



**Academic Representative:**



**Technology Education Concepts**

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## Project Based Learning

## The Ready-to-Teach and Easy-to-Learn Solution

### Project Based Learning (PBL)

Roland's step-by-step tutorials work seamlessly with Roland software and machines, making it easy for educators to teach and for students to learn design and engineering skills.

#### A Simply Smart Solution

Fun, simple-to-understand, and hands-on engineering, design and art projects promote intuitive learning — teaching digital fabrication to students of all skills and abilities.

#### Made For Teachers

PBL tutorials reduce time-consuming prep and planning. They help teachers develop lessons that support curriculums and solve issues associated with teaching digital fabrication to large classroom sizes.

#### Made For Students

PBL tutorials allow students to work at their own pace and without strict supervision — offering student's fast results and an immediate sense of achievement.

#### Foundation For Success

Each web-based PBL package contains a series of device specific tutorials to quickly familiarize students with hardware and software — key safety and machine maintenance topics are also covered.



## Confidence-Building Projects

The following examples of Roland devices and accompanying PBL tutorials show the diversity of skills that students can master. Created to be less intimidating than other machine tutorials, these hands-on lessons allow students to learn more, achieve more and build confidence in design, engineering and graphics production.

	MODEL	EXAMPLE PROJECTS	LESSON OBJECTIVES
Vinyl Cutting	<b>GS-24 PBL</b> \$495.00	<ul style="list-style-type: none"> <li>• License Plate</li> <li>• Directional Sign</li> <li>• Window Text</li> <li>• Family Decal</li> </ul>	Vinyl cutting, weeding, and graphic application software is explored.
Print & Cut	<b>BN-20 PBL</b> \$1,195.00  <b>SG Series PBL</b> \$1,195.00	<ul style="list-style-type: none"> <li>• STEM Banner</li> <li>• Window Decals</li> <li>• T-Shirt Transfer</li> <li>• Window Text</li> </ul>	<ul style="list-style-type: none"> <li>• Printing large format signage and banners</li> <li>• Produce decals with contour cut and perforated cut features</li> <li>• Printing thermal transfers for apparel using image editing software</li> <li>• Printing, cutting, weeding, and graphic application is explored</li> </ul>
UV Printing	<b>LEF Series PBL</b> \$1,195.00	<ul style="list-style-type: none"> <li>• Golf Ball</li> <li>• Decorative Tile</li> <li>• Acrylic Award</li> <li>• Phone Case</li> </ul>	<ul style="list-style-type: none"> <li>• Direct-to-surface printing</li> <li>• Use advanced image editing to print with special spot colors</li> <li>• Explore special effects like gloss, matte, and embossing</li> </ul>
3D Milling	<b>SRM-20 PBL</b> \$495.00  <b>MDX-40A/MDX-50/ MDX-540 PBL</b> \$1,195.00	<ul style="list-style-type: none"> <li>• Wooden Plaque</li> <li>• Wooden Yo-Yo</li> <li>• Baseball Bat</li> </ul>	<ul style="list-style-type: none"> <li>• Milling a single-sided model using a sacrificial bed on the mill table</li> <li>• Milling a two-sided model using dowel pin registration</li> <li>• Milling one and two-sided models using a self-centering vise</li> <li>• Milling a model in the rotary axis using cylindrical and block material</li> </ul>

Chart above is an example of the content offered and is subject to change. Other hardware, software, accessories and consumable items may be required.

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Imagine.  **Roland**