Contest Description
Edmonton Expo Centre, Edmonton
May 3 & May 4, 2023

EVENT: 3D Digital Game Art	**LEVEL:** Secondary
EQUIPMENT DROP OFF MAY 2: 5:00PM – 6:00PM **EQUIPMENT SET UP AND TESTING** MAY 2: 7:30PM – 8:30PM	**LOCATION:** Hall B Edmonton Expo Centre, Edmonton
COMPETITION START & END TIMES: **MAY 3:** 8:00 AM – 4:30 PM **MAY 4:** 8:00 AM – 1:00PM (Detailed schedule below)	**REGIONALIZED:** NO
DURATION: 13.5 hrs. (2 days)	**WORLD SKILLS TRADE #:** 50

BYOD (Bring Your Own Device): *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.
    - It is strongly encouraged that teacher mentors review the 'workflow' with their students prior to the contest. Please refer to Item #9 under 'Additional Competition Information and Expectations'
- 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.
    - One known issue is that students borrow laptops or workstations that have always been accessed using the school network. When these machines are taken away from the school network, the students frequently don't have access to the same user 'profile', and so sometimes students can't log on, sometimes software licenses are missing, and sometimes students are unable to make changes to the machine (such as adding drivers for their tablets or licenses for their software) because their 'local' login doesn't confer privileges. An easy way around this is to test the device--and all peripherals--using the login the student will use, away and apart from the school network before leaving for the competition.

GENERAL DESCRIPTION

https://www.skillscompetencescanada.com/en/skill_area/3d-digital-game-art-technology-careers-skills-competences-canada/

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
- 3D Modelling
- Lighting
- UV Unwrapping & Texturing
- Retopology and Normal Map Baking
- Organization & File Management
- Exporting & Uploading Files

These skills directly relate to the following Skills for Success as determined by Skills Canada: Reading, Problem Solving, Creativity & Innovation, Digital

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.

Day(s) of Competition - The two days of competition will be broken into modules for a total of 13.5 hours. Day 1 will start with a modelling module followed by a UV mapping module. Day 2 will start with a surfacing module (including retopology) and finish with an exporting (rendering) module. You are asked to complete the concept art/reference/planning module prior to the contest and arrive with a completed reference board. More details are provided in the practice project to help you start preparing for this competition.

Additional Competition Information and Expectations:

1. Nowhere within the models or rendering should the name of the students, or their school brand
2. *Teams must be able to export a fully rendered high definition scene within the time allowed* so that judging can commence at 1:00 p.m. on Thursday, May 4, 2023. Please be aware of how long rendering can take even on the most powerful of computers.
3. The participant 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).
4. 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.
5. 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/References submitted.
8:15 AM – 4:30 PM	Production Time

Day 2

8:00 AM – 1:00 PM	Production Time
1:00 PM	Competition ends and students begin to submit their completed animations 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 & 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 and extension cords.

Optimum Hardware Requirements:

- Intel Graphics Workstation i7 Quad Core Processors
- 1 TB HD
- 16GB RAM
- 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 2022, 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, 2023, 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.

Equipment Set-Up and Testing for all event areas that are Bring Your Own Device will be held on Tuesday May 2, 2023 at 7:30pm (following opening ceremonies/registration).

Equipment Set-up and Testing (for BYOD events)

Immediately following 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. If preferred, this equipment can be dropped off to the contest site area no earlier than one hour prior to the start of the Opening Ceremonies. 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.

Note, computers must remain inside the competition area for the duration of the competition from the time the competition begins on Day 1 to when the competition ends on Day 2 (including overnight). Competitors may supply their own locking cables if they wish.

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.

Task Breakdown:

Interpretation of Design Brief (5)
Concept Art / Reference Board (5)
3D Modelling
- Box / Curve Models (20)
- Sculpted Model (20)

UV Map (10)
Retopology (10)
Surfacing (Textures) (15)
Exporting and Rendering (15)

Rubric

2D Animation Rubric				
Hard Surface Model (20 Marks)				
	1	2	3	4
Geometry Quad based mesh, with no n-gons and tris only used in appropriate locations. Polycount is reasonable. Edge flow is clean.	Models provided are insufficient and glaring issues are present. Could not be reworked, but an attempt at modelling is made.	Models provided are displaying major issues, but the forms could be reworked.	Models provided are sufficient with only minor issues (n-gons, too many tris) found.	Clean, production ready meshes are provided.
			Hard Surface Total	

Sculpted Model (20 Marks)				
	1	2	3	4
Geometry Details are added to enhance the mesh. Takes advantage of a large increase in polycount.	Models provided are insufficient and glaring issues are present. Could not be reworked, but an attempt at modelling is made.	Models provided are displaying major issues, but the forms could be reworked.	Models provided are sufficient with only minor issues found (malformed details).	Clean, production ready meshes are provided.
			Sculpted Model Total	
UV Map (10 Marks)				
	1	2	3	4
UV Map - Minimal stretch - Appropriate scaling	Map provided is insufficient and glaring issues are presented. Could not be reworked, but an attempt to create a UV map was made. Auto-UV software or add-on was used.	Map provided has major issues that could be reworked to create a suitable map. Seams may be misplaced causing defects.	Map provided is sufficient. Minor scaling or alignment issues, but proper seam placement hides the defects.	Clean, any stretch is appropriate, could be used in a production setting.
			UV Map Total	
Retopology (10 Marks)				

	1	2	3	4
Mesh - Quad based, no n-gon, minimal tris - Reduces polycount of high poly model to an appropriate amount - Clean edge flow	Models provided are insufficient and glaring issues are present. Could not be reworked, but an attempt at modelling is made.	Models provided are displaying major issues, but the forms could be reworked.	Models provided are sufficient with only minor issues found (poor placement of tris, a couple of n-gons)	Clean, production ready meshes are provided.
			Retopology Total	
Surfacing (15 Marks)				
	1	2	3	4
Texturing - Proper resolution of textures used - Texture maps used to create unique details - Texture maps are clean and free from artifacts - Textures created showcase a story about the provided item, used to bring objects to life.	Textures provided are insufficient and glaring issues are present. Could not be reworked, but an attempt was made	Textures display major issues, but have a solid base that could be reworked.	Textures are sufficient. There are minor issues (ex: artifacts, gaps) that detract from some good details created.	Texture maps are production ready, clean, and highly detailed. Complex effects are applied to create a unique look
			Surfacing Total	
Exporting & Rendering (15 Marks)				
	1	2	3	4
Exportation - Acceptable formats are used for export (Models use SketchFab standards and textures are appropriate resolution and color space)	Some components are unable to be viewed, but are present	Most components are in sub-standard formats, but usable.	Some components are in sub-standard formats, but are usable.	All components are submitted accurately.

Look Development - Texture maps applied properly - Scene is organized to portray a story or entice exploration. - Lighting is used to create atmosphere and highlight key components of the scene.	Components are insufficient and the scene is not composed well. Glaring issues are present.	Some components show major issues, but the overall look applicable to the theme is upheld.	Some components are not appearing properly. Scene has lighting issues, but still works.	All components appear properly. Scene is masterfully composed, lit, and has a professional look and feel.
			Exporting & Rendering Total	
			TOTAL SCORE	

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 Retopology task will be declared the winner.

ADDITIONAL INFORMATION

Skills Canada Alberta Regional and Provincial Rules and Regulations

Regional and Provincial Rules and Regulations

Test Project change at the Competition

Where the Test Project has been circulated to Competitors in advance, PTC shall change a maximum of 30% of the work content. Please refer to the Competition Rules as linked above.

Competitor Registration

Registration for Provincial Skills Canada Competition (PSCC) will open online on January 18, 2023 @ 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/

Opening Ceremonies / Competitor Registration

Opening Ceremonies for the PSCC will take place on Tuesday May 2, 2023 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 Ceremony.

Awards Ceremony

The Awards Ceremony will take place on Thursday May 4, 2023 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 24- 27, 2023 in Winnipeg MB. 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 4, 2023 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 individuals 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 3, 2023.

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 field trip/travel information for potential Team AB members is organized and completed prior to the selection of Team AB.

Questions?

Please contact Kennedy Mayer at kennedym@skillsalberta.com if you have any questions regarding the Contest Description.

COMMITTEE MEMBERS

Chair - David Brown