



Vacuum Former and Casting workshop (DIY Easter Eggs)

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Vacuum Former and Casting workshop (DIY Easter Eggs)

Summary

Participants will design and print a 3d object that can be readily vacuum formed. Participants will vacuum form a two part mould of this object for casting. Participants will cast an object using their two part mould. In this workshops they will temper chocolate

Activity Summary

- Introduction to 3D printing and design.
- Introduction to vacuum moulding process.
- Introduction to rotocasting.
- Introduction to tempering chocolate using a sous vide.
- Workshop runs two-to-three sessions

Materials

- Quantity of vacuum forming materials. In this instance recycled 2l milk containers
- Scissors
- Bulldog clips
- Permanent markers (fine point for chasing)
- An assortment of chocolate in block or pellet form

Tools

- Sous Vide and suitable sized container. Suggest maybe multiple sous vides (if afforded); five would be ideal
- 5 x small Vacuum former
 - 5 x heat guns
- 10 x small Rotocaster
 - 10 x vacuum cleaners
- 5 x 3D printers
- 10 x Laptops (or maybe iPads depending if that is feasible)
- vacuum forming material
- Laster cutter (optional)

Instructions

Step Zero: Prep Space

- When setting up the space account for community members working in pairs.
- Sous vide need to be set up and risk mitigation put in place regards use of water. Water temprature does not reach burning points. Spillage is an issue.
- Pre-pack the chocolate in vacuum sealed backs. If food safety is a concern do this in a licensed venue (such as Wandering cooks or similar). 1 block to a back is suitable. Advise using a reputable brand vacuum sealer to make life easier. Chill the chocolate before vacuum sealing as it helps generate a good deal on it. By reputable I mean ALDI and costing more that \$60 AUD.
- Set up vacuum sealers and heat guns. Check for available power in the building to ensure you know in advance how much equipment can be run at a given time. It can cause issues with tripping the safety switch when the circuit if overloaded. We found that we could run five things at once and then last that we lost power. Allowing for plenty of space around the vacuum former to allow multiple community members to have access at any given time.
- Set up roto-caster on a surface that can survive chocolate spills. Allowing for plenty of space around the roto-caster to allow multiple community members to have access at any given time.
- Make sure there is enough space to deliver the workshops; you're essentially going to need space for three seperate workstation spaces to accomodate ten people. If you didn't have the space, consider splitting into three rather than two sessions.

Step One: 3D printing workshop

This is essentially the bog standard 3D design and printing workshop that we have run a hundred times before. Main different is running it with the considerations of design and printing for casting.

- Overhangs are bad
- intricate details won't transfer to the material
- Size and scale for the machine's being used.

Other considerations that have been brought us are;

- Using a comparatively low fill objects and fill with polyutherane/plaster of paris.
- exposure to heat and the objects degradation when exposed to heat.

Step Two:

Step Three:

Step Four:

Step Five: Troubleshooting

Step Six: References

Production notes

Critical Success Factors

[Which of the critical success factors does this Prototype target? For more details see](#)

SLQ-Strategic-Plan-2016-20

Enable Access

- ☐ Provide life skills and early childhood literacy programs
- ☐ Increase free access to digital content
- ☐ Strengthen Queensland library infrastructure and discovery platforms

Engage Community

- ☐ Grow the State's historical collection of Queensland culture and heritage
- ☐ Engage with communities of interest through dedicated centres of engagement
- ☐ Facilitate the community's use of and interaction with content

Build Capability

- ☐ Build capacity within our communities of interest
- ☐ Generate new revenue sources
- ☐ Position our workforce for the future

Delivering of The Edge Promises

Aside from the SLQ Strategic Plan, there is The Edge's commitments to the community and the lens we look at it through. Here are a few more check boxes for you to answer

This empowers creative experimentation across...

- ☐ Art?
- ☐ Science?
- ☐ Technology?
- ☐ Enterprise?

It will inspire...

- ☐ Whimsy?
- ☐ Nostalgia?
- ☐ Curiosity?
- ☐ Awe?

Feedback

1. Feedback:

Solution:

2. Feedback:

Solution:

3. Feedback:

Solution:

4. Other observations:

References**Files**