2024 Provincial Skills Canada Competition

Contest Description
Edmonton Expo Centre, Edmonton
May 8 & May 9, 2024

EVENT: 3D Digital Game Art	**LEVEL:** Post Secondary / Secondary
EQUIPMENT DROP OFF, SET-UP AND TESTING **MAY 7:** 4:00PM – 5:30PM	**LOCATION:** Hall B Edmonton Expo Centre, Edmonton
COMPETITION START & END TIMES: **MAY 8:** 8:00 AM – 4:30 PM **MAY 9:** 8:00 AM – 2:00PM (Detailed schedule below)	**REGIONALIZED:** NO
DURATION: 14.5 hrs. (2 days)	**WORLD SKILLS TRADE #:** 50

Please Note: This document is subject to change as competition information is updated. Competitors are responsible for staying up to date with the most recent information. Check the footer for last updated date. Changes will be highlighted in yellow.

GENERAL DESCRIPTION

https://www.skillscompetencescanada.com/en/skill_area/3d-digital-game-art-technology-careers-skills-competences-canada/. 3D Digital Game Art is a post-secondary competition Nationally. If you move on to Team Alberta, you will be competing at a post-secondary level with post-secondary projects.

Purpose of the Challenge:

To provide competitors an opportunity to demonstrate their knowledge of 3D Digital Game Art. This competition simulates real world production from concept to delivery.

Skills and Knowledge to be Tested:

- Interpretation of Design Brief
- Concept Art
- 3D Modelling – Hard Surface and Sculpting
- UV Unwrapping & Texturing Objects of a Variety of Detail Levels
- Scene Composition and Lighting
- Organization & File Management
- Exporting & Uploading Files

Project:

In order to reflect the process used in the 3D digital art industry, the project will be structured in duration and required form. Examples of forms might include gaming, animation, movies, instruction, advertising, business, re-enactments, or simulations. The competition is completed as an individual. The final project files must be submitted and remain with Skills Canada Alberta, but students are allowed to take their completed project files at the end of the event.

Days of Competition - The two days of competition will be broken into modules for a total of 14.5 hours. Day 1 will start with a Modelling module followed by the beginning of the UV Unwrapping & Surfacing module. Day 2 will start the second part of the UV Unwrapping & Surfacing module and finish with an Exporting (rendering) module. You are asked to complete the Concept Art module prior to the contest and arrive with a completed file in the requested format.

Additional Competition Information and Expectations:

1. Nowhere within the models or rendering should the name of the students, or their school brand be present. *Competitor must be able to export a fully rendered high-definition scene within the time allowed* so that final judging can commence at 2:00 pm on Day 2 of competition. Please be aware of how long rendering can take even on the most powerful of computers.
2. The competitor will work independently. Instructors and/or observers will give no assistance and are not allowed in the competition area except with the permission of the Provincial Technical Committee (PTC). This also means that AI is not to be used for any module of the competition.
3. Judges may decide to take a walk-through on the first day of competition to see what teams are creating. They may also look at project files Wednesday afternoon. Judges, where possible, will prepare brief reflective comments that may be shared with teams via email after the competition. A 'showing' of the completed work will be held at the completion of judging, prior to the main Skills Awards Ceremony.
4. While this is an extremely safe working environment, there are environmental stresses. Students should bring layered clothing to allow for heat or cold, earbuds or headphones that allow for quiet or for the playing of music, and anything else they may feel will help them to sit for two days at a computer, in a folding chair, in a 'large hall' environment.

SCHEDULE

Day 1

8:00 AM – 8:15 AM	Project details provided, configuring of your workstation to meet the expectations of the project, Concept Art submitted.
8:15 AM – 4:30 PM	Production Time

Day 2

8:00 AM – 2:00 PM	Production Time
2:00 PM	Competition ends and students begin to submit their final products to allow judging to begin.
4:00 PM	Public viewing of completed work

There will be a 60-minute lunch break each day from Noon until 1:00 p.m. Competitors can choose how much of this time is taken for lunch.

Equipment and Materials

Equipment and Materials supplied by the Committee:

- Table and Chair

Equipment and Materials Competitors Must Supply:

- *Competitors are required to bring their own device and software for the competition*. Each competitor can choose their own device and software, so their workflow and process are what they are familiar with.
- If competitors are bringing a computer or laptop from their school (instead of their personal computer), please ensure that the computer is unlocked so documents and possibly software can be saved/installed to the hard drive and technology support can be provided onsite. This may require access to CMOS settings.
- Students may bring one computer and one spare machine. This second machine can be used for rendering purposes. Only two machines are allowed per individual.
- Competitors must provide their own power bar, extension cords, and networking cable (10 ft)

Recommended Minimum Hardware Requirements:

- Intel i7 CPU (10 series or higher) or AMD Ryzen 5 CPU (5000 series or higher)
- 1 TB HD
- 16GB RAM (DDR4 or higher)
- Dedicated video card (recommended RTX20-series or above / ray tracing compatible)
- Flat Panel Display 1920 X 1080
- Operating System – Windows 10 or 11 64 Bit
- WiFi enabled computer system

Suggested software:

- 3D Software: 3D Studio Max, Maya, Blender
- Surfacing Software: Substance Painter, Quixel Mixer, 3D Coat, Marmoset Toolbag 4

Compositing Software:

- Adobe Photoshop, Adobe After Effects

Additional Equipment and material suggested:

- Tablet and driver (Driver compatible with your system)
- Headphones
- Pencils and erasers

Competitors are required to contact the technical chair by **April 28, 2024**, at david.brown@grasslands.ab.ca to advise the Committee what software they will be using if it is not listed above. Competitors should be prepared to use the software provided by the committee if installing their desired software is unsuccessful.

Bring Your Own Device (BYOD) Information

IMPORTANT: Competitors are required to bring their own device and software that meets or exceeds the stated requirements for their competition. Each competitor can choose their own device and software, so their workflow and process are what they are familiar with. If competitors are bringing a computer or laptop from their school (instead of their personal computer), please ensure that the computer is unlocked allowing for USB sticks, documents and possibly software to be saved/installed to the hard drive and IT support can be properly provided onsite. This may require administrator privileges to access the CMOS settings. All USB sticks provided for competition use will be cleared and inspected prior to being used.

Note, computers must remain inside the competition area for the duration of the competition from the time of equipment drop-off to when the competition ends on Day 2 (including overnight). Competitors may supply their own locking cables if they wish.

Equipment Set-Up and Testing for all event areas that are Bring Your Own Device will be held on Tuesday May 7, 2024, at 4:00pm (before opening ceremonies/registration).

Equipment Set-up and Testing (for BYOD events)

Before the Opening Ceremonies and registration, students who are competing in technology-based events that are a BYOD event will be given an opportunity to set up and test their equipment to ensure their equipment is fully functional and networked (where required) prior to the start of the competition. Only accredited students and educators will be permitted into the competition site for equipment drop off and testing. Students who miss the equipment and setup testing opportunity will need to set up their equipment AFTER the mandatory COMPETITOR ORIENTATION time on the day of competition. Any time that is required to set up and test their equipment on the competition day will be part of their overall competition time. The competition time for these competitors will NOT be extended.

Example Project

An example project will be provided to help competitors understand the requirements of the competition test project allowing for practice of the necessary skills needed for the event. Alongside the practice project, competitors will also be given the test project theme, and concept art requirements (to be done before competition start) in the form of a design brief. The example project and design brief will be a separate document posted at least 3 months before the competition begins.

Clothing Requirement

Appropriate work clothing must be worn to compete. All clothing must be neat and clean and free of rips and tears. Casual wear such as shorts will not be permitted. Close Toed Shoes must be worn. No visible school name or logo on any clothing worn during the competition.

SAFETY

The health, safety, and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

JUDGING CRITERIA

Point Breakdown: Total / 100%

The final renderings, maps, and models from each competitor will be viewed and assessed individually by the judges. Tabulation sheets will be given to the members of the PTC for verification of scores. In the event of a tie, judges will be asked to confer and come to a consensus on the winners. Judges will direct any questions to members of the PTC only.

NOTE: As stated above, AI cannot be used to support any of the work to be completed in this competition. Also, any references used for your work must be properly credited in your submissions. Using AI or failing to credit your references could result in disqualification.

Task Breakdown:

Concept Art (15%)
3D Modelling
- Hard Surface Models (15%)
- Sculpted Model (15%)

UV Mapping & Surfacing (Textures) (30%)
Animation (may include rigging) (15%)
Exporting and Rendering (10%)
Total: 100%

Ties

Tiebreaker #1: The individual with the highest score in the 3D Modelling task Criteria will be declared the winner.

Tiebreaker #2: If there is also a tie in the 3D Modelling task, then the highest score in the Surfacing task will be declared the winner.

Tiebreaker #3: If there is also a tie in the Surfacing task then the highest score in the Export and Rendering task will be declared the winner.

Rubric

Module 1 – Concept Art	10%
(2 points each) Model Sheets follow design brief specifications. ● Concept art is in the style of the design brief. ● Concept art is clearly labelled and illustrated in 3 views as requested in the brief. ● Concept art demonstrates proper proportions. ● The final concept features shading techniques to represent form of the object. ● Color has been employed to denote potential materials used in the scene.	1__ 2__ 3__ 4__ 5__
Module 2 - Modelling	30%
(3 points each) Hard Surface ● Uses hard surface modelling techniques to achieve required results. ● Modelled for animation – Quad based topology for proper deformation, minimal use of triangles. ● Appropriate distribution of polys under 10,000 tris ● No Ngons, Clean unified geometry ● Designs conform to the design brief Sculpting ● Uses digital sculpting techniques to achieve required results. ● Appropriate forms created producing clean and easy to retopologize geometry. ● Low poly version of the sculpt produced using decimation techniques. Demonstrates understanding of how to prepare for baking. ● Appropriate distribution of polys uses detail where detail is needed. ● Designs conform to the design brief	1__2__3__4__5__

Module 3 – UV unwrapping	10%
(2 points each) • The UV islands are proportional to the corresponding areas on the model. • Smooth and even UV shells: major asset has separate UV shells that represent understandable elements of the model. • There are no distortions of texture maps, stretched, etc. • Seams are kept to a minimum and hidden as much as possible on the object. • Texel density is even across the UV space and only scaled when necessary	1__ 2__ 3__ 4__5__
Module 4 - Texture Mapping (4 point each)	20%

(4 points each) • Surface Textures describe materials correctly. The appropriate materials have been created for the textures, skin on skin, metal on metal etc. • Texture looks seamless on model, no obvious joins or break in texture. • Texture is consistent with model sheet; textures conform to the overall art style of the project. • A variety of physical materials have been represented, e.g., wood, plastic, metal, fabric, skin, hair. • Multiple maps have been used, Normal, transparency, etc.	1__ 2__ 3__ 4__ 5__
Module 5 - Rigging & Animation	15%
• The model has been rigged for animation. • Joints are placed in appropriate positions for topology of object. • At least two animation principles can be seen (slow-in slow-out, anticipation, follow-through). • The animation loop is appropriate for the intention. • The animation loop plays smoothly without skips.	1__ 2__3__4__5__
Module 6 - Exporting and Rendering	10%
(3 points each) • Logical naming conventions are used for objects, files and textures.	1__ 2__ 3__4__5__

• Models open and view without errors. • Animation works properly in FBX/GLTF import into Blender/Maya • Final render uses lighting to enhance features of the required scene. • Additional composition steps are taken to create a formal render for portfolio/client purposes.	
TOTAL	**100%**

ADDITIONAL INFORMATION

Skills Canada Alberta Regional and Provincial Rules and Regulations
Regional and Provincial Rules and Regulations

Competitor Registration
Registration for Provincial Skills Canada Competition (PSCC) will open online on January 17, 2024 @ 8:30 AM. Please refer to this competitions event page for additional registration and competition information: https://skillsalberta.com/competition/

Lunch
Lunch for accredited competitors will be provided by Skills Canada Alberta.

Parking & Venue Maps:
http://edmontonexpocentre.com/attend/parking/
Parking is FREE for all attendees.

Opening Ceremonies / Competitor Registration
Opening Ceremonies for the PSCC will take place on Tuesday May 7, 2024, at 6:00 pm in Hall D of the Edmonton EXPO Centre. Admission is free, and everyone is welcome to attend. It is important to note that competitor registration will open immediately following the Opening Ceremonies.

Awards Ceremony
The Awards Ceremony will take place on Thursday May 9, 2024, at 6:30 pm in Hall D of the Edmonton EXPO Centre. Admission is free and everyone is welcome to attend. The Awards Ceremony will be shown live at http://skillsalberta.com/

Team Alberta Information
Team Alberta will be selected at the PSCC Awards Ceremony. Gold medalists will then be eligible to participate at the Skills Canada National Competition (SCNC) on May 27- June 1, 2024, in Quebec City, QC. It is recommended that competitors review the SCNC contest description to be familiar with the national contest description and project at http://www.skillscanada.com/.

During the PSCC Awards Ceremony on Thursday May 9, 2024, gold medalists will be given their Team Alberta information package and will confirm their participation in the SCNC. Students must be present at the Awards Ceremony to claim their position on Team Alberta. If the Gold medalist is not able to attend SCNC, the next top ranking individual will be asked to participate. If a student is not able to attend the Awards Ceremony a letter confirming the student's interest in Team Alberta participation must be emailed to javierad@skillsalberta.com prior to the start of competition on May 8, 2024.

Please prepare your students in advance to accept a position on Team Alberta and outline how your school will support their participation. Furthermore, it is very important that all fieldtrip/travel information for potential Team AB members is organized and completed prior to the selection of Team AB.

Questions?

Please contact Whitney Koop at whitneyk@skillsalberta.com if you have any questions regarding the Contest Description.

COMMITTEE MEMBERS

Chair - David Brown

Member – Ethan Thomsen