Technical Description

Painting and Decorating
Construction and Building Technology
WorldSkills International, by a resolution of the Competitions 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 WorldSkills Competition.

The Technical Description consists of the following:

1 INTRODUCTION
2 THE WORLDSKILLS STANDARDS SPECIFICATION (WSSS)
3 THE ASSESSMENT STRATEGY AND SPECIFICATION
4 THE MARKING SCHEME
5 THE TEST PROJECT
6 SKILL MANAGEMENT AND COMMUNICATION
7 SKILL-SPECIFIC SAFETY REQUIREMENTS
8 MATERIALS AND EQUIPMENT
9 SKILL-SPECIFIC RULES
10 VISITOR AND MEDIA ENGAGEMENT
11 SUSTAINABILITY
12 REFERENCES FOR INDUSTRY CONSULTATION
13 TEST PROJECT GUIDELINES BASED ON PAST COMPETITIONS

Effective 22.08.18

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Chair of the Competitions Committee

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Vice Chair of the Competitions Committee

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1 INTRODUCTION

1.1 NAME AND DESCRIPTION OF THE SKILL COMPETITION

1.1.1 The name of the skill competition is

Painting and Decorating

1.1.2 Description of the associated work role(s) or occupation(s).

A painter and decorator works in the commercial and public sectors and is responsible for the external and internal appearance of a building and its protection from water, rust, corrosion, mould, and insect infestation. There is a direct relationship between the nature and quality of the service required and the payment made by the client. Therefore, the painter and decorator has a continuing responsibility to work professionally and interactively with the client in order to give satisfaction and thus maintain and grow the business.

Painting and decorating is closely associated with other parts of the construction industry, and with the many products that support it. The painter and decorator works internally and externally in very diverse environments, for example in companies, factories, schools, hotels, the homes of clients, and on building sites in all weather conditions. He or she may offer a range of services, including interpreting client requirements to the environmental and sustainability of materials/drawings, advising on designs/colours, painting, spraying, decorative coatings, wallpapering, gilding, and sign writing to a high standard.

Work organization and self-management, communication and interpersonal skills, problem solving, innovation, creativity, and the ability to prepare surfaces thoroughly with meticulous care including hazardous surfaces such as lead and asbestos. These are the universal attributes of an outstanding painter and decorator. In a mobile labour market, the painter and decorator may work in teams, or alone, or in both from time to time. Whatever the structure of the work, the trained and experienced painter and decorator takes on a high level of personal responsibility and autonomy. From carefully determining the requirements of the client, working safely and tidily, exceptional planning and scheduling, precision and attention to detail to the fine gilding of objects and finishing of furniture, every process matters and mistakes are largely irreversible and costly.

With the international mobility of people, the painter and decorator faces rapidly expanding opportunities and challenges. For the talented painter and decorator there are many commercial and international opportunities; however, these carry with them the need to understand and work with diverse cultures, trends, and fashions. The diversity of skills associated with painting and decorating is therefore likely to expand.

1.1.3 Number of Competitors per team

Painting and Decorating is a single Competitor skill competition.

1.1.4 Age limit of Competitors

The Competitors must not be older than 22 years in the year of the Competition.

1.2 THE RELEVANCE AND SIGNIFICANCE OF THIS DOCUMENT

This document contains information about the standards required to compete in this skill competition, and the assessment principles, methods and procedures that govern the competition.

Every Expert and Competitor must know and understand this Technical Description.

In the event of any conflict within the different languages of the Technical Descriptions, the English version takes precedence.
1.3 ASSOCIATED DOCUMENTS

Since this Technical Description contains only skill-specific information it must be used in association with the following:

- WSI – Competition Rules
- WSI – WorldSkills Standards Specification framework
- WSI – WorldSkills Assessment Strategy
- WSI Online resources as indicated in this document
- WorldSkills Health, Safety, and Environment Policy and Regulations
2 THE WORLDSKILLS STANDARDS SPECIFICATION (WSSS)

2.1 GENERAL NOTES ON THE WSSS

The WSSS specifies the knowledge, understanding and specific skills that underpin international best practice in technical and vocational performance. It should reflect a shared global understanding of what the associated work role(s) or occupation(s) represent for industry and business (www.worldskills.org/WSSS).

The skill competition is intended to reflect international best practice as described by the WSSS, and to the extent that it is able to. The Standards Specification is therefore a guide to the required training and preparation for the skill competition.

In the skill competition the assessment of knowledge and understanding will take place through the assessment of performance. There will only be separate tests of knowledge and understanding where there is an overwhelming reason for these.

The Standards Specification is divided into distinct sections with headings and reference numbers added.

Each section is assigned a percentage of the total marks to indicate its relative importance within the Standards Specification. This is often referred to as the “weighting”. The sum of all the percentage marks is 100.

The Marking Scheme and Test Project will assess only those skills that are set out in the Standards Specification. They will reflect the Standards Specification as comprehensively as possible within the constraints of the skill competition.

The Marking Scheme and Test Project will follow the allocation of marks within the Standards Specification to the extent practically possible. A variation of five percent is allowed, provided that this does not distort the weightings assigned by the Standards Specification.
2.2 **WORLDSKILLS STANDARDS SPECIFICATION**

<table>
<thead>
<tr>
<th>SECTION</th>
<th>RELATIVE IMPORTANCE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Work organization and management</td>
</tr>
</tbody>
</table>

The individual needs to know and understand:
- Health and safety legislation, obligations, and documentation
- Accident/first-aid/fire emergency procedures and reporting
- How to work safely with electricity
- The situations when personal protective equipment must be used
- The purposes, uses, care, maintenance, and storage of all tools and equipment together with their safety implications
- The purposes, uses, care, and storage of materials to include effects of temperature and sunlight
- The importance of following manufacturer’s instructions, e.g. surface preparation, internal angles, shading, and application
- Sustainability measures applying to the use of ‘green’ materials and recycling
- The ways in which working practices can minimize wastage and help to manage costs
- The principles of work flow and measurement
- The significance of planning, accuracy, checking, and attention to detail in all working practices
- The value of managing own continuing professional development

The individual shall be able to:
- Follow health and safety standards, rules and regulations including manufacturer’s
- Identify health and safety hazards on construction sites and undertake risk assessments
- Position warning signs and notices for the safety of the general public
- Identify and use the appropriate personal protective equipment including safety footwear, ear, and eye protection
- Take necessary safety precautions when working at heights, e.g. using scaffolding and ladders
- Select, use, clean, maintain, and store all tools and equipment safely
- Select, use, and store all materials safely
- Plan the work area to maximize efficiency and maintain the discipline of regular tidying
- Consistently measure accurately
- Work efficiently and check progress and outcomes regularly
- Consistently maintain high quality standards and working processes
<table>
<thead>
<tr>
<th>2</th>
<th><strong>Communication and interpersonal skills</strong></th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>The individual needs to know and understand:</td>
<td>The roles and requirements of architects and related trades</td>
<td></td>
</tr>
<tr>
<td>• The significance of establishing and maintaining customer confidence technical considerations related to heritage/preservation work</td>
<td>• The value of building and maintaining trust/productive working relationships</td>
<td></td>
</tr>
<tr>
<td>• The importance of swiftly resolving misunderstandings and conflicting demands</td>
<td>• The roles and requirements of architects and related trades</td>
<td></td>
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<tr>
<td>The individual shall be able to:</td>
<td>The roles and requirements of architects and related trades</td>
<td></td>
</tr>
<tr>
<td>• Interpret customer requirements and manage customer expectations positively</td>
<td>• Interpret customer requirements and manage customer expectations positively</td>
<td></td>
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<tr>
<td>• Visualize and translate customer wishes making recommendations which meet/improve their design and budgetary requirements</td>
<td>• Visualize and translate customer wishes making recommendations which meet/improve their design and budgetary requirements</td>
<td></td>
</tr>
<tr>
<td>• Provide specialist technical advice and guidance on heritage projects</td>
<td>• Present portfolio of previous work to demonstrate range and quality of experience and expertise</td>
<td></td>
</tr>
<tr>
<td>• Present portfolio of previous work to demonstrate range and quality of experience and expertise</td>
<td>• Produce a cost and time estimate for customers</td>
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<tr>
<td>• Recognize the needs of architects and related trades</td>
<td>• Recognize the needs of architects and related trades</td>
<td></td>
</tr>
<tr>
<td>• Introduce architects and related trades to support customer requirements</td>
<td>• Introduce architects and related trades to support customer requirements</td>
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</tr>
<tr>
<td>• Work effectively in a team to facilitate efficiency/productivity/quality and cost control</td>
<td>• Work effectively in a team to facilitate efficiency/productivity/quality and cost control</td>
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<tr>
<th>3</th>
<th><strong>Problem solving, innovation, and creativity</strong></th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The individual needs to know and understand:</td>
<td>The individual shall be able to:</td>
<td></td>
</tr>
<tr>
<td>• The types of problem which can occur within the work process such as poor pasting</td>
<td>• Check work regularly to minimize problems at a later stage</td>
<td></td>
</tr>
<tr>
<td>• Diagnostic approaches to problem solving</td>
<td>• Challenge incorrect information to prevent problems</td>
<td></td>
</tr>
<tr>
<td>• Trends and developments in the industry including new materials, Methods, and equipment/technology, e.g. colour mixing</td>
<td>• Recognize and understand problems swiftly and follow a self-managed process for resolving</td>
<td></td>
</tr>
<tr>
<td>The individual shall be able to:</td>
<td>• Recognize opportunities to contribute ideas to improve the product and overall level of customer satisfaction</td>
<td></td>
</tr>
<tr>
<td>• Check work regularly to minimize problems at a later stage</td>
<td>• Show willingness to try new methods and embrace change</td>
<td></td>
</tr>
<tr>
<td>• Challenge incorrect information to prevent problems</td>
<td>• Recognize opportunities to contribute ideas to improve the product and overall level of customer satisfaction</td>
<td></td>
</tr>
<tr>
<td>• Recognize and understand problems swiftly and follow a self-managed process for resolving</td>
<td>• Show willingness to try new methods and embrace change</td>
<td></td>
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<tr>
<td>4</td>
<td><strong>Produce and interpret plans/technical drawings</strong></td>
<td>10</td>
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</tbody>
</table>
| The individual needs to know and understand:  
- The details required for floor plans in construction drawings including sections, datum levels, wall constructions, material codes, depth dimensions, heights, schedules, and specifications  
- Symbols e.g. for materials  
- Scales  
- The benefits of planning the sequence of material and labour requirements including the use of bills of quantities, programmes of work, stock systems, critical path analysis, lead times, schedules, and pricing systems  
- External and internal colour schemes, e.g. monochromatic, analogous, and complementary, warm/advancing, contrasting, and cool/receding  
- The need for accurate drawings to produce accurate work |  |
| The individual shall be able to:  
- Produce hand or computer aided designs (CAD)  
- Interpret drawings accurately  
- Produce colour schemes  
- Provide colour matches e.g. for type/era of building  
- Check for specialist requirements, e.g. to be fire retardant  
- Accurately measure from technical drawings and scale  
- Check for accuracy, challenge and make recommendations to architect/client  
- Accurately calculate quantities of materials required and price work  
- Produce schedules of work |  |

<table>
<thead>
<tr>
<th>5</th>
<th><strong>Apply paint brush and roller</strong></th>
<th>25</th>
</tr>
</thead>
</table>
| The individual needs to know and understand:  
- Purposes of painting: protection, preservation, sanitation, decoration, and identification, e.g. colour coding  
- The significance of following manufacturer’s guidelines  
- COSHH requirements  
- Impact of materials on the general public and necessary precautions e.g. allergies  
- Range of brushes, rollers and trowel/texturing tools  
- The variety of surface coatings e.g. water and solvent borne; wood treatments, e.g. stains and preservatives |  |

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The individual shall be able to:
- Check condition of substrates e.g. new or existing, hazardous/non-hazardous
- Check type of substrates e.g. timber, plaster (porous and non-porous surfaces), plastic, or metal
- Use the correct preparation process for the type of substrate to include: cleaning, priming, de-greasing, sealing
- Prepare the paint following the correct process, including: stirring/mixing/straining
- Select the appropriate equipment to apply the paint depending on the material, substrate, and quantity of work
- Take into consideration the effects of temperature on paint e.g. humidity levels and weather conditions for external work
- Protect the surrounding area to include: coverage of floors/features and signage to avoid effects on people
- Apply the correct paint system for the type of substrate using brush, roller, paint pad, or spray, e.g. primer, undercoat, and gloss
- Use masking aids for ‘cutting in’/producing accurate lines
- Regularly check the quality of the painting by opacity test to ensure consistent coverage
- Refer to other trades where problems emerge (immediately or at a later stage) for investigation, e.g. water stain
- Check quality of finish meets specification to include no defects and take any corrective action

<table>
<thead>
<tr>
<th></th>
<th>Apply paint by spray</th>
<th>15</th>
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<tbody>
<tr>
<td>6</td>
<td><strong>The individual needs to know and understand:</strong></td>
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<tr>
<td></td>
<td>- Purposes of painting: protection, preservation, sanitation, decoration, and identification, e.g. colour coding</td>
<td></td>
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<tr>
<td></td>
<td>- The importance of following manufacturer’s guidelines</td>
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<tr>
<td></td>
<td>- COSHH requirements</td>
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<tr>
<td></td>
<td>- The impact of materials on the general public and necessary precautions, e.g. allergies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Materials which cannot be sprayed e.g. paste and some primers</td>
<td></td>
</tr>
</tbody>
</table>
The individual shall be able to:
- Check condition of substrate, e.g. new or existing
- Check type of substrate, e.g. timber, plastic, or metal
- Use the correct preparation process for the type of substrate to include: cleaning, priming, de-greasing, and sealing
- Prepare the paint following the correct process, as appropriate, to include: stirring/mixing/straining and viscosity required
- Select the appropriate equipment to apply the paint depending on the material, substrate, and quantity of work
- Take into consideration the effects of temperature, on paint, e.g. humidity levels and weather conditions for external work
- Protect the surrounding area to include: coverage of floors/features and signage to avoid effects on people
- Select the appropriate spray equipment e.g. HVLP, airless, electrostatic, and pressure feed
- Apply spray paint, following COSHH and manufacturer’s guidelines for the type of substrate, e.g. primer, undercoat, and gloss
- Use large scale masking aids for ‘cutting in’ producing accurate lines
- Clean and thoroughly maintain spray equipment
- Regularly check the quality of the painting by opacity test to ensure consistent coverage
- Check film thickness by WFT (wet film thickness) or DFT (dry film thickness)
- Refer to other trades where problems emerge (immediately or at a later stage) for investigation, e.g. water stain
- Check quality of finish meets specification to include no defects and take any correction action

<table>
<thead>
<tr>
<th>7</th>
<th>Apply wallpaper</th>
<th>15</th>
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</thead>
</table>

The individual needs to know and understand:
- Methods of production including: wet embossing, laminating, dry embossing, heat expansion, particles on to wet adhesive
- Methods of printing to include: block, screen, machine, wet, dry, and embossing
- Types of pattern to include: set/straight match, drop/offset match, and random/free match
- Range of papers (including specialist) and their characteristics: pulps, anaglyptic, washable, vinyl, duplex, simplex, fabric-backed vinyl, paper backed fabrics, hand-print, paper-backed vinyl, warps/weft less, lincrusta, supadurables, flock, hessian, metallic, glass fibre, foil, and damp
- The situations when lining paper is required, including solvent-painted
- Wall and excessive making good
- Methods of trimming: pre-trimmed and remove selvedge
- The importance of accurate trimming when removing a selvedge
- Methods of jointing, for paper types to include: butt, overlap, and cut
- International performance symbols e.g. spongeable, peelable, and offset match
- Types of adhesive, e.g. cellulose and starch and their suitability for different papers
- Pasting methods in relation to the range of papers: pasting machine
- Brush, roller, ready pasted and past the wall
The individual shall be able to:
- Check condition of substrate, e.g. new or existing
- Check type of substrate, e.g. timber, plastic, plaster, or metal
- Use the correct preparation process for the type of substrate to include: cleaning, priming, de-greasing, sealing for a defect, e.g. water or oil stains
- Size and seal for even porosity of the surface or apply lining paper as appropriate
- Check for pattern matching requirements: random, set, off-set, alternate lengths, and reverse
- Cut and trim wallpaper efficiently for cost effectiveness
- For high quality/expensive papers take particular precautions, e.g. use of cotton gloves
- Paste the wall and the paper or use a pasting machine (if not ready pasted) using a range of adhesives e.g. for vinyl, flock, and lincrusta
- Ensure manufacturer’s guidelines are followed with regard to soaking times as necessary
- Select the best starting position, e.g. working away from the light and take into consideration patterns including murals
- Hang to vertical or plumb line and check for accuracy, taking corrective action as required
- Re-plumb as appropriate e.g. around obstacles
- Ensure joints are butt with exceptions such as damp-proof paper
- Check for quality, e.g. shade variation and notify manufacturer as appropriate
- Check overall quality meets customer specification

### 8 Apply decorative techniques
10

The individual needs to know and understand:
- Historical considerations for restoration and preservation work e.g. following a flood or fire
- Variety of decorative techniques
- Preparation methods to include: wet abrading, dry abrading, making
- Good and spot priming
- Defects which can occur: uneven colour, ropiness, sinking, bittiness
- Appropriate coating types for use as ground coats for painted decorative work

The individual shall be able to:
- Select and use and apply specialist materials e.g. sponging, ragging, bagging, stippling and blending, wood graining, marbling and trompe l’oeil, gilding (gold and silver leaf)
- Select and use specialist tools, e.g. for gilding
- Design and apply stencils
- Apply to a range of surfaces, e.g. cardboard, plastic, timber, plaster, and metal
- Prepare the surfaces to a perfect finish including clean, smooth, and sized
<table>
<thead>
<tr>
<th>9</th>
<th>Apply sign writing/lettering</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The individual needs to know and understand:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Stencil types: positive, negative, and multi-plate</td>
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<td></td>
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<tr>
<td>• Methods used for enlarging and reducing stencils: accurate measurement, grid, illuminated projection, and photocopy</td>
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<tr>
<td>• Methods of transferring a design – including trace, pounce, and photocopy onto the stencil plate materials of paper and proprietary</td>
<td></td>
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<tr>
<td>• Stencil card</td>
<td></td>
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<tr>
<td>• The suitability of base materials used for cutting stencil plates: glass plate, proprietary cutting mat</td>
<td></td>
<td></td>
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<tr>
<td>• The importance of cleanliness, hand position, knife angle, direction of cutting, blade sharpness, repair of broken ties, size and sequence of pattern (small areas and vertical lines first), free movement of stencil plate, margin widths</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Methods for securing stencils to surfaces: proprietary, spray adhesive, and tape (masking, low-tack)</td>
<td></td>
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</tr>
<tr>
<td>The individual shall be able to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Take into consideration number of repeats/connections, location of doors, windows, corners, access requirements, room dimensions, stencil size, and spacing when working on walls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Follow the required order of application</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Transfer images using different methods, e.g. tracing, pouncing, CAD materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Apply the frisk film using different methods, e.g. spray and roller</td>
<td></td>
<td></td>
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<tr>
<td>• Ensure enlarging</td>
<td></td>
<td></td>
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<tr>
<td>• Apply the finish by free hand or template</td>
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<td></td>
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<tr>
<td>• Accurately measure when setting out the lettering</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
3 THE ASSESSMENT STRATEGY AND SPECIFICATION

3.1 GENERAL GUIDANCE

Assessment is governed by the WorldSkills Assessment Strategy. The Strategy establishes the principles and techniques to which WorldSkills assessment and marking must conform.

Expert assessment practice lies at the heart of the WorldSkills Competition. For this reason, it is the subject of continuing professional development and scrutiny. The growth of expertise in assessment will inform the future use and direction of the main assessment instruments used by the WorldSkills Competition: the Marking Scheme, Test Project, and Competition Information System (CIS).

Assessment at the WorldSkills Competition falls into two broad types: measurement and judgement. For both types of assessment, the use of explicit benchmarks against which to assess each Aspect is essential to guarantee quality.

The Marking Scheme must follow the weightings within the Standards Specification. The Test Project is the assessment vehicle for the skill competition, and also follows the Standards Specification. The CIS enables the timely and accurate recording of marks, and has expanding supportive capacity.

The Marking Scheme, in outline, will lead the process of Test Project design. After this, the Marking Scheme and Test Project will be designed and developed through an iterative process, to ensure that both together optimize their relationship with the Standards Specification and the Assessment Strategy. They will be agreed by the Experts and submitted to WSI for approval together, in order to demonstrate their quality and conformity with the Standards Specification.

Prior to submission for approval to WSI, the Marking Scheme and Test Project will liaise with the WSI Skill Advisors in order to benefit from the capabilities of the CIS.
4 THE MARKING SCHEME

4.1 GENERAL GUIDANCE

This section describes the role and place of the Marking Scheme, how the Experts will assess Competitors’ work as demonstrated through the Test Project, and the procedures and requirements for marking.

The Marking Scheme is the pivotal instrument of the WorldSkills Competition; in that it ties assessment to the standards that represent the skill. It is designed to allocate marks for each assessed aspect of performance in accordance with the weightings in the Standards Specification.

By reflecting the weightings in the Standards Specification, the Marking Scheme establishes the parameters for the design of the Test Project. Depending on the nature of the skill and its assessment needs, it may initially be appropriate to develop the Marking Scheme in more detail as a guide for Test Project design. Alternatively, initial Test Project design can be based on the outline Marking Scheme. From this point onwards the Marking Scheme and Test Project should be developed together.

Section 2.1 above indicates the extent to which the Marking Scheme and Test Project may diverge from the weightings given in the Standards Specification, if there is no practicable alternative.

The Marking Scheme and Test Project may be developed by one person, or several, or by all Experts. The detailed and final Marking Scheme and Test Project must be approved by the whole Expert Jury prior to submission for independent quality assurance. The exception to this process is for those skill competitions which use an independent designer for the development of the Marking Scheme and Test Project. Please see the Rules for further details.

Experts and independent designers are required to submit their Marking Schemes and Test Projects for comment and provisional approval well in advance of completion, in order to avoid disappointment or setbacks at a late stage. They are also advised to work with the CIS Team at this intermediate stage, in order to take full advantage of the possibilities of the CIS.

In all cases a draft Marking Scheme must be entered into the CIS at least eight weeks prior to the Competition using the CIS standard spreadsheet or other agreed methods.

4.2 ASSESSMENT CRITERIA

The main headings of the Marking Scheme are the Assessment Criteria. These headings are derived in conjunction with the Test Project. In some skill competitions the Assessment Criteria may be similar to the section headings in the Standards Specification; in others they may be totally different. There will normally be between five and nine Assessment Criteria. Whether or not the headings match, the Marking Scheme as a whole must reflect the weightings in the Standards Specification.

Assessment Criteria are created by the person(s) developing the Marking Scheme, who are free to define criteria that they consider most suited to the assessment and marking of the Test Project. Each Assessment Criterion is defined by a letter (A-I). It is advisable not to specify either the Assessment Criteria, or the allocation of marks, or the assessment methods, within this Technical Description.

The Mark Summary Form generated by the CIS will comprise a list of the Assessment Criteria.

The marks allocated to each Criterion will be calculated by the CIS. These will be the cumulative sum of marks given to each Aspect within that Assessment Criterion.
4.3 **SUB CRITERIA**

Each Assessment Criterion is divided into one or more Sub Criteria. Each Sub Criterion becomes the heading for a WorldSkills marking form. Each marking form (Sub Criterion) contains Aspects to be assessed and marked by measurement or judgement, or both measurement and judgement.

Each marking form (Sub Criterion) specified both the day on which it will be marked, and the identity of the marking team.

4.4 **ASPECTS**

Each Aspect defines, in detail, a single item to be assessed and marked together with the marks, or instructions for how the marks are to be awarded. Aspects are assessed either by measurement or judgement.

The marking form lists, in detail, every Aspect to be marked together with the mark allocated to it.

The sum of the marks allocated to each Aspect must fall within the range of marks specified for that section of the skill in the Standards Specification. This will be displayed in the Mark Allocation Table of the CIS, in the following format, when the Marking Scheme is reviewed from C-8 weeks. (Section 4.1)

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>TOTAL MARKS PER SECTION</th>
<th>WSSS MARKS PER SECTION</th>
<th>VARIANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>1</td>
<td>5.00</td>
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<tr>
<td>5</td>
<td></td>
<td>30.00</td>
<td>30.00</td>
</tr>
<tr>
<td>6</td>
<td>8.00</td>
<td>5.00</td>
<td>2.50</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>15.00</td>
<td>15.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5.00</td>
<td>20.00</td>
<td>10.00</td>
</tr>
</tbody>
</table>

4.5 **ASSESSMENT AND MARKING**

There is to be one marking team for each Sub Criterion, whether it is assessed and marked by judgement, measurement, or both. The same marking team must assess and mark all competitors, in all circumstances. The marking teams must be organized to ensure that there is no compatriot marking in any circumstances. (See 4.6.)

4.6 **ASSESSMENT AND MARKING USING JUDGEMENT**

Judgement uses a scale of 0-3. To apply the scale with rigour and consistency, judgement must be conducted using:

- benchmarks (criteria) for detailed guidance for each Aspect (in words, images, artefacts or separate guidance notes)
- the 0-3 scale to indicate:
  - 0: performance below industry standard
  - 1: performance meets industry standard
  - 2: performance meets and, in specific respects, exceeds industry standard
  - 3: performance wholly exceeds industry standard and is judged as excellent

Three Experts will judge each Aspect, with a fourth to coordinate the marking and acting as a judge to prevent compatriot marking.
4.7 **ASSESSMENT AND MARKING USING MEASUREMENT**

Three Experts will be used to assess each aspect. Unless otherwise stated only the maximum mark or zero will be awarded. Where they are used, the benchmarks for awarding partial marks will be clearly defined within the Aspect.

4.8 **THE USE OF MEASUREMENT AND JUDGEMENT**

Decisions regarding the selection of criteria and assessment methods will be made during the design of the competition through the Marking Scheme and Test Project.

4.9 **COMPLETION OF SKILL ASSESSMENT SPECIFICATION**

Days and allocation of judgement and measurement marks will be finalized at the Competition by the Experts, however 30% minimum of measurement and/or blind marking must be carried out on day C4.

Schedule of completed work for marking
Judgement = J, Measurement = M

<table>
<thead>
<tr>
<th></th>
<th>DAY ONE</th>
<th>DAY TWO</th>
<th>DAY THREE</th>
<th>DAY FOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Work organization</td>
<td></td>
<td>J/1, M/1</td>
<td>M/2</td>
<td>M/1</td>
</tr>
<tr>
<td>and management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B: Communication</td>
<td>J/1.5, M/4.5</td>
<td>M/3.5</td>
<td>M/0.5</td>
<td></td>
</tr>
<tr>
<td>and interpersonal skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C: Problem solving,</td>
<td></td>
<td>M/3</td>
<td>J/2, M/6</td>
<td></td>
</tr>
<tr>
<td>innovation, and creativity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D: Produce and interpret plans/technical drawings</td>
<td>M/4</td>
<td>M/1</td>
<td>M/5</td>
<td></td>
</tr>
<tr>
<td>E: Apply paint by brush and roller</td>
<td></td>
<td></td>
<td>J/2, M/22</td>
<td></td>
</tr>
<tr>
<td>F: Apply wallpaper</td>
<td>J/2, M/13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G: Apply paint by brush, spray, or roller</td>
<td>J/1</td>
<td>M/18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H: Apply sign writing/lettering</td>
<td></td>
<td>J/1, M/5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total marks per day</strong></td>
<td>J/2.50, M/4.50</td>
<td>J/3, M/24.50</td>
<td>J/3, M/32.50</td>
<td>J/2, M/28</td>
</tr>
</tbody>
</table>

Each completed module (or parts thereof) will be assessed on the day on which it is completed, except wallpapering:

- **Module 1 (door):**
  - Panel door with moulding, inner panel only by spray, door frame and bottom skirting marks. The outer panel, the inner panel and the moulding will be painted in three different colours.
- **Module 2 (wallpaper):**
  - Cutting and pattern matching to internal corner, clean surfaces, connections, dimensional accuracy.
• Module 3 (Free Technique):
  • Info sheet, artistic composition (Judgement), technical execution, colour concept, accurate implementation.

• Module 4 (Lettering, design):
  • Lettering: correct colour, clean surfaces, straight lines, clean corners, no visible reference lines, dimensional accuracy;
  • Design: correct colour, clean surfaces, straight lines, clean corners, no visible reference lines, dimensional accuracy, overall appearance (Judgement)

• Module 5 (Mural):
  • Clean surfaces, mixing colour tones, mixing colour shade, dimensional accuracy, overall appearance (Judgement).

• Module 6 (Speed Competition)
  • Speed, precision painting

Marking scale will be made available on the forum six months prior to the Competition.

• Colour mixing (Module 6)
  • Colour tone;
  • Colour shades.

In the first instance the various elements will be arranged according to their quality. The best quality work will be placed first, the least quality work last. Works of an identical quality will be grouped together and given the same number of points.

In the second instance the best work is given the maximum number of points possible for this element, the other works are given lower numbers of points according to their quality.

• Speed competition (Module 6)
  At the speed competition all Competitors have to work as fast and as precisely as possible. The expenditure of time will be awarded with maximum 2 marks. The swiftest Competitor will be awarded 2 marks, the others in the order in which they complete the task 0.10 marks less (if there are more Competitors than 20, the marking needs to be changed). Competitors who finish simultaneously will receive the same number of marks, the next Competitor 0.20 or more marks less.

• Dimensional Accuracy
  For the dimensional accuracy tests, a deviation of ± 1 mm from the required measurement will be tolerated and deviations of more than 1 mm from the required measurement will be given 0 marks:
  ± 1 mm = 1 Mark.
  Maximum 1 mark will be awarded per measurement point.

• Free technique
  The free technique will be dismantled and marked according to three criteria:
  • Technical execution, max. 3 marks (measurement)
  • The technical execution will be assessed with measurement criteria. The detailed and final marking scheme is developed and agreed by all Experts before the Competition.

  • Artistic composition, max. 2 marks (judgement);
  • The artistic composition will be assessed with judgement criteria by all the Experts.
  • The level of difficulty must also be assessed by the judgement group

  • The information sheet will be assessed with measurement criteria, max 0.50 marks;
  • Colour concept 1 mark;
  • Accurate implementation 2 marks;
  • The final work needs to match the information sheet.
4.10 **SKILL ASSESSMENT PROCEDURES**

Final detailed aspects for the measurement marking will be decided by the Experts prior to Competition.

The Experts will be deployed for marking purposes as follows:

- Judgement marking - total 7 marks
  - Free technique (artistic composition), max. 2 marks;
  - Design (overall appearance) max 2 marks;
  - The artistic composition will be assessed by all the Experts including Chief Expert and Deputy Chief Expert and an average mark will be calculated.

- Measurement marking - total 93 marks
  - Three Experts for the evaluation which they will do together;
  - One Expert compiles the results;
  - One Expert checks the compilation;

- Speed competition, total 2 marks
  - One Expert compiles the results;
  - One Expert checks the compilation;
  - Two Experts checks the reports;
  - All other Experts checks the competition;

- Colour mixing, total 6 marks
  - Five Experts line the elements according to their quality (as described at section 4.8) whereas at least four Experts have to agree to it;
  - One Expert to compile the results;
  - One Expert to check the compilation;

- Groups of Experts;
  - The groups of Experts will be put together by the Chief Expert and the Deputy Chief Expert. The groups must consist of both experienced and new Experts;
  - Each Expert in the group assesses every Competitor.

4.11 **PENALTY SYSTEM**

- There will be penalties for Competitors who use forbidden material, tools, or machines.
  - If a Competitor uses a forbidden material, tools, or machine, this must be reported by at least three Experts to the Chief or Deputy Chief Expert in written words on a signed paper sheet. If possible, there should be a photograph taken from the forbidden tool, material, or machine.
  - The penalty for using a forbidden tool, material or machine will be zero marks in the module the tool, material, or machine has been used.
5 THE TEST PROJECT

5.1 GENERAL NOTES

Sections 3 and 4 govern the development of the Test Project. These notes are supplementary.

Whether it is a single entity, or a series of stand-alone or connected modules, the Test Project will enable the assessment of the skills in each section of the WSSS.

The purpose of the Test Project is to provide full, balanced and authentic opportunities for assessment and marking across the Standards Specification, in conjunction with the Marking Scheme. The relationship between the Test Project, Marking Scheme and Standards Specification will be a key indicator of quality, as will be its relationship with actual work performance.

The Test Project will not cover areas outside the Standards Specification, or affect the balance of marks within the Standards Specification other than in the circumstances indicated by Section 2.

The Test Project will enable knowledge and understanding to be assessed solely through their applications within practical work.

The Test Project will not assess knowledge of WorldSkills rules and regulations.

This Technical Description will note any issues that affect the Test Project’s capacity to support the full range of assessment relative to the Standards Specification. Section 2.2 refers.

5.2 FORMAT/STRUCTURE OF THE TEST PROJECT

The format of the Test Project comprises a series of separately assessed modules.

5.3 TEST PROJECT DESIGN REQUIREMENTS

Criteria that has to be submitted

- The Test Project consisting of all modules except module 5 has to be prepared by an Independent Designer. This is done in consultation with the Skill Competition Manager and is not circulated.
- The Test Project must:
  - Comply with the current valid Technical Description;
  - Comply with the requirements and numbering defined by WorldSkills;
  - Module four consists of a colour drawing showing the design and lettering (name of the venue and year) as well as details of the construction.
  - Outline in colour, M1:10;
  - Design drawing, M1:10, measurements in cm;
  - Specification of the colour tone with an international code,
  - Be submitted with proof it can be constructed and is feasible within the given time (section 5.5)
- The necessary materials to be used will be made available, already mixed, at the competition venue. Therefore, the colours of the design and the lettering must be precisely indicated when the Test Project is submitted, e.g. RAL, NCS or other international colour codes.
- All the colours that will be used in the competition must be globally available.
  - Primer, middle coat, and semi- or gloss paint for the door
  - Wall paint for panels, top skirting
  - Design colours
  - Paste or wallpaper glue
- The wallpaper must be to be globally available.
Criteria for the submitted module five

- Experts must draw the mural for module five during the preparation days at the Competition (C-4 to C-1). The Experts need to choose from a minimum of two, maximum of four murals, which will be prepared at the Competition. The mural measurements must be no larger than approx. 2200mm - 2400mm x 800mm and be designed so that there is no wet paint on wet paint;
- The mural must be done in a minimum of three, maximum of four colours, including the background and comprise the construction in detail;
- The mural will take the form of a speed competition; the maximum time for the speed competition is 1.5 hours. The colour tone mixed by the Experts at the current Competition must be reproduced exactly by the Competitor and included in the mural according to the Test Project. The other three colours must be mixed as colour shades. The colour mixing will be completed prior to the speed competition;
- The mural must be done in four colours including the background (project in four levels of grey) and comprise the construction in detail.
- Proof must be submitted that the project is able to be constructed in the time and is feasible (section 5.5).

5.4 TEST PROJECT DEVELOPMENT

The Test Project MUST be submitted using the templates provided by WorldSkills International (www.worldskills.org/expertcentre). Use the Word template for text documents and DWG template for drawings.

5.4.1 Who develops the Test Project or modules

The Test Project is designed by an independent designer with the exception of module 5 which is drawn by the Experts at the Competition.

5.4.2 How and where is the Test Project or modules developed

The proposals for the Test Project modules are developed independently.

5.4.3 When is the Test Project developed

The Test Project is developed according to the following timeline:

<table>
<thead>
<tr>
<th>TIME</th>
<th>ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the previous Competition</td>
<td>The Experts define the requirements of the individual modules.</td>
</tr>
<tr>
<td>Six (6) months before the Competition</td>
<td>Choice of wallpaper, module 2: The wallpaper must be minimum 530mm wide, it must have a pattern (with repeat) and has to be washable. The Skill Competition Manager selects a minimum of three wallpaper samples and requests all the registered Experts to vote on them via the Discussion Forum on the WorldSkills website. The wallpaper that receives the most votes is selected.</td>
</tr>
<tr>
<td>Before the current Competition</td>
<td>The type (product/serial number) of the provided ready cut foil must be defined exactly three months before the Competition. The Experts vote on module five (section 5.3). The winning Test Project is sent to the Director of Skills Competitions. The Experts determine a colour shade as a sample for module five. All Competitors are provided with four colour samples mixed by the Experts on wooden plates, and also one wooden plate with a white undercoat for colour mixing and colour graduation, the wooden plates must be approx. 21 x 29.7 cm</td>
</tr>
<tr>
<td>TIME</td>
<td>ACTIVITY</td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td>(A4 format). The number of the Competitor is written on the backside of the boards. Marking or writing on the front side is not allowed. The Competitors have to check their colour mixing on a clearly defined table somewhere in the workshop area with a constant light during the whole day. 20 measurement points are fixed for modules 2, 4 and 5. 13 of these measurement points will be drawn by lot at the end of the competition and included in the rating. The Experts make the final assessment of modules 4 and 5 on the basis of the submitted assessment criteria.</td>
</tr>
</tbody>
</table>

5.5 **TEST PROJECT VALIDATION**

The independently designed Test Project must be accompanied by a functional demonstration/proof of construction/feasibility in the given time etc. for example with a photograph of a project that was completed in compliance with material and equipment specifications, the required professional skills, and the time limit.

5.6 **TEST PROJECT COORDINATION (PREPARATION FOR COMPETITION)**

Coordination of the Test Project will be undertaken by the Skills Competition Manager.

5.7 **MATERIAL OR MANUFACTURER SPECIFICATIONS**

Specific material and/or manufacturer specifications required to allow the Competitor to complete the Test Project will be supplied by the Competition Organizer and are available from [www.worldskills.org/infrastructure](http://www.worldskills.org/infrastructure) located in the Expert Centre.

The following material specifications must be complied with at the competition venue:

- All coating materials must be water-based;
- All coatings used on the inner panel for spraying must be suitable for spraying (per the technical data sheet). The provided material has to be suitable with the chosen spray system.
- Wallpapers according to section 5.4.3;
- The door must be a real door made from MDF with moulding and pre-primed. For modules 3, 4, and 5 MDF panels are required, minimum 22 mm thick, for stability. The Competitor workstations need to be a minimum of 6m x 2.5m.
- The chosen spray gun or spray system must be clearly defined minimum three months before the Competition;
- Skirting (top + bottom) must be made from MDF, pre-primed and fixed with screws (no nails)
6 SKILL MANAGEMENT AND COMMUNICATION

6.1 DISCUSSION FORUM

Prior to the Competition, all discussion, communication, collaboration, and decision making regarding the skill competition must take place on the skill specific Discussion Forum (http://forums.worldskills.org). Skill related decisions and communication are only valid if they take place on the forum. The Chief Expert (or an Expert nominated by the Chief Expert) will be the moderator for this Forum. Refer to Competition Rules for the timeline of communication and competition development requirements.

6.2 COMPETITOR INFORMATION

All information for registered Competitors is available from the Competitor Centre (www.worldskills.org/competitorcentre).

This information includes:

- Competition Rules
- Technical Descriptions
- Marking Schemes
- Test Projects
- Infrastructure List
- WorldSkills Health, Safety, and Environment Policy and Regulations
- Other Competition-related information

6.3 TEST PROJECTS [AND MARKING SCHEMES]

Circulated Test Projects will be available from www.worldskills.org/testprojects and the Competitor Centre (www.worldskills.org/competitorcentre).

6.4 DAY-TO-DAY MANAGEMENT

The day-to-day management of the skill during the Competition is defined in the Skill Management Plan that is created by the Skill Management Team led by the Skill Competition Manager. The Skill Management Team comprises the Skill Competition Manager, Chief Expert, and Deputy Chief Expert. The Skill Management Plan is progressively developed in the six months prior to the Competition and finalized at the Competition by agreement of the Experts. The Skill Management Plan can be viewed in the Expert Centre (www.worldskills.org/expertcentre).
7 SKILL-SPECIFIC SAFETY REQUIREMENTS

Refer to WorldSkills Health, Safety, and Environment Policy and Regulations for Host country or region regulations.

The following skill-specific safety requirements apply:

All Competitors must use safety glasses and masks when using any hand, power, or machine tools or equipment likely to cause or create chips or fragments that may injure the eyes;
Experts will use the appropriate personal safety equipment when inspecting, checking, or working with a Competitor’s project.

All Competitors must bring and use:
- Coveralls;
- Work gloves;
- Rubber gloves;
- Safety goggles (white glass);
- Regular P2 vapour respirator;
- Safety shoes including toe protection.
8 MATERIALS AND EQUIPMENT

8.1 INFRASTRUCTURE LIST

The Infrastructure List details all equipment, materials and facilities provided by the Competition Organizer.

The Infrastructure List is available at www.worldskills.org/infrastructure.

The Infrastructure List specifies the items and quantities requested by the Experts for the next Competition. The Competition Organizer will progressively update the Infrastructure List specifying the actual quantity, type, brand, and model of the items. Items supplied by the Competition Organizer are shown in a separate column.

At each Competition, the Experts must review and update the Infrastructure List in preparation for the next Competition. Experts must advise the Director of Skills Competitions of any increases in space and/or equipment.

At each Competition, the Technical Observer must audit the Infrastructure List that was used at that Competition.

The Infrastructure List does not include items that Competitors and/or Experts are required to bring and items that Competitors are not allowed to bring – they are specified below.

8.2 COMPETITOR’S TOOLBOX

The maximum toolbox size is 1.50m³. It does not matter how long or how high the boxes are, as long they are not over 1.50m³.

You can bring more than one toolbox, as long the total volume is not bigger than 1.50m³.

8.3 MATERIALS, EQUIPMENT, AND TOOLS SUPPLIED BY COMPETITORS IN THEIR TOOLBOX

The following tools and materials (incl. tools and materials for the special painting technique) will be brought by the Competitor in a toolbox:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PICTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Filler for wood</td>
</tr>
<tr>
<td>2</td>
<td>Abrasive materials</td>
</tr>
<tr>
<td>3</td>
<td>Personal tools for all modules</td>
</tr>
<tr>
<td>4</td>
<td>Materials for module three, free technique</td>
</tr>
<tr>
<td>5</td>
<td>Drawing and measuring tools (commercially available)</td>
</tr>
<tr>
<td>6</td>
<td>Various brushes, rollers and pads</td>
</tr>
<tr>
<td>7</td>
<td>1 x set of paper hanging tools</td>
</tr>
<tr>
<td>8</td>
<td>1 x Mal stick and Painters ruler</td>
</tr>
</tbody>
</table>
### MATERIALS, EQUIPMENT, AND TOOLS SUPPLIED BY EXPERTS

Not applicable.

### MATERIALS AND EQUIPMENT PROHIBITED IN THE SKILL AREA

Not applicable.
8.6 PROPOSED WORKSHOP AND WORKSTATION LAYOUTS

Workshop layouts from previous competitions are available at [www.worldskills.org/sitelayou](http://www.worldskills.org/sitelayou).

Example workshop layout:
Side with the door: 2.00 m x 2.50 m, Side with no door: 4.00 m x 2.50 m

The Experts will consider and confirm the following criteria prior to the Competition.

- **Workstation**
  - A workstation with a wall to work on will be made available to each Competitor. On-site conditions must be taken into account. The area for the workstation for each Competitor must be 5 m x 6 m.
- **Type of construction**
  - The walls must consist of MDF and must have been filled, sanded, primed, and given an opaque coat of mat white, water-based paint of a quality suitable for walls (dispersion paint) before the beginning of the competition. The finished walls must be tested for adhesion strength with adhesive tape!
- **Preparation at the Competition venue (by the Workshop Manager)**
  - The surfaces to be treated (walls, doors, panels, etc.) must be prepared by the respective Workshop Manager Assistant according to the instructions for the assignment/given by the Chief Expert. The templates, lettering, and transfer sheets must adhere to the surface (work surface in the booth) but should not cause damage when removed. The sheets will be tested by the Workshop Manager and made available after consultation of the Chief Expert.
- **Workstation layout**
  - The space must be made available for the work booths and work stations of the Competitors according to section 8.6. This layout is binding.
- **General terms and conditions concerning the workstation**
  - The following general requirements apply to the workstation:
    - The lighting of the worked-on walls must remain constant at 600 lux (without shadows);
    - The light has to be equal in every work bay at every time during the day and evening during assessment;
    - The room temperature must be at least 18°C and may not exceed 24°C;
• The workstation must not be located close to professions that cause dust and must provide as much daylight as possible;
• The workstation needs to include an Expert and Competitor corridor at the front. The corridor needs to be clean and walkable. The workstations are not included in the corridor.

The personal work station of each Competitor is shown below (measurements in centimetres). There must be enough room for equipment and machines as outlined under 9.6.
9 **SKILL-SPECIFIC RULES**

Skill-specific rules cannot contradict or take priority over the Competition Rules. They do provide specific details and clarity in areas that may vary from skill competition to skill competition. This includes but is not limited to personal IT equipment, data storage devices, internet access, procedures and work flow, and documentation management and distribution.

<table>
<thead>
<tr>
<th>TOPIC/TASK</th>
<th>SKILL-SPECIFIC RULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of technology – USB, memory sticks</td>
<td>• Competitors, Experts, and Interpreters are allowed to bring memory sticks into the workshop however they cannot be removed from the workshop until the conclusion of the Competition. They must be stored in the locker overnight.</td>
</tr>
<tr>
<td>Use of technology – personal laptops, tablets and mobile phones</td>
<td>• Competitors, Experts, and Interpreters are allowed to bring personal laptops, tablets or mobile phones into the workshop however they cannot be removed from the workshop until the conclusion of the Competition. They must be stored in the locker overnight.</td>
</tr>
<tr>
<td>Use of technology – personal photo and video taking devices</td>
<td>• Competitors, Experts, and Interpreters are allowed to bring personal photo and video taking devices into the workshop however they cannot be removed from the workshop until the conclusion of the Competition. They must be stored in the locker overnight.</td>
</tr>
<tr>
<td>Templates, aids, etc.</td>
<td>• Competitors are allowed to have templates for Module three only – free technique.</td>
</tr>
<tr>
<td>Drawings, recording information</td>
<td>• All Test Project documents must be stored in the Expert room in lockers by the Chief Expert.</td>
</tr>
<tr>
<td>Health, Safety, and Environment</td>
<td>• Refer to the WorldSkills Health, Safety, and Environment policy and guidelines document.</td>
</tr>
<tr>
<td>Sustainability</td>
<td>• Competitors can only bring the minimum amounts of material required for the free technique module.</td>
</tr>
<tr>
<td>Penalty System</td>
<td>• There will be penalties for Competitors who uses forbidden materials, tools, or machines.</td>
</tr>
<tr>
<td></td>
<td>• If a Competitor uses a forbidden material, tool, or machine, this has to be reported by at least three Experts to the Chief- or Deputy-Chief Expert in written words on a signed paper sheet. If possible, there should be a photograph taken from the forbidden tool, material, or machine.</td>
</tr>
<tr>
<td></td>
<td>• The penalty for using a forbidden tool, material, or machine will be 0.00 Points in the module the tool, material, or machine has been used.</td>
</tr>
</tbody>
</table>
10 VISITOR AND MEDIA ENGAGEMENT

Following is a list of possible ideas to maximize visitor and media engagement:

- Speed module (Module 6);
- Display screens;
- Detail descriptions of the Test Project;
- Enhanced understanding of Competitor activity;
- Competitor profiles;
- Career opportunities;
- Daily reports about the competition status.
11 SUSTAINABILITY

This skill competition will focus on the sustainable practices below:

- Recycling;
- Use of ‘green’ materials;
- Use of completed Test Projects after Competition;
- Efficient use of water to rinse paint brushes.
12 REFERENCES FOR INDUSTRY CONSULTATION

WorldSkills is committed to ensuring that the WorldSkills Standards Specifications fully reflect the dynamism of internationally recognized best practice in industry and business. To do this WorldSkills approaches a number of organizations across the world that can offer feedback on the draft Description of the Associated Role and WorldSkills Standards Specification on a two-yearly cycle.

In parallel to this, WSI consults three international occupational classifications and databases:

- ESCO: [https://ec.europa.eu/esco/portal/home](https://ec.europa.eu/esco/portal/home)
- O*NET OnLine ([www.onetonline.org](http://www.onetonline.org)).

This WSSS (Section 2) appears to relate most closely to Construction Painter: [http://data.europa.eu/esco/occupation/15620506-fb5d-49cd-87a2-1c9047fb406a](http://data.europa.eu/esco/occupation/15620506-fb5d-49cd-87a2-1c9047fb406a)

and Paperhangers: [https://www.onetonline.org/link/summary/47-2142.00](https://www.onetonline.org/link/summary/47-2142.00)

Adjacent occupations can also be explored through these links.

The following table indicates which organizations were approached and provided valuable feedback for the Description of the Associated Role and WorldSkills Standards Specification in place for WorldSkills Kazan 2019.

<table>
<thead>
<tr>
<th>ORGANIZATION</th>
<th>CONTACT NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW ASSOCIATION</td>
<td>Therese Lauriola</td>
</tr>
<tr>
<td>MPA Skills Training</td>
<td>John Makrillos</td>
</tr>
</tbody>
</table>
13 TEST PROJECT GUIDELINES BASED ON PAST COMPETITIONS

13.1 DESCRIPTION OF PROJECT AND TASKS

The Competitor has to carry out, independently, the following tasks:

- All preparations of base walls and woodwork;
- Application of water-based filler, primer, undercoat, semi and gloss finish;
- Application with filling tools, paintbrush, and paint roller;
- Preparation and application of wall hangings;
- Drawing and attaching a design;
- Attaching lettering and signs;
- Measuring points;
- Painting of colour bands;
- Application of a free painting technique of the Competitor's own choice;
- Materials and tools for free technique must be brought by the Competitor.
- Pre-fabricated foils are allowed.

13.2 INSTRUCTIONS TO THE COMPETITOR

Workstation size for the Competitor: 2.00m x 4.00m wide and 2.50m high.

Between the corner of Wall A and B angle from 90 degree.

Open on the front side (facing the visitors).

A minimum of one spray booth per five Competitors will be provided for the Competition.

Wall A (2.50m x 2.00m) for door and wall-paper hanging.

Wall B (2.50m x 4.00m) for decoration design and lettering, wall-paper hanging, colour bands, and free painting technique.

The Competitors will be allowed to enter they work bay five min before the start in the morning and after every brake during the day. They are allowed to prepare their tools and clean up the work bay. But it is forbidden to do any work on the walls, panels, door, etc. and also no preparation of the paints (e.g. thining, decant, stir up etc.)

Decoration design, lettering, and measuring (approx. nine hours)

Painting door (approx. six hours)

Hanging wallpaper (approx. 1.5 hours)

Free technique - demonstrate personal abilities (approx. 2 hours)

Painting colour stripes and measuring (approx. 1.5 hour)

Total time +/- 20 hours
13.2.1 Wall A: Door with moulding, Top, and bottom skirting

Surfaces are made of MDF, pre-coated by the Workshop Manager by roller, brush or spray. The primer has to be waterborne and suitable with the industry standard.

Apply undercoat and apply gloss or semi-gloss finish.

If necessary, you can abrade smooth, fill the door with your own waterborne filler on the preparation day.

Door may be removed for filling and sanding but must be upright for painting. If door is being painted when it is not hanging on hinges it must stand inside the competitors work area. Hinges may be taped or removed and must be replace before the end of the competition (Day four before the Competition starts with help by the Experts)

**Outer Panel**

The paint for the outside of the moulding/section may be applied with a roller, a brush or paint pad. Spatulas or other painters’ tools are not allowed. (Colour 1). That means no rags, no knives, no tape, no other masking material can be used while painting on the outer Panel and the outside of the moulding. You are only aloud to protect these sections for spraying the inner panel.

**Moulding**

The moulding needs to be painted with a roller, a brush or paint pad. Spatulas or other painters’ tools are not allowed (except masking the inner edge) (Colour 2) Moulding Type: NMC Wallsty WL3.

The Moulding must be masked on the inner edge. The last edge of the moulding regarding to the outer panel must be kept free from any masking tape at any time.

**Inner Panel**

The inside panel of the door must be masked and painted with a spray gun. (Colour 3)

Every coat done by the competitor on the inner panel has to be done with a spray gun (except filling)

Every Competitor will get two 15 min Timeslots per day from day one to day three (one in the morning, one in the afternoon) the timeslots will be chosen by drawing a lot.

**Bottom skirting on Wall A/B**

Preparation and coatings similar to the outer Panel and the moulding (by hHand, no spraying)

You are allowed to apply undercoat, and apply gloss or semi-gloss finish during the preparation day. At least one more coat has to be done during the Competition (Except the section with the free technique)

**Upper Skirting on Wall A/B**

Preparation and Coatings similar to the Walls and Panels with a finish of white wall Paint. All the work including filling etc. can be done at the preparation day.

**Time to finish: Day 1 to day 3**

**Marking: 20 marks (of 100)**
13.2.2 WALL A and B: Wallpaper

Corner must be cut and must have an overlap between 1-10mm. needs to be discussed by the Experts.

The measurements of the panel and the areas to apply the wallpaper are given on the plan. The work area is constructed from MDF or similar and is prepared by the Workshop Manager with a white wall paint. The surface has to be prepared professionally in advance to allow for perfect papering of the wall (you may apply a sealer, glue size, or PVA).

The wallpaper must be cut in the corners/angles. The glue/adhesive will be ready mixed or be prepared by the Experts. The wallpaper is made by Marburg or Erfurt with the size of 53cm wide. The exact type of wallpaper will not be shown till C-1.

Prepare the panel. Hang wallpaper as per drawing. The paper must be matched correctly and hung vertically. Everybody will get two rolls. Top and bottom skirting, door frame, and all the surrounding walls must be kept clean.

**Time to finish:** End of day 1

**Marking:** 18 marks (of 100)

13.2.3 Wall B: Design

The wall is ready painted with white colour.

Construction of a given design.

The Design must be drawn using only a black graphite pencil. Guidelines should not be visible. It is not permitted to scratch with a knife, a needle, or any other tool at any time. The pencil will be checked by the Experts before the Competition and every competition day. The Pencil will be marked with a sticker by the experts and only a checked pencil is aloud to be used on the design panel.

Freehand painting without the use of masking tapes, masking films or masking shields.

It is allowed to use masking tape for Protection of the surrounding areas on the design panel, but it is not allowed to do any painted edge with any kind of masking material. It has to be freehand painted only by using paintbrush, paintroller, and painter-ruler/mal-stick. The painter-ruler/mal-stick has to be made of a stiff material (not flexible/bending) and the painter-ruler/mal-stick has to have a minimum distance to the surface of 5.00 mm on every side of the tool. The painter-ruler/mal-stick will be checked by the experts before the Competition and every competition day. It will be marked with a sticker by the Experts and only a checked painter-ruler/mal-stick is aloud to be used on the design panel.

All original colours will be provided, and must be applied as shown on the colour schedule.

Some parts of the Design will be provided 1:1 as an already cut sign mask film similar to the lettering, and has to be painted in the given colour.

Lettering: The lettering will be provided 1:1 as an already cut sign mask film and has to be painted in the given colour.

**Time to finish:**

- Day 1 to day 3 lettering
- Day 1 to day 4 design

**Marking:**

- 30 marks design (of 100)
- 8 marks lettering (of 100)
13.2.4  Wall B: Colour design, Colour mixing and Speed Competition

Panel: (the wall is ready painted, white colour)

**Colour Design**

The measurements of the panel are ???mm x ???mm. The working area is manufactured from MDF and will have been given an undercoat (white dispersion).

Experts must draw the mural for module 5 during the preparation days at the Competition (C-2 to C-1). The Experts need to choose from a minimum of two.

Maximum of four murals, which will be prepared at the competition and be designed so that there is no wet paint on wet paint. Constructing of a given design on the panel and paint the elements with three colours according to the plan. All The elements have to be masked by the given tape provided by the Workshop Manager.

The Design will be shown to the competitors during the briefing 30 mins before the start of the speed competition. The panel needs to be painted with one of the mixed colours (Colour 1 or 4) by the competitor before the start of the speed competition. The edge of the board will be covered with the given masking tape (so the edge stays white underneath) The Competitor is not allowed to do any reference marks on the panel or the surrounding tape before the speed competition starts.

**Colour mixing**

Mixing of two predetermined colours (1 and 4) and in harmonic nuances. (two coloured grading.)

The Competitors will get five wooden boards. Four plates with colour samples (two with Colour one and two with colour four) mixed by the experts, and also 1 wooden plate with a white undercoat for Colour Graduation, the wooden plates will be approx. 21 x 29.7 cm (A4 format). All the given boards have to be given back to the Experts for assessment.

The half of two boards with the mixed colour on (Colour 1 and 4) will be covered with masking tape and sealed by the Experts. The other half of the two boards must be painted by the Competitors with their mixed colours.

The other two boards are for testing.

**Speed Competition**

The Competitors will have a Briefing for the Speed competition 30 min before the Start.

This means: 10 min briefing by the Chief Expert

10 min expert communication without taking notes

10 min preparation of the work bay by the Competitor.

The protection of the surrounding areas e.g. design plate and free technique have to be done during the competition time.

All Competitors will start simultaneously with the Colour design. The Competitor who finishes first will get the maximum of two Points. Every Competitor behind will get 0.25 points less according to the position they finish (when there are more than 16 Competitors, we deduct 0.1 Points per Position).

Competitors who finish within 30 seconds will get the same amount of points.

**Time:**

Day 1, Colour mixing, preparation background

Day 2 Colour design, speed competition

**Marking:** 15 marks (of 100)
13.2.5 Wall B: Free technique

The area for the free technique will be approx. 90-100cm wide and 240-250cm high. The top and bottom end will have a skirting. The wall is ready painted with white colour.

Application of a decorative painting technique chosen by the Competitor. Materials/tools for this exercise must be brought by Competitor.

No wallpaper and glass fibre are allowed.

Also elements in three dimensions are not allowed.

Spraying is not aloud at all on the free technique (no spray guns, spray cans or similar)

Prefabricated templates are allowed (ready cut masking film).

The whole dimensional area must be covered by a manual technique. The use of pre-prepared materials for projection are permitted, however all techniques must be applied manually. The projection of a pattern via beamer or similar appliance must be done within the provided work space. All the work must be done within the work booth, which the Competitor must not leave.

The free technique module must include an info sheet, this is to be brought along to the Competition and include the following points:

- Competitor name and country/region;
- Applied materials for the free technique (only water-based material);
- Layout for the free technique, without dimensions.

This Info sheet must be given to the Chief Expert before start the Competition at C1. It will be appraised in module three.

Layout for the free technique with coloured draft (plan) or coloured, printed photo, without dimensions. The Competitor needs to use the whole surface of the free technique panel.

Time to finish: Day 1 to day 3

Marking: 9 marks (of 100)