Test Project

EVENT: 3D Digital Game Art	**LEVEL:** Post Secondary / Secondary
EQUIPMENT DROP OFF, SET-UP AND TESTING **MAY 6:** 4:00PM – 5:30PM	**LOCATION:** Hall E Edmonton Expo Centre, Edmonton
COMPETITION START & END TIMES: **MAY 7:** 8:00 AM – 5:00 PM **MAY 8:** 8:00 AM – 12:30 PM	**REGIONALIZED:** NO
DURATION: 13.5 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 the last updated date. Changes will be highlighted in yellow.

3D Digital Game Art 2025 Overview:

During the competition, you will be challenged with 8 modules to demonstrate your skills. Modules do overlap, but we will do our best to ensure that issues from one module do not cause issues for another module. To ensure authenticity with the industry workflow there could be a situation where an impact is unavoidable. Each module will have a distinct submission requirement. The modules will allow you to demonstrate:

1. Your ability to create basic concept art based on a provided design brief.
2. Your ability to model a hard surface object and a sculpted organic object
3. Your skill with UV unwrapping and surfacing models
4. Your skill to prepare a model for animation (rigging) and provide a basic animation for one or more components
5. Your ability to import files to a game engine and demonstrate their functionality.
6. Your ability to communicate your work with others on your team.

The 2025 Project

The overall theme for your 2025 contest project will be: **Sharky Shack!**

You have been contacted by a new upstart game studio as a potential candidate for a role as a junior general 3D artist. In order to score the interview you must complete an art test to demonstrate your skills. Your test is broken down into 6 different modules. Each module will have unique instructions attached and different requirements that you will need to read carefully.

The studio has provided you with the following style guide and references for you to get an idea of what you will be required to be created:

References

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Style Guide

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Stylized leaning towards realism</td>
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Mid-poly with clearly defined hero details, but features are definitely simplified for performance.

Examples: Divine Knockout (DKO), Borderlands, Okami, Breath of the Wild</td>
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Environment is simplified, but still retains accurate characteristics of terrain, tree detail, and building details.</td>
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The game is positioned as a mobile game, but the platform remains unsettled. Prepare models to have the look and feel of above, but more detail may be required if the platform changes.</td>
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Note: This could be presented as a continuum at WorldSkills 2026. Be familiar with many different styles of game art and be prepared to adapt!

Module 1: Concept Art

The first module will test your ability to create effective concept art related to the design brief presented. You are tasked to generate a concept art sheet as you would see in industry.

Your images must demonstrate your understanding of perspective, shading, and proportion.

The items you will be required to create concept art for is: **A Tiki Bar and a Crab NPC**

Here are the required elements that must be shown in your concept art:

1. The crab and tiki bar are separate concepts. Please create 2 images following the criteria noted below.
2. The style must adhere to the style guide and references provided. NOTE: Only the Tiki Bar has references provided. The studio wants to see your creative prowess in creating the crab.
3. The crab needs a unique item to separate it from other crabs. Only a single item is required, please keep in mind that this concept will need to be modeled later, the more you add the more you will need to model later!
4. The concepts must be presented from the front, the side, and a larger ¾ perspective.
5. The colors and shading should indicate what materials have been used to create your concepts. EX: metal attempts to look like metal, glass attempts to look like glass.

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.

Here are the design briefs for the objects:

Tiki Bar

The Tiki Bar is an item shop for the game. It can be considered a hero prop. Here are some requests that must appear in the model:

1. The roof must be made of palm leaves or similar.
2. There must be items shown on the counters that demonstrate potential purchases for the player. These items will be power-ups and must connect to the theme of the game and prop.
3. There must be a sign to draw the player to the location. It should be brightly colored and easy to see. The name on the sign has been left to your imagination.
4. There must be strings of lights that will also draw the player to the location. How the lights are arranged has been left to you.

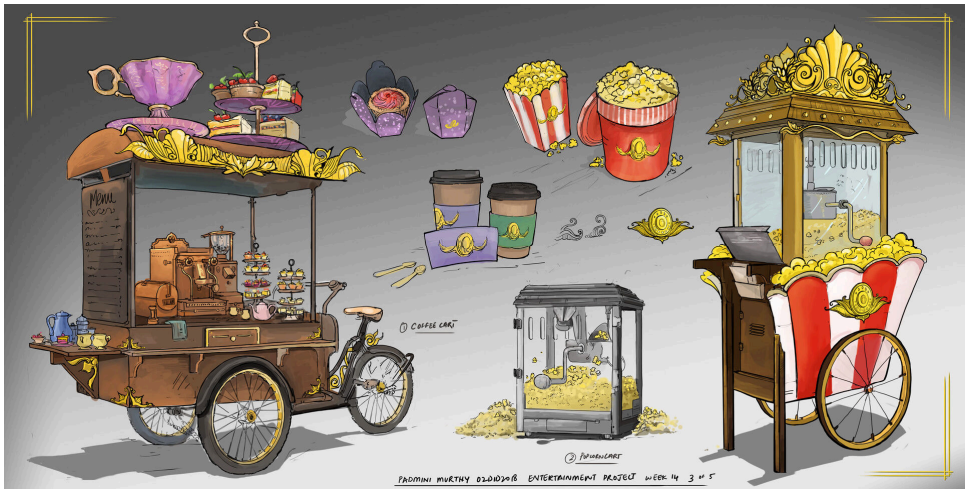
Crabby!

The crab is going to be a unique monster that will run the item shop. Here are the requests for your art test:

1. The crab must resemble a real world crab species. No cyber crabs please!
2. The crab must possess a unique item that separates them from the generic crabs scattered around the beaches.
3. The crab will be much larger than a typical crab. It should be approximately half the size of a normal human in height. All other proportions are up to you as there are many different crab species you could select from.

Submission Guidelines

- The concept art sheet should look as if it was prepared for industry. Here is an example that you can follow to assist in the look.



- All concept art images should exist in separate Photoshop (or similar) files. They are separate concepts and should not be presented together.
- The image can be in the following formats: .PNG or .PSD
- The resolution of the images should be 2560 x 1600 (2.5k 16:10)
- Submissions will be collected by PTC members at the beginning of day 1 of the contest. (Communication systems will be explained on Day 1)

Module 2: Modelling

You will be modelling two assets for this module:

Item 1 (hard surface modelling) - Competitors will model a solid surfaced item. UV mapping is not required for this module. The model will only require simple materials like glass and metal and simple base colors. Making more complex materials will only eat away at your time, KEEP IT SIMPLE!

The required item is the **Tiki Bar based on the concept you created.**

Hard Surface Modelling Guidelines

- Appropriate distribution of polys. Quads and Tris. Small ones where you want detail, Big ones where you don't.
- No more than 15000 tris can be used for the entire scene.
- No Ngons
- Designs conform to the concept you provided

Item 2 (sculpting and retopology) Competitors will be challenged to model an intricate sculpted object. No UV mapping required. The model does not require color at all. Focus on the details!

The required items are the **Crab based on the concept you created, along with its unique item!**

Sculpting and Retopology Guidelines

- The crab must be sculpted and show the characteristics of an adventurous crab that has seen some things. There should be scratches, scars, cracks, chips, etc. demonstrating that this crab is not someone who should be messed with.
- The unique item DOES NOT require to be sculpted, but could be if you so choose. Play to your strengths!
- Any sculpted piece can have unlimited tris. However, the final submitted model (along with the unique item) can be no greater than 30000 tris.
- No Ngons are present in the retopology.
- Quads and tris are used appropriately and distributed uniformly throughout the retopology.
- The retopology will be used for animation. Try your best to ensure the object can deform.
- Designs conform to the concept you provided.

NOTE: The Blender Add-on Retopoflow is 100% allowed for this section and is highly recommended. Auto-retopology tools are permitted, but be aware that most times they cause more problems than the time they save.

Modelling Submissions

- For both components of the modelling module you will submit your scene files containing all your work. (.ma, .blend, .max).
- Use of proper naming conventions within your object outliner. For the sculpting and retopology please use _low and _high to tag your low poly and high poly models respectively.
- You will submit two files, one containing your tiki bar, the other containing your crab high poly, low poly, and item.
- If you have elected to use Zbrush for your crab (highly recommended), you must export your work as a .FBX and import it into your retopology program of choice. It is recommended that you decimate your sculpt to 30% of the original polycount. This will increase performance and likely will not cause any loss of detail.

Module 3: UV Mapping

Competitors will create a UV map within their chosen 3D software. Auto UV unwrapping workflows are **NOT** permitted for this section.

You are tasked with UV Unwrapping your Tiki Bar and Crab.

UV Mapping Guidelines

- Be mindful of texture distortion and stretching.
- Create your UV map appropriate to the model and professional standards. This means you should group your islands by materials, stay within the 0 to 1 UV space, and scale of islands should be appropriate based on detail required (texel density).
- Please make use of mirroring and stacking techniques as both models should be symmetrical, which saves you a TON of time.
- Place a UV grid texture on your model. Make sure that you pack this texture with your scene file!
- Do not place both objects in the same file. They should remain as separate files.

UV Mapping Submissions

- Your Blender, Maya or 3DS Max scene files. (.blend, .ma, .max)

Module 4: Surfacing

This can be completed alongside Module 3 and submitted at the same time. Continuing your workflow will save you a lot of time. You may also need to change your maps to assist in your texturing.

You are tasked with texturing the Tiki Bar and Crab (as well as the unique item) in your texturing program of choice. HOWEVER, it is highly recommended that you use Substance Painter to complete this task as you will be required to do normal map baking. Blender can do it, but does it poorly. The only other program that would suffice is Marmoset Tool bag.

Surfacing Guidelines

- Materials and maps should use a PBR-Metallic-Roughness workflow (Roughness, Metallic, Base Color, Normals, Curvature, Thickness, Ambient Occlusion).
- Base shaders and tones represent the model successfully and embodies the concept art created prior.
- The appropriate maps have been created for the objects. Maps look seamless on model, no obvious joins or break in texture.
- Multiple maps have been used to create masks or used in generators to create unique looks for your work.

Surfacing Submission

- Your Substance Painter (or appropriate substitute) file.

Module 5: Animation and Rigging

You are tasked with creating a simple rig for your crab. **DO NOT** use your high poly model for this task. If you did not finish your retopology or your retopology does not allow for deformation, there will be a placeholder asset provided to you.

Animation and Rigging Guidelines

- Prepare a rig for your crab. This means adding an armature to your model. Your rig should make use of inverse kinematics (IK). Controllers are not required, but please keep in mind that at WorldSkills 2026, they are essential.
- Utilize the 12 principles of animation to ensure you create a captivating action. 3D Artists should always look for ways to really make their work POP, and animation is a relatively easy way to accomplish this. For competition you will need to showcase at minimum 3 major principles of animation. EX: Exaggeration, Anticipation, Squash and Stretch.
- Your animation should be set at 60 frames per second. (60 FPS in a game is now becoming too slow, so you may even see 120 FPS at future events).

Here is your design brief for the animation:

Create a greeting animation for your crab that highlights their personality. For example: a pirate crab may shake its claw at the player in a menacing way.

Animation Submission

- Provide a .FBX file with the animation baked into it. This will be required for import in the final module.

Module 6: Game Engine and Technical Art

You are tasked with importing the following assets into a game engine and setting up a shop scene. Unreal Engine is highly recommended. Unity is acceptable, but Godot and other lighter game engines are not recommended.

Asset List:

1. Your Tiki Bar
2. Your animated crab

Your scene must include the following:

1. All textures applied with appropriate materials created in the game engine.
2. A visual effect, such as lit tiki torches (FIRE!), fireflies, etc. The effect must enhance the scene, not be a distraction or be invisible.
3. Your objects must be placed in a manner that when the play button is pressed to test the scene, the player is presented with a framed “shot”. For example: the player starts facing the shop, the crab is positioned in front of the tiki bar.
4. Position the crab in front of the Tiki Bar.
5. The crab animation must only play when the “space” bar is pressed during runtime.
6. Do not worry about the resolution of the test scene. We can adjust to ensure we see the best shot possible. (more so for Unity users).
7. Ensure the use of post-process effects such as Bloom.

Game Engine and Technical Art Submission

- Provide a .uproject or .unitypackage file.
    - You can ZIP the entire .uproject right in Unreal Engine. This will take time and is a large file. Be prepared for this!
    - The .unitypackage should contain everything needed to be imported into Unity and replicate your scene.
    - Other engines will need to be evaluated at the competitor’s workstation.
- If time does not allow for a scene export, you will not be penalized. Evaluation can be done at your workstation. The export allows us to archive completed work for future purposes and centralizes our marking.

Modules 7 and 8 - Workplace Communication and Organization.

These modules include workplace communication and organization. These are things that cannot be practiced, but competitors need to be aware that there will be additional tasks that will occur during the competition days.

The tasks include:

Work Log - competitors will provide a work log of what was completed during the competition day. Two submissions will take place, one on day one and the other on day two.

Asset List - competitors will create an asset list to be submitted on both days, one for day one and the other for day two.

Templates will be provided for competitors and an example will be shown during orientation.

Questions?

Please contact Mike Sury, mikes@skillsalberta.ca, if you have any questions.

COMMITTEE MEMBERS
Chair - David Brown
Member – Ethan Thomsen