

IDD Objectives & Test Questions Worksheet

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IST 522: Instructional Design

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November 1, 2022

Brief Introductory Info

Your Name	Amanda Philbrick
Your IDD Topic	Safe and Effective Vinyl Cutter Use
Organization	Monterey Bay Aquarium Innovation Lab
Learners	Innovation Lab Participants

An Introductory Note

The Innovation Lab is a maker space within the Monterey Bay Aquarium's (MBA) Bechtel Family Center for Ocean Education and Leadership (Monterey Bay Aquarium, 2022). Their projects grant young people the opportunity to engage in discovery learning, building a sense of their power to positively impact the world and combat climate change. The center also engages in outreach efforts that empower classroom teachers to confidently address climate education.

At the time of my content analysis submission, I knew that my project would be for the Innovation Lab, but I did not yet know the topic. I proposed that the project might be creation of an instructional module to prepare MBA Innovation Lab volunteers to facilitate discovery learning for teenager participants.

Since that time, I met with the MBA Education Programs Director, Katy Scott. She provided a wealth of helpful information and clarified that the project will be creation of an online Thinkific instructional module that accompanies direct in-person instruction and final sign-off on one of many learning tools in the lab. The target audience is 11- to 65-year-old Innovation Lab participants.

The Innovation Lab houses many tools including 3D printers, vinyl cutters, sewing machines, a laser cutter, hand tools, and a heat press. To use them, participants must complete training on safe and effective use. Prior to the COVID-19 pandemic, all trainings were completed

in-person. Since the advent of the pandemic online education has been made for some tools, but the majority still require creation. Finalization of which tool(s) I will create instruction on is pending, but at this time I will focus my efforts on vinyl cutter instruction.

First Declarative Objective

Given a job aid, Innovation Lab participants will be able to state the purpose of all GS-24 vinyl cutter major parts with 100% accuracy.

Condition	Learners	Behavior	Standard
Given a job aid	Innovation Lab participants	Will be able to state the purpose of all GS-24 vinyl cutter major parts	With 100% accuracy

First Declarative Test Question

Multiple choice question

The knife guide allows you to:

- a) Cut off a piece of material without first removing the material from the machine
- b) Clamp the material when the loading lever is raised
- c) Install the blade holder accurately
- d) Protect the tip of the blade

Answer: a (Roland DG Corporation, 2015)

Second Declarative Objective

From memory, Innovation Lab participants will be able to identify four purposes for which the GS-24 vinyl cutter can be used with 75% accuracy.

Condition	Learners	Behavior	Standard
From memory	Innovation Lab participants	Will be able to state four purposes for which the GS-24 vinyl cutter can be used	With 75% accuracy.

Second Declarative Test Item

Multiple choice/Multiple answer question

From the following list, please select all purposes for which the GS-24 vinyl cutter can be used:

- ☐ Stamping clear images on vinyl
- ☐ Cutting characters and shapes cleanly
- ☐ Making simple stickers by connecting to a printer
- ☐ Etching designs into metal products
- ☐ Producing complex shapes using less material than most manufacturing methods
- ☐ Cutting perforated lines on a variety of materials
- ☐ Handling large output smoothly
- ☐ Stitching pliable materials together

Correct answers:

- Cutting characters and shapes cleanly
- Making simple stickers by connecting to a printer
- Cutting perforated lines on a variety of materials
- Handling large output smoothly (Roland DG Corporation, 2015)

First Procedural Objective

Given access to the GS-24 User's Manual, Innovation Lab participants will be able to import sample data into CutStudio software without receiving an "error" notification.

Condition	Learners	Behavior	Standard
Given access to the GS-24 User's Manual	Innovation Lab participants	Will be able to import sample data into CutStudio software	Without receiving an "error" notification

First Procedural Test Question

Performance Test Behavior Checklist:

- _ Opens CutStudio software by clicking on the icon
- _ Clicks the "Import" image on the top toolbar
- _ Selects and opens desired saved image from folder by clicking
- _ Positions the image data within the crop-marked area (Roland DG Corporation, 2015)

Second Procedural Objective

Given a reference sheet, Innovation Lab participants will be able to load A4-size material into the correct position in the vinyl cutter based on the material's width with 100% accuracy.

Condition	Learners	Behavior	Standard
Given a reference sheet	Innovation Lab participants	Will be able to load A4-size material into the correct position in the vinyl cutter based on the width of the material	With 100% accuracy

Second Procedural Test Question

Performance Test Behavior checklist:

- _ Lowers the loading lever
- _ Loads the materials with the short edge of the material toward the front
- _ Checks the “Loading Position of Material” reference sheet to determine the material position based on width
- _ Sets the material in the position indicated on the reference sheet
- _ Moves the pinch rollers to the edges of the material, ensuring each edge is within the grit marks
- _ Aligns the left edge of the material so that it is parallel to the guide lines
- _ Raises the loading lever to secure material in place (Roland DG Corporation, 2015)

References

Roland DG Corporation. (Ed.) (2015). *GS-24 User's Manual*.

[https://files.rolanddga.com/Files/GS-](https://files.rolanddga.com/Files/GS-24_UsersManual/Responsive_HTML5/index.htm#t=GS-24_USE_EN_03_3.html)

[24_UsersManual/Responsive_HTML5/index.htm#t=GS-24_USE_EN_03_3.html](https://files.rolanddga.com/Files/GS-24_UsersManual/Responsive_HTML5/index.htm#t=GS-24_USE_EN_03_3.html)

Monterey Bay Aquarium. (2022). *New Center, New Direction*.

<https://www.montereybayaquarium.org/stories/new-center-new-direction>