26th ANNUAL SKILLS MANITOBA COMPETITION
CONTEST DESCRIPTION
APRIL 11, 2024

CONTEST NAME: 3D Game Art – Post Secondary

CONTEST NO: 50

CONTEST LOCATION:
Sisler High School
1360 Redwood Avenue
Winnipeg, Manitoba
Room 58

CONTEST START TIME AND DURATION:

Time	Task
8:00 am - 12:00 pm	Orientation 8:00-8:15AM 8:15AM Hand in concept art model sheets. (Created prior to contest and submitted at beginning of contest as PNGs. Production time – modelling modules due at 12:00pm
12:00 pm - 12:30 pm	Lunch (provided)
12:30 pm - 2:30 pm	Competition 2 hours Production time UV mapping and Model Surfacing
2:30 pm -3:30 pm	Judging

PURPOSE OF CHALLENGE:
To provide competitors with the opportunity to experience the 3D Game Art production process and demonstrate their knowledge and skill. The 3D Digital Game Artist takes a designer's brief and, through a combination of conceptualization, creativity, selectivity, technical, and specialist skills, completes the brief to the satisfaction of the client.

Competitors will be given 6 hours to develop and present assets including models, UV maps, and surfaces. Concept art will be prepared **prior** to the contest start. All models will be presented in Sketchfab for final presentation.

Your models should follow the design aesthetic detailed in this document. The individual models should use no more than 6,000 polygons (tris) each. Individual texture maps should be no more than 2K (2048 x2048) pixels each.

Task: You will model, UV map and texture the assets described in this document. The intention of this competition is to create original artwork. All assets must be created on site during the competition except for the model sheets (concept art) which should be done before the competition but must be submitted as digital PNG files at the beginning of the competition. All concept models must be clearly labeled and have 3 views (2 orthographic and 1 perspective), on the same page. **No AI tools are to be used for any asset, drawing, material, texture, or models created for this contest.**
Your concept art, surface materials, and models can be created in any 3D and 2D software combination you are familiar with but must be exported into Sketchfab for judging. Note: You should be familiar with uploading files Sketchfab and ensuring your model, textures, and lighting are optimized.

OVERVIEW

During this competition, you will be challenged with **5** modules to demonstrate your skills. Each module will be judged independently. Each module will have a distinct submission requirement. For the final module, you will combine your results from each of the modules to create a final scene. These separated modules will allow you to demonstrate your skills in each area.

MODULES

1. CONCEPT ART-Your ability to create concept art based on a design brief.
2. MODELLING-Your ability to model a hard surface object and a sculpted organic object.
3. UV MAPPING-Your skill with UV unwrapping.
4. SURFACING-Your ability to texture models.
5. EXPORT AND PRESENTATION-Your skill to publish your files onto an online platform.

Competitors will be given 6 hours to model, UV map, surface, and combine all created and provided assets into a completed Sketchfab scene. The style this year is “Steam Punk”. Your models should follow this design aesthetic.

DESIGN BRIEF:

Steampunk Jeweler's workshop

For this contest, you are challenged to create items to add to a cluttered work surface belonging to a fictional artist who builds delicate, robotic insects. This watchmaker/ jeweler’s desktop workspace is cluttered with various items related to their craft. In addition to the assets you will develop, you will be provided with some items to help complete the scene. You will develop a model of the jeweller’s latest creation, an ornate mechanical Firefly. The creation will be housed inside a glass globe with a wooden and velvet base (provided model). On the desk, there will be schematic drawings of the creation. These papers should display your own concept art drawing for the mechanical insect. In addition to the provided models of the desk, a light, tools, tins and jars, you will add a model of the jeweller’s steampunk style leather hat.

Assets to create:

MODULE 1-Concept Art

Concept Art: You will arrive at the contest with your completed digital images displaying your finalized designs of both the Firefly and the Hat. See the model design brief below for visual direction for the concept art. All concept models sheets must be clearly labeled and have 3 views (2 orthographic and 1 perspective), rendered on the same page. Demonstrate your skills with proportions and shading to illustrate the models. Details, relative sizes, textures, and colours should be represented. Your perspective view should demonstrate considered perspective as well. Concept Art Model sheets should be 4K (3840 x 2160 pixels) and submitted as PNGs.

MODULE 2
Modelling

Model 1: Mechanical Firefly
This mechanical model of a firefly is a stunning piece of artistry, combining intricate details and craftsmanship. This mechanical firefly created by a master jeweler is a blend of art and engineering. Picture a small, delicate sculpture with moving parts, perhaps crafted from precious metals like silver and gold. The firefly's body might be composed of a variety of smoothly polished metals. This mechanical marvel is not only functional, but it is also a beautiful piece of jewelry. The designer sought to make a representation of a firefly, not a true likeness.

The wings of the mechanical firefly are meticulously crafted from thin sheets of fine crystal glass framed with precious metals.

Tiny mechanical components, like gears and joints allow the wings and legs to move. The jeweler incorporated miniature hinges and springs to achieve this delicate functionality, showcasing their skill in both jewelry design and mechanical engineering.

To enhance the charm of the piece, the firefly's abdomen is crafted from a globe of delicate crystal glass. Inside this glass bulb there is a coil of filament that should glow a bright warm light.

You are not tasked to UV map this model. Each component should use a material but not a texture.

Model 2: Jewellers Hat
Envision a steampunk-inspired pork pie hat crafted from leather, exuding a blend of vintage charm and industrial sophistication. The hat a rich, deep brown hue, with the leather displaying a worn patina that suggests years of use.

The crown of the pork pie hat is distinctively rounded on top, giving it that classic silhouette. A ribbon wraps around the base of the hat. Embellishments of brass and copper adorn the hat, enhancing its steampunk aesthetic. Imagine a series of small, meticulously placed gears, cogs, and rivets pinned or sewn into the leather. These metallic elements not only serve a decorative purpose but also

imply a collection of tools or items the jeweller found and hopes to use for a future project.

You are not tasked to UV map this model. You may choose to create a map, but you won't be evaluated on it. For surfacing the leather, you may wish to use automatic mapping in your surfacing software. Each metal component should use a material but not a texture.

MODULE 3
UV Mapping
All competitors will be provided with the **same** unmapped models. Each competitor will demonstrate their ability to create a suitable UV map for each model. Each competitor will be provided with the same UV Checker texture to apply to their mapped model to demonstrate texel density. See the last page of this document for a copy of the UV checker texture. Once mapped, submit a screenshot of the UV maps and a link to the published Sketchfab models displaying the UV Checker texture for judging.

MODULE 4
Surfacing
All competitors will be provided with the same two models to surface. The models will already have a complete UV map. **Do not** surface your mapped models from Module 3. Each competitor will demonstrate their ability to surface a model based on a design brief they will receive on the day of the contest. Each competitor will upload their surfaced models to Sketchfab and submit the link for judging.

MODULE 5
Export and Presentation
Competitors will assemble a scene with their models of their fireflies, hats, the surfaced model from Module 4, and with other provided assets according to a brief that will be provided on the day of the contest. Competitors will upload the completed scene to Sketchfab. Optimise the visual presentation using the materials, lights, and rendering effects. Submit a link for judging.

SKILLS AND KNOWLEDGE TO BE TESTED:

Employability Skills:	Preproduction:	Production:
Reading, problem solving, Critical thinking	Interpretation of a Design Brief	Preproduction, Planning
Time management	Creation of Concept Art	Asset Construction

Planning		Texture mapping & UV Unwrapping
Attention to detail		Exporting
		File Management
		Appeal of Final Product

POINT BREAKDOWN / 100 TOTAL:

POINT BREAKDOWN	/100
Design Brief Follow design brief specifications. Creative interpretation of the Design Brief.	10
Concept Art Create one detailed and labelled model sheet with 3 views for each of the 2 models (One model sheet for each of the assets). These model sheets should be created prior to contest and submitted at beginning of contest as PNGs.	15
Modeling: You are asked to model separate 2 items. Model 1: mechanical firefly Model 2: steampunk leather hat	30
Surfacing UV map and texture your models using your chosen workflow. 15 for UV maps 15 for textures	30
File Management Organisation of your folder, files, and textures	5

Presentation Upload your files to Sketchfab 15 minutes prior to the end of competition. Modify materials and lighting to enhance the presentation. Provide link to judges	10
Total	**100**

NATIONAL COMPETITION ELIGIBILITY:

A mark of **70% or higher** must be scored by the gold medalist in order to attend the National Skills Competition

EQUIPMENT, TOOLS, MATERIALS TO BE PROVIDED BY COMMITTEE:

The 3D Game Art competition will be BYOD, (Bring Your Own Device for each competitor.) No equipment will be supplied.

EQUIPMENT, TOOLS, MATERIALS TO BE SUPPLIED BY COMPETITOR:

Minimum suggested Hardware Requirements:
Desktop or laptop
• Intel Graphics Workstation i7 Quad Core Processors
• 1 TB HD • 16Gb RAM
• Dedicated video card (suggested 4GB) as approved by Autodesk
• Flat Panel Display 1920 X 1080
• Sound card
• Operating System –Windows 10 or Mac OSX
• WiFi enabled computer system.

Suggested software:
• 3D Software: 3D Studio Max, Maya, Blender.
• 2D Software: Adobe Photoshop or Illustrator. Autodesk Sketchbook. Krita, Clip Studio or GIMP, Zbrush, Substance painter.
• **Additional Equipment and material suggested.**
    • Tablet and driver (Driver compatible with your system)
    • Headphones
    • Pencils and erasers
• Required clothing (Provided by competitor)
    • No special requirements

WORKSITE SAFETY RULES / REQUIREMENTS:

No personal protective equipment required.

SPECIAL CONDITIONS / ADDITIONAL INFORMATION:

Consecutive translation If consecutive translation is required on site, the Skills/Compétences Canada Provincial/Territorial offices must advise Skills/Compétences Canada National Secretariat a minimum of 1 month prior to the competition or this service might not be guaranteed.

FAQ:

What do I design?
3D models and surfaces. Competitors will be given written descriptions of game assets.

How much time do I have?
During the 6-hour competition, all tasks must be completed by the end of the competition.

Can I use my own files?
Competitors are not permitted to bring their own files, rigs, materials, or maps for use during the competition.

Can I use the Internet as a resource?
Competitors can use the internet for general help or reference during the competition but may not receive online coaching.

Can I use my own tools?
Digital Drawing tools such as tablets are permitted. Contestants will be responsible for installation and troubleshooting their devices.

Can I use my cell phone during the competition:
During the competition you may use your cell only for listening to music or as an emergency resource.

What software should I use?
Remember you are providing your own computer and software. It is suggested that you use 3D software that you are licenced to use such as Maya, Blender, 3DS Max. Competitors need 2D software such as Adobe Photoshop or Krita. Competitors are responsible for their own IT support so ensure that everything works in advance.

Do I need to stay in the competition area the whole time?
Yes, during the competition all competitors must remain within the proximity of the competition area, as specified by the Technical Committee.

Can I communicate with my coaches, friends, and family during the competition?
Communication with non-competitors is not permitted during the competition through any means. (i.e. Cell phones, text, email)

THE IMPORTANCE OF SKILLS FOR SUCCESS FOR CAREERS IN THE SKILLED TRADES AND TECHNOLOGY;

In response to the evolving labour market and changing skill needs, the Government of Canada has launched the new Skills for Success (former Essential Skills) model defining nine key skills needed by Canadians to participate in work, in education and training, and in modern society more broadly. SCC is currently working with Employment and Social Development Canada (ESDC) to bring awareness of the importance of these skills that are absolutely crucial for success in Trade and Technology careers. Part of this ongoing initiative requires the integration and identification of the Skills for Success in contest descriptions, projects, and project documents. The following 9 skills have been identified and validated as key skills for success for

the workplace: 1.Numeracy, 2.Communication, 3.Collaboration, 4.Adaptability, 5.Reading, 6.Writing, 7.Problem Solving, 8.Creativity and Innovation, 9.Digital

FOR MORE INFORMATION CONTACT TECHNICAL COMMITTEE MEMBER:

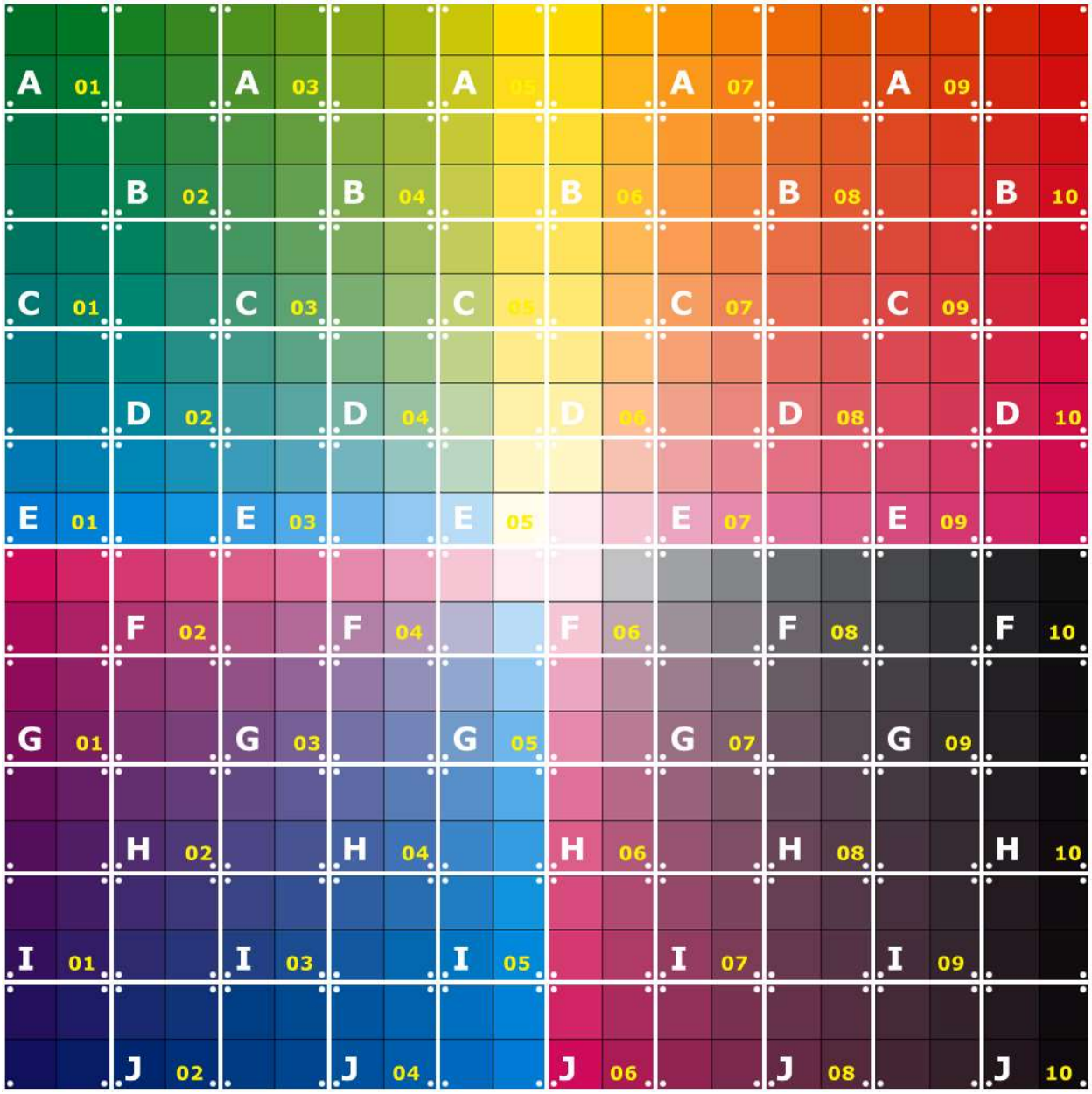
Derek Ford fordd@assiniboine.net

SCORESHEET:

A) Design Brief Follow Design Brief specifications	10%
Models, surfaces, and concept art follow design brief specifications. Creative interpretation of the design brief.	1 2 3 4 5
B) Concept Art Model Sheets of crown and case (submitted at beginning)	15%
Model 1 sheet • Digital sketch is clearly labelled and illustrates the model in 3 views • Digital painting demonstrates perspective and proper proportion. • The final concept features blending/smoothing to represent form of the object • Shading techniques employed	1 2 3 4 5
Model 2 sheet • Digital sketch is clearly labelled and illustrates the model in 3 views • Digital painting demonstrates perspective and proper proportion. • The final concept features blending/smoothing to represent form of the object • Shading techniques employed	1 2 3 4 5
C-1) Modelling – Model 1 – Mechanical Firefly	15%
Similar to model sheet Meets triangle budget. No N-Gons present Chamfered edges on any 90-degree edge Model's distribution of triangles is even across fixed areas and concentrated for areas of deformation and detail.	1 2 3 4 5

Edgeflow follows the topology of the object.	
C-2) Modelling - Model 2 – Steampunk Hat	15%
Similar to model sheet Meets triangle budget. No N-Gons present Chamfered edges on any 90-degree edge Model's distribution of triangles is even across fixed areas and concentrated for areas of deformation and detail. Edgeflow follows the topology of the object.	1 2 3 4 5
D-1) UV Unwrapping	15%
Model 1 UV unwrapping Demonstration of UV unwrap tools: model has been unwrapped logically. Smooth and even UV shells: major asset has separate UV shells that represent understandable elements of the model Use of UV spacing to maximized texture sheet use without bleeding or overlapping.	1 2 3 4 5
Model 2 UV unwrapping Demonstration of UV unwrap tools: model has been unwrapped logically. Smooth and even UV shells: major asset has separate UV shells that represent understandable elements of the model Use of UV spacing to maximized texture sheet use without bleeding or overlapping.	1 2 3 4 5
D-2) Surfacing	15%
Model 1 Surfacing Materials represent the model effectively. Surfaces describe materials realistically. The appropriate materials have been created for the surfaces. Textures look seamless on models, no obvious joins or breaks in texture. Surfaces are consistent with model sheets, surfaces conform to the overall requested art style. An appropriate variety of physical materials have been represented. Multiple surface maps have been used (normal, roughness, colour, etc)	1 2 3 4 5
Model 2 Surfacing Materials represent the model effectively. Surfaces describe materials realistically. The appropriate materials have been created for the surfaces. Textures look seamless on models, no obvious joins or breaks in texture. Surfaces are consistent with model sheets surfaces conform to the overall requested art style.	1 2 3 4 5

An appropriate variety of physical materials have been represented. Multiple surface maps have been used (normal, roughness, colour, etc)	
E) File Management	5%
Ability to follow instructions and deliver assets & files as directed. Files, folders, layers, and assets are clearly names and organised.	1 2 3 4 5
F) Presentation Uploading to Sketchfab & file management	10%
Models open and view without errors. Final product is enhanced with Sketchfab lighting to match design brief File is properly submitted on time to competition.	1 2 3 4 5
TOTAL	100%



Updated: December 22, 2023