- The names of the selected experts will be entered into the provided documentation and signed by the Jury President and returned to the co-chair of the competitions committee.

3.3.11 Changes to the method of Competition design or suggestions offered for the next Competition design process or tasks must be written down and signed by 80% of the experts.

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3.3.12 The Deputy Chief Expert's primary role is to ensure that the Technical Description is updated to reflect the technological advances of the skill category and include overall improvements for the preparation and running of the Competition. He/she will ensure that all changes to the Technical Description are entered, that all experts sign it, and that it is delivered to the co-chair of the competitions committee as a hard copy and digitally.

3.3.13 The Deputy Chief Expert also assists in the distribution and collection of the QAMS Audit Questionnaires and assists the Chief Expert where necessary.

3.4. HONESTY AND TRANSPARENCY

3.4.1 The competitors that attend the National Skills Competition have the right to expect fair and honest treatment during the Competition in terms of the following:

- Instructions that are clear and unambiguous
- Marking schedules that provide no advantage to an opposing competitor
- All necessary equipment and material specified within the skill documentation that are required to complete the Competition
- The assistance necessary from judges and officials to ensure that he is able to complete the project. (The assistance deemed necessary will be provided equally and at the same time to all competitors present)
- No undue interference by officials or spectators that may hinder them in the completion of their project

3.4.2 Every competitor has the right to expect and demand that no opposing competitors will receive undue or unfair assistance or intervention that may provide that opposing competitor with an unfair advantage.

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- 3.4.3 All officials and judges present on the Competition site are expected to ensure that paragraphs 3.4.1 and 3.4.2 above are complied with and maintained.
- 3.4.4 It is the responsibility of the Chief Expert or his Deputy to ensure that all competitors, interpreters, officials and judges comply with and maintain the integrity of the Competition, and additionally ensure that all necessary steps are taken to ensure that:
- Outside influences do not unduly improve or decrease competitors' abilities to provide a worthy performance.
- 3.4.5 A briefing will be provided to all experts and competitors on the requirements for integrity during the Competition.
- 3.4.6 Additionally, the Chief Expert is expected to identify these and any other factors that may exist on the Competition site that may result in the contravention of paragraphs 3.4.1 and 3.4.2 above, and reduce them to a checklist for continuous reference.
- 3.4.7 In the event that any competitor, judge, official, observer or competitor compatriot is found to be attempting to gain or provide assistance in any form that may result in an unfair advantage, the Chief Expert is to immediately refer the matter to the Jury President.
- 3.4.8 The Chief Expert will receive nominations and appoint a Security Officer whose responsibility it will be to ensure that these requirements are carried out.
- 3.4.9 It will be explained to all experts and competitors that nothing is to come in or out of the site unless specified by the Chief Expert as being allowed after being briefed on this topic.
- 3.4.10 Security checks will be carried out each day on experts and competitors (by experts and competitors) upon entry and exit to the site.

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3.5. INFORMATION POLICY

- 3.9.1 During the competition a modified project plan without measurements is to be made available to the public.

4. THEORETICAL KNOWLEDGE

- Interpretation and application of drawings, sketches and details.
- Geometrical knowledge for calculating the actual measurements and angles.
- Knowledge of materials, fixings and building processes.

5. MATERIALS

(Emphasize Local Materials - bamboo, coconut, board, thatch, environmentally friendly materials)

5.1 Planed dry softwood, Plywood.

5.2 Nails, screws, dowels, bolts, as necessary for the test project.

5.3 Sectional sizes of solid timber shall not exceed 3.5 inches x 3.5 inches and 6 inches x 2.5 inches x length 64 inches

5.4 The use of flat sheet material such as ply and or, particleboard may be used in the project design.

5.5 All timber shall be free of defects and of moisture content 10% to 15%. Dressed smooth, straight and square to a dimensional tolerance of not greater than + 0.25 mm. (Treated)

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6. WORKSHOP INSTALLATIONS

6.1 Each competitor will have a working area. Local conditions will be taken into consideration. (Minimum of 20 square metres)

6.2 The following will be made available on the competition site (for general use)

- Brooms
- 4 battery drill (reserve)
- One (1) suitably equipped first aid kit
- One (1) grinding wheel and safety glasses

Additional equipment as required by the design, per competitor or competition site

6.3 The working area for each competitor shall be at least 20m square, and shall also allow for the equipment and machines specified in Sec. 6.4 below.

6.4 The following machines and equipment will be made available to each competitor:

- Complete workbench, ca. 2 m long, with vice
- Set-out board of MDF (bright colour) , minimum 18 mm thick, for setting
- Out 2400 x 2400 mm (module 1) MDF or Plyboard can be used.
- Second set out board MDF (bright colour) minimum 10 mm thick, for setting out 2400 x 2400 mm (modul 2 & 3)
- Straight edge, minimum 2 m long, aluminium
- Pan and brush
- Battery drill

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- Screw clamps of different sizes
- Drop saw per 3 competitors

6.5 The competitor must bring the following items:

- Comprehensive carpenter's toolkit including measuring tapes, hammer, pencils and PPE.

6.6 The competitor may bring commercially available and branded portable power tools to be used in the competition.

6.7 Occupational health and safety recommendation should be observed.

6.8 Competitors tool boxes; associated packing, tables and benches shall be placed and contained within their own designated work area. All such items shall be placed such that they cause no interference to any other competitor, block the line of vision or impede the safety of anyone concerned.

7. TEST PROJECT MARKING

The experts will decide together on the test project, the marking criteria and the dimensional tolerances on forms provided.

7.1. MARKS

Perfect	=	10 points
Very good	=	9 points
Good	=	8 points
Rather good	=	7points
Sufficient	=	6 points
Medium	=	5 points
Weak	=	4 points

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Insufficient	=	3 points
Very bad	=	2 points
Zero	=	1 point

Marks and tolerances will be determined by the experts after viewing the project.

7.2. RATING

Section	Item	Maximum Points
A	Drawings + develop of the cuts	16
B	Marking onto timber	5
C	Interior joints	15
D	Principal dimensions	20
E	Secondary dimensions	12
F	Exterior joints	15
G	Neatness of finish, cleanness gen. impr.	12
H	Use of material (replacement)	5

7.3 Conversion to the 400 - 600 scale will be done by computer.

8. COMPETITION PROCEDURE

8.1 The competition will be worked on over two days on a modular basis for all competitors so that progressive marking can take place.

8.2 Competitors will have time made available to familiarise themselves with material and processes

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- 8.3 The competitors will be given all competition documents including the marking criteria prior to the commencement of the competition so that they may study the requirements
- 8.4 Prior to the start of the competition, each competitor will receive a detailed timetable reflecting the timing for completion of modules.

9. JUDGING PROCEDURAL REQUIREMENTS

- 9.1 The experts that attend the competition will be divided into marking groups to deal with each section of the marking criteria.
- 9.2 Every completed module will be marked on the same day in which it was completed.

10. GENERAL SAFETY REQUIREMENTS

- 10.1 All competitors must use safety glasses when using any hand, power or machine tools or equipment likely to cause or create chips or fragments that may injure the eyes
- 10.2 All competitors must wear appropriate clothing and safety footwear.
- 10.3 All competitors must wear hearing protection when necessary.
- 10.4 No loose clothing or jewellery is to be worn during the competition; long hair is to be tied back.
- 10.5 All competitors must make themselves familiar with the safe use of machinery provided before the competition starts.

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10.6 Competitors must keep their workspace clear of obstacles and the floor space clean of material and equipment - any items likely to cause the competitor to trip, slip or fall.

10.7 Failure by the competitor to comply with safety directions or instructions may incur loss of marks for safety.