3D DIGITAL GAME ART

POST-SECONDARY

1. Schedule & Registration

DATE Wednesday, April 17, 2024	
Time	**Task**
8:00-8:25 AM	Check-In, Setup and Testing
8:30 AM	Competition begins
TBD on competition day	Lunch
3:30 PM	Competition ends
6:00 PM – 7:00 PM	Medal & Awards Ceremony

Registration:
Competitors must be registered by a teacher with a username and password. Teachers needing usernames and passwords should contact Jamie Maxwell at jmaxwell@skillscanada.bc.ca. Online registration fees are $100 per competitor.

2. Purpose of the Contest

This competition gives competitors 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 and specialist skills, completes the brief to the satisfaction of the client.

3. Project Overview

Competitors will be given **7 hours** to develop assets including designs, models, maps and exported artwork. The object this year will be a mechanical ladybug along with a mystery description of an environment which will be revealed at the morning of the competition.

The intention of this competition is to create original artwork. All assets must be created on site during the competition except for the concept art which be done before the competition but must be submitted as a digital PNG file at the beginning of the competition. All models must be clearly labeled and have 3 views. **AI software or generated imagery are not permitted.**

Task:

You will be challenged with 6 modules to demonstrate your skills. Each module will be judged independently and is independent of the previous module. 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. Modules will allow you to demonstrate:

1. Your ability to create concept art based on a design brief.
2. Your ability to conform the model to the concept art.
3. Your ability to model hard surface & organic sculpting.
4. Your skill with UV unwrapping and texturing/shading.
5. Your ability to create and incorporate the mystery set.
6. Your skill to publish your files onto an online platform (Sketchfab).

Design Brief:

Develop concept art of a mechanical ladybug made of multiple tiny mechanical parts. The mechanical model should be a fine and delicate work that combines the art of jewelry, the precision of watch making, and the marvels of nature. The combination of components should convey the whimsical charm of a ladybug with the impressive skill of a jeweler and a watchmaker. There should be 3 views (perspective, side, and back view).

Visual Description:

The ladybug's body parts have been crafted from various watch parts. The split shell of the back is made from delicate copper and lacquered with red and black. The ladybug's rounded abdomen is made from black leather watchstraps. The head is cleverly repurposed glass and metal from watches. The head should be clear on the top with a metal underside. Inside the head, we can see gears, cogs, and wheels. The ladybug's eyes, made from minuscule watch components and jewels, add a touch of character and depth to its face. Two delicate watch hands extend from the head, forming the ladybug's antennae, gracefully curving upwards, resembling sensory receptors.

On the underside of the ladybug's body, you'll find its intricate legs, each painstakingly crafted from tiny metal rods, attached using tiny screws and nuts, allowing them to move independently and giving the ladybug a lifelike appearance.

The ladybug's wings, equally detailed and visually captivating, are made from circular cutouts of watch faces. They're hinged to the body, allowing them to open and close, mirroring the way real ladybug wings fold. These wings are often adorned with fine, decorative patterns that give the ladybug a touch of elegance.

Gears and springs, strategically positioned inside the ladybug's body, add to the overall mechanical complexity. They serve as the internal mechanisms that power the ladybug's movements. When wound up using a small key or winding mechanism, the gears and springs activate the ladybug's legs and wings, causing them to move in a lifelike and mesmerizing manner.

Vibrant red and glossy black paints cover its body, mimicking the familiar appearance of a ladybug.

This mechanical ladybug is a testament to craftsmanship, ingenuity, and attention to detail. It's both a work of art and a functional piece, blending the worlds of horology and entomology into a visually captivating and fascinating creation.

Assets to Create:

1.	Original digital concept art should be brought in advance to the competition as a PNG file.
2.	The mechanical ladybug described in the design brief and visual description.
3.	A mystery set environment will be described on competition day.

Use Your Imagination

These images are intended to be used as reference only! And are NOT intended to be used as final designs. Contestants are encouraged to follow this theme but come up with their own unique designs for this project based on the provided design brief. The contestants' designs should be produced with a 3D production pipeline in mind (ie. Modeling, Rigging, Animation etc.) Feel free to use 3D software to setup shapes to draw over and aid you with perspective of your design. Please reach out to the tech committee if you need anything clarified on the design brief.
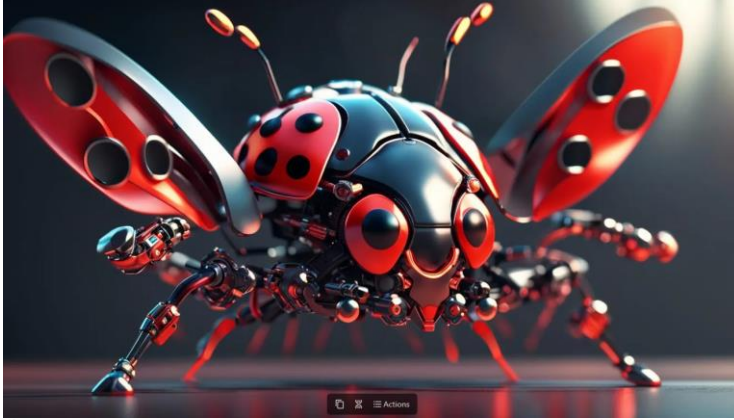
Exported Models:
- Competitors are required to illuminate their model and export to Sketchfab.com
- Each finished model should consist of no more than 10, 000 polygons (20,000 Tri's) in total.
- Individual texture maps should be no more than 2048 x 2048 pixel resolution.
- It should be loaded into Sketchfab with the correct maps and materials for judging.
  Note: You should be familiar with uploading FBX files Sketchfab and ensuring your lighting is optimized. The final deliverable should conform to the design specification and art style defined in this brief.

4. Number of Stations / Allocations

BYOD - Bring Your Own Device

Supplied by Skills British Columbia Technical Committee:
- Workspace: table, chair, electrical outlet

5. Skills & Knowledge to be Tested

- Interpretation of Design Brief
- Develop Concept Art
- 3D modeling
- Lighting
- UV Unwrapping & Texturing
- Organization & File Management
- Exporting & Uploading Files

6. Prerequisites

SCNS Prerequisites
- Enrolled in a community college, university or private school OR be registered as an apprentice with the Ministry of Advanced Education, Skills and Training;
- Registered as a competitor with Skills Canada – British Columbia;
- The competitor cannot be a certified journey-person;
- Have been earning post-secondary credits any time during the academic school year (September to June);
- All competitors must be able to show either current apprenticeship status and/or proof of enrollment in a post-secondary institution upon request of the Provincial Technical Committee (PTC).

7. Equipment & Software

3D GAME ART IS A 'BRING YOUR OWN DEVICE (BYOD) CONTEST. COMPETITORS ARE REQUIRED TO BRING THEIR OWN COMPUTERS AND RELATED EQUIPMENT. NO EQUIPMENT OR SOFTWARE WILL BE SUPPLIED. PLEASE SEE BELOW FOR MORE INFORMATION.

Minimum Recommended Hardware:
- 64-bit Intel® or AMD® multi-core processor with SSE4.2 instruction set Microsoft® Windows®, Microsoft Windows 10 (64-bit only) operating system
- Apple® Mac OS® X 10.11.x, 10.12.x, 10.13.x, 10.14.x operating system
- 1 TB HD
- 16Gb RAM
- Dedicated video card as approved by Autodesk
- Flat Panel Display 1920 x 1080 minimum resolution
- Sound card
- Wi-Fi network card

Competitors can bring whatever 3D and 2D software they are comfortable with but no files, rigs, materials or texture libraries.

Suggested Software:
- Competitors are advised to use licensed or open-source 3D software such as Maya, Blender, or 3DS Max. Competitors may compete with surfacing tools like Substance Painter. Competitors will also need 2D software such as Adobe Photoshop or Krita. Competitors are responsible for their own IT support to ensure that all the tools they compete with are licensed and operational at the time of the contest.
- Competitors will be required to publish to SketchFab their contest deliverables.

Additional Equipment and Material Recommendations:
- Drawing Tablet (driver compatible with your system)
- Headphones
- Pencils and erasers
- Sketchbook
- Any adapters that you may require to connect your hardware to the network and displays
- Memory stick or external hard drive

8. Evaluation & Judging Criteria

SCORESHEET

Concept Art	
Creative and original interpretation of the design brief	5%
Concept art is clearly labelled and illustrated in 3 views as requested in the brief	5%
Final 3D asset conforms to concept art	
3D asset conforms to the concept art	5%
3D interpretation of the concept art is proportioned to having real world proportion	5%
3D Modelling	
Uses hard & soft surface modelling techniques with proper construction	5%
Cleanliness of model (no ngons, holes, backward faces, obvious seams)	5%

Appropriate distribution of polygons/topology	5%
Organized naming of objects, materials and assets	5%
Model has clear shape and silhouette	5%
Aesthetic appeal of models	5%
UV Unwrapping & Texture Mapping/Surfacing	
Efficient UV packing (not wasting space or overlap, too close to borders, poorly oriented UV shells, etc)	5%
Varied use of texture types, (color, normal, specular, metal, etc)	5%
Organized naming of maps	5%
Texture files are no more than 2048 x 2048 pixel resolution	5%
Even texel density (Distribution of UV shells in the UV space)	5%
Mystery Set, Texturing & Shading	
Appropriate distribution of polygons and efficient and even distribution of UVs	5%
Organized naming of objects, materials and assets and cleanliness (seamlines, ngons, normals, holes etc)	5%
Texture and shading display an understanding of color theory & realistic construction	5%
Export & Uploading Files	
Illumination, camera set-up	5%
Aesthetic appeal of final model uploaded to Sketchfab	5%
TOTAL	**/100%**

No ties are permitted. In the event of a tie, the contestant with the highest score in the '3D Modelling' will be declared the winner. If there is a tie in the '3D Modelling,' then the highest score in the 'UV Unwrapping & Texture Mapping/Surfacing' will be declared the winner. If there is a tie in the 'UV Unwrapping & Texture Mapping/Surfacing' then the highest score in the 'Mystery Set, Texturing & Shading' will be declared the winner.

9. Submission Process

Finished models should be uploaded to Sketchfab.com.

1. You must have a sketchfab account.
2. Once uploaded, test to see if everything is working.
3. Email the URL to scbc3dgameart@gmail.com like so: Subject: 3D Game Art Submission (Your name) Body: (Paste URL)
4. Attach a zipped file with the entire project via google drive. Make sure the textures and models are included please. (In case of Google drive failure, a USB will be used to collect the zipped files)

10. Additional Information

Frequently Asked Questions (FAQ)

What do I design?
Competitors will design a 3D asset based on the description of the design brief and a mystery description of the game world to which it belongs will be revealed on the morning of the competition day.

What happens if my work does not adhere to competition specifications?
Work that does not conform to or exceeds the specifications described in the design brief will not be judged and will be disqualified.

Where do I submit my projects?
Upload your model on to sketchfab. This article explains the steps to uploading to your account.
https://help.sketchfab.com/hc/en-us/articles/202508836-Uploading?utm_source=website&utm_campaign=upload_hints
And here is a Youtube video explaining the process of how to present and edit your model.
https://www.youtube.com/watch?v=VWjYbb8t7Iw&ab_channel=GrantAbbitt

How much time do I have?
All tasks must be completed by the end of the 7-hour 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. Only the concept art may be brought in advance.

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

Can I use my own tools?
Digital Drawing tools such as tablets are permitted. If bringing your own tablet, please bring tablet drivers to the competition. Contestants will be responsible for installation and troubleshooting their devices.

What software should I use?
Remember, you are providing your own computer and software. It is suggested that you use 3D software that you own such as Maya, Blender, 3DS Max, substance painter, 3D coat - some of which are free. Competitors need 2D software such as Adobe Photoshop, Corel Paint, Illustrator, Krita or Gimp. Competitors are responsible for their own IT support, so please ensure that everything works in advance. We would suggest a test at home and not at school to make sure that your software will load and function without access to a school/college network. Make sure you have an account with Sketchfab and can upload with no problems. **NO use of AI software or generated imagery or cell phone apps are permitted.**

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 Provincial Technical Committee (PTC). However, bathroom breaks are permitted.

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. mobile devices, text, email etc.) You may use your phone to listen to music with headphones.

10. PTC Contact Information

Provincial Technical Committee Members		
Patty Chomseng	Technical Chair	Scbc3dgameart@gmail.com
Tim Tang	Co-Chair	Timtang3d@gmail.com
Bill Henderson	Judge	Bhenderson@offloadstudios.com