# The Third Dimension

Setting Up the File
- Right click on Show Hoop.
- Select the Jumbo Hoop from the drop-down choices.
- Make sure Foot # 43 is selected.
- Place a dot by Manual under Hoop Position.
- Place a check mark by Show Hoop.
- Click OK.

Creating a Spiral
- Switch to Artwork Canvas.
- Click on the visible Vector Shape icon and select the Spiral.
- Change the number of revolutions to 5 in the Property bar.
- Click and drag on the screen to create the spiral.
- Select the Pick tool and note the size in the Property bar.
- Select Reshape Vector Object.
- Move the nodes of the outside points to make the spiral about 3" wide and 3" tall.
- Continue to move the nodes to create more spacing between the lines.
- Delete the innermost nodes by selecting the first four nodes of the spiral while holding the Ctrl key; then press Delete.
- If you need to add a node, double click on the line in reshape mode.
- Press the space bar when you are finished reshaping.
- With the spiral selected, click on Convert Artwork to Embroidery.
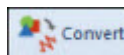
Convert to Couching
- With the design selected, click on Couching.
- With the couched design selected, click on Copy; then Paste.
- While the copy is selected, change the color.
- Deactivate Couching on the copy by clicking on the Couching icon in the Effects section of the Stitch toolbar. This changes the copy to a straight stitch line on top of the couching.
- Right click on Pattern Run.
- Click on Select.
- Select BERNINA V5 from the Pattern Set Choices; then select NP005-22.
    - ◊ Click OK.
    - ◊ Change the size and the spacing to .25.
    - ◊ Click OK.
- Select Ctrl + A.
- Right click and select Group.
- Move the flower center to the top of the hoop.
- Save the file as Combined Base Design.

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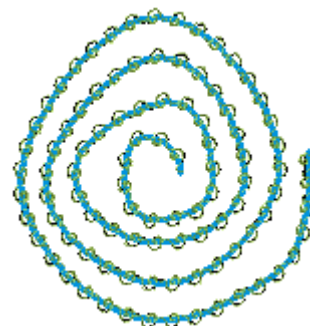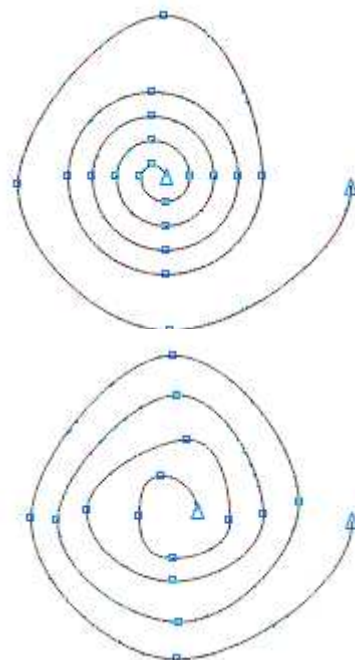
Insert Artwork
- Select Insert Artwork.
- Navigate to the location of the saved file, Stem.png.
- Select it; then click on Open.
- Move the stem to the base of the flower center so that the top of the stem touches the vertical center of the hoop.
- Open Options; select the General tab.
- Uncheck Apply closest join while digitizing; click OK.

Digitize the Stem
- Select the Open Object tool in the Digitize Toolbox.
- Select the Single outline.
- Select a color for the stem from the Color Palette.
- Digitize a slightly curved line along the right offshoot of the stem; begin with a left click at the base of the offshoot where it connects to the stem, followed with two right clicks; then end with a left click when you reach the tip of the offshoot. Press Enter.
- Press Esc; then select the line.
- Click on Double Run in the Edit Toolbox. While this line is selected, click on Backstitch.
- Select the Open Object tool and the Single Outline. Digitize a line of stitching from the end point of the backstitch to the left offshoot. Press Enter.
- Begin another line of stitching from this end point and digitize a line up the left offshoot of the stem. Press Enter when you reach the tip of the stem.
- Press Esc.
- Select the line; select Double Run in the Edit Toolbox; then click on Backstitch.
- Select the Open Object tool and a Single Outline and digitize a line from the end point of the second offshoot to the last offshoot of the stem. Press Enter. Press Esc.
- Select the Open Object tool and the Single Outline. Digitize a line of stitching from the end point of the this line to the tip of the last offshoot. Press Enter.
- Press Esc.
- Select the line; select Double Run in the Edit Toolbox; then click on Backstitch.
- Select the Open Object tool and a Single Outline and digitize a line from the end point of the last offshoot to the end of the stem.
- Press Enter.
- Digitize a line from the bottom to the top of the stem. Press Enter.
- Press Esc; then select the line.
- Select Double Run in the Edit Toolbox; then click on Backstitch.

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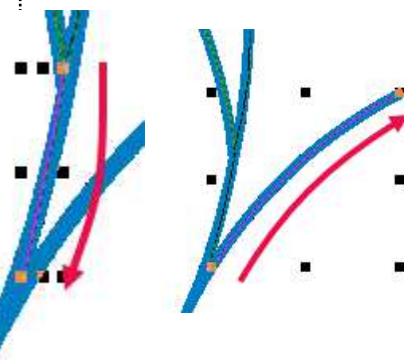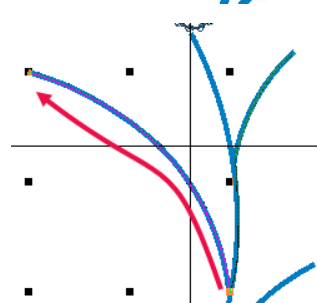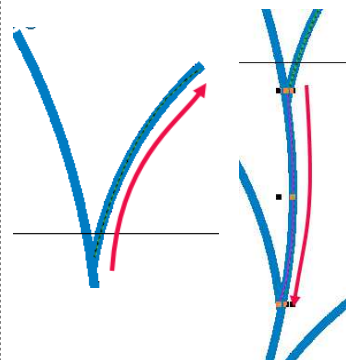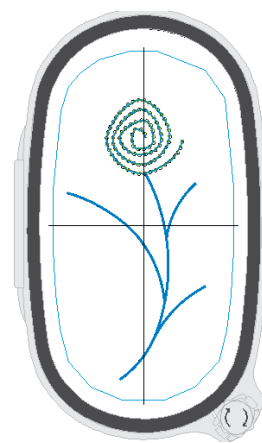
Fringed Flowers

- Select the Open Object tool and the Single Outline.
- Choose a color for the fringe petal.
- At the tip of one of the offshoots, digitize a single line of stitching with two left clicks; then press Enter.
- Press Esc.
- Switch to the Metric system and press M on the keyboard to activate the Measurement tool. Measure the length of the line. m
- Change the line to 15-20 mm.
- Press Esc twice.
- Make a quick clone of the line by right clicking and dragging the line. The lines should be close together.
- Select the clone and double click to open Object Properties.
    - ◊ Select Satin for the Outline Type.
    - ◊ Change the Width to 12 mm.
    - ◊ Place a dot in front of Manual and change the Satin Spacing to .30 mm. Click OK.
- Click on the Underlay icon to remove the Underlay.
- Move the satin line to the end of the stem so that the first single line is slightly covered by one edge of the satin.
- Select Reshape and move the stop and start points of the fringe as shown.
- Select the Closed Object tool and the Satin Fill. Digitize a cup-shape as shown below.
- Select Reshape and change the angle of the satin fill so that it is parallel to the fringe.
- Also place the Start & Stop points on the cupped shape as shown in the illustration.
- Press Esc.
- Select the fringe flower in Color Film and right click to Group.

Length: 17.16 mm
Angle: -62°

Fringed Flowers Tip

- Select the Open Object tool and the Single Outline. Choose a different color.
- At the tip of the top right fringed flower, create a straight line with two left clicks. Press Enter; then Esc.
- Create a quick clone by right clicking and dragging.
- Select the clone; then double click to open Object Properties.
- Select Satin for the Outline Type
    - ◊ Change the Satin Width to 20 mm.
    - ◊ Change the Satin Spacing to Manual; then select .30 mm.
    - ◊ Click Apply.

Angle: 11°
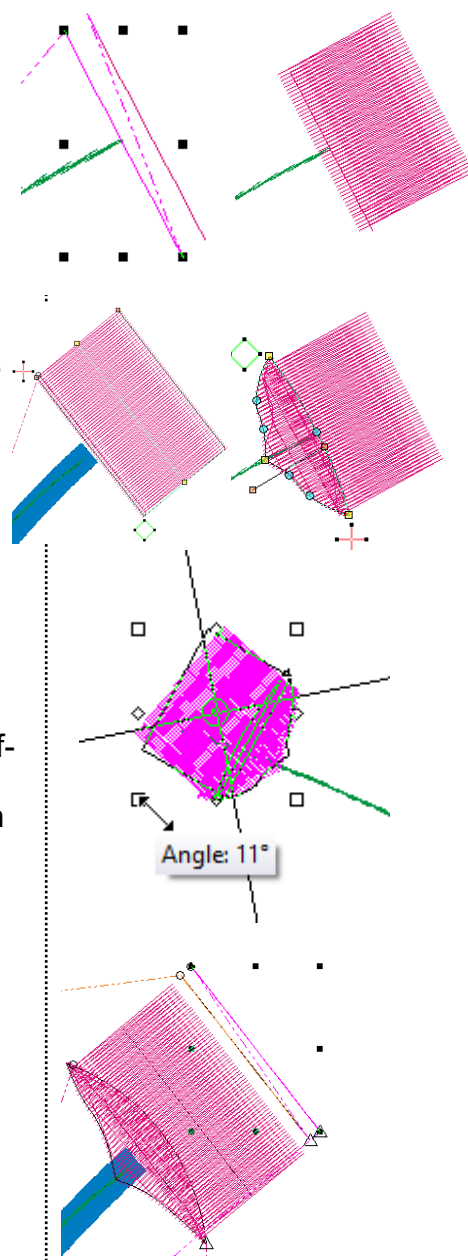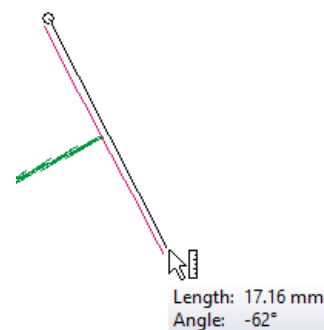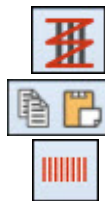
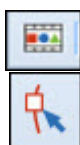- Move the fringe so that the single line is slightly covered by one edge of the wide satin stitch.
- With the fringe selected, click on the Underlay icon to remove the underlay.
- Select the single line of stitching under the fringe; select Copy; then Paste.
- Right click on Satin Outline.
- Change the Satin Width to 2.5 mm.
- Press OK.
- Move the satin outline so there is a small gap between the fringe components.

Changing Starts & Stops
- Click on Show Objects in Color Film.
- Select the single outline of this fringe flower.
- Select Reshape.
- Check that the Start and Stop points are as pictured.
- Select the Tab key. This moves to the next object to show the Start and Stop points. Move these as pictured.
- Select the Tab key again.
- Move these if needed as shown in the third picture.
- Click on Show Objects to deactivate.
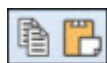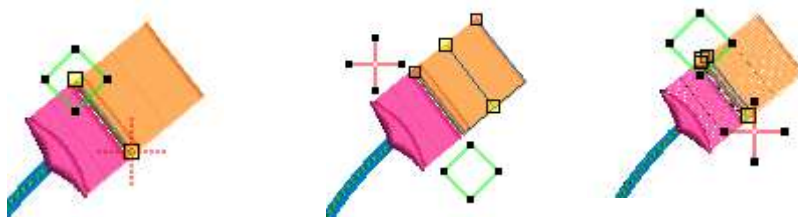
- Select the second fringed flower in Color Film and right click and select Group.
- Select both fringed flowers in Color Film.
- Select Copy and Paste.
- Move the copy to the lower right stem.
- Rotate if needed.
- Select Paste again.
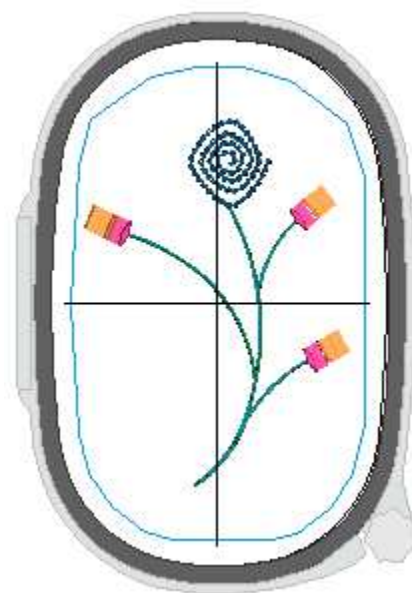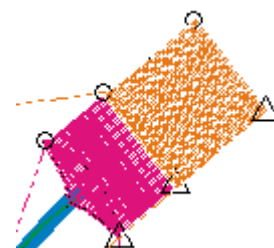- Move this copy to the left bud.
- Rotate as needed.
- Select Ctrl + A.
- Right click on Show Hoop.
- Place a dot by Automatic Center.
- Click OK.
- Select Save.

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Puffy Foam Lettering
- Right click on the Lettering icon in the Digitize Toolbox.
- From the drop-down font choices, choose 3D Comica.
- Type Welcome Spring in the white box.
- Choose 1" in Height. (Use a shorter height for smaller hoops. The acceptable range for this font is .8-2").
- Click OK.
- Click on the lower part of the hoop to add the lettering.

Digitizing the Petals
- Select Show Hoop to hide the hoop.
- Select the Closed Object tool and a Single Stitch.
- Digitize a rounded-petal shape. This is formed with a left click at the outside base of the petal, right clicks around the petal, with another left click at the opposite base and a right click in the middle at the base.
- Press Enter to activate the shape; then Esc.
- If you wish to reshape your petal, select Reshape and move the points as needed.
- Select the shape when you are finished.
- Select the Wreath tool in the Mirror-Merge Toolbox.
- Change the Number of copies to 5.
- Click to set the petals. It is ok if the petals are over the other parts of the design—remember they will be three dimensional petals with wire edges.
- Select all the petals by clicking on the color chip in Color Film.
- Change to a Ripple Fill.
- Double click on one of the petals and change the spacing to 4 mm in Object Properties.
- Press OK.
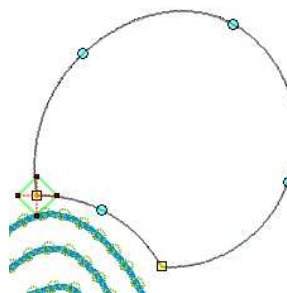
StumpWork Petals
- Three of the petals will be changed to StumpWork Petals.
- They must be selected one at a time and this process will be repeated for each:
  ◊ Select the petal.
  ◊ Select Add CutWork Border in the CutWork Toolbox.
  ◊ StumpWork is the default.
  ◊ Leave the Offset at 1.
  ◊ Uncheck Include Holes.
  ◊ Click OK.
  ◊ Press Esc.
  ◊ Repeat for two more petals.
  ◊ For one of the petals, select the Ripple Fill and press Delete. This will leave only the StumpWork border.

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CutWork Petals

- Follow these steps to create two CutWork Petals.
    - ◊ Select the petal.
    - ◊ Select Add CutWork Border.
    - ◊ Select Cut for the Border Type.
    - ◊ Keep Include Holes checked.
    - ◊ Select Cut for the Hole Border Type.
    - ◊ Change the Offset to 2 mmm. Click OK.
    - ◊ Deselect; then select the ripple fill.
    - ◊ Delete the ripple fill. Repeat for the other petal.

PunchWork Leaf

- Select the Digitize Toolbox. Select PunchWork.
- Digitize a leaf with left clicks at the points of the leaf and right clicks at the side of the leaf.
- Press Enter to activate the shape. Press Esc.
- Double click on the leaf to open Object Properties.
- Change the density to 5.
- Place a check mark by Use border stitching.
- Leave the type of stitch as a Blanket stitch.
- Leave the width at 3 mm and change the spacing to 3.0 mm.
- Press OK.

NOTE: PunchWork, StumpWork, and CutWork will be done in separate hoopings, so it isn't necessary that these components fit within the hoop.

Creating the StumpWork Sub-Design

- Select one of the StumpWork petal borders.
- Hold the Ctrl key and click on the ripple fill of the petal.
- Select Create StumpWork Sub-Design in the StumpWork Toolbox.
- Select Open StumpWork Sub-Design. This places the petal in its own file.

Sending the StumpWork Petal to the Machine

- Select Design> Auto Start & End. Set the Start Needle Position at the First stitch of the design and the End Needle Position at the Last stitch of the design. Click OK.
- Right click on Show Hoop.
- Choose the Medium Hoop.
- Select Foot #44C.
- Uncheck At start needle position.
- Click OK.
- Select Print Preview.
- Click on Options. Have only Design Worksheet, Stitches, and Artistic View checked. Click OK.
- Click on Print Now. This will be used as a pattern.
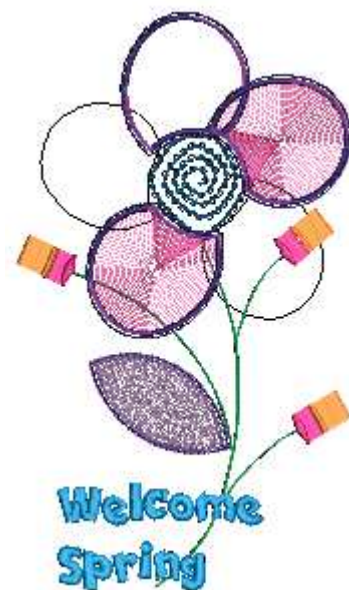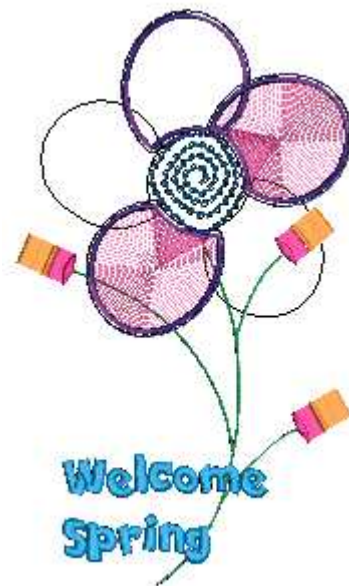
- To send the StumpWork petal to the machine, click on Write to Card/Machine.
- Choose the USB option to send the design to a USB stick.
- Click OK in the dialog box that opens.
- Close the file.
- In the dialog box that opens, select Save Changes and Close.
- This sends only the StumpWork petal to the USB. This file will be used two times to create the two Ripple Fill petals.

Sheer Fabric StumpWork
- Select the StumpWork petal with the deleted Ripple Fill.
- Select Create StumpWork Sub-Design.
- Select Open StumpWork Sub-Design.
- Select Design> Auto Start & End. Set the Start Needle Position at the First stitch of the design and the End Needle Position at the Last stitch of the design. Click OK.
- Right click on Show Hoop.
- Choose the Medium Hoop.
- Select Foot #44C. At start needle position should not be checked. Click OK.
- To send the StumpWork petal to the machine, click on Write to Card/Machine.
- Choose the USB option to send the design to a USB stick.
- Click OK in the dialog box that opens.
- Close the file.
- In the dialog box that opens, select Save Changes and Close.

CutWork File
- Select one of the CutWork petals.
- Select Copy; then open a New Blank Design; and select Paste.
- Select Design> Auto Start & End. Set the Start Needle Position at the First stitch of the design and the End Needle Position at the Last stitch of the design. Click OK.
- Right click on Show Hoop.
- Uncheck At start needle position. Click OK.
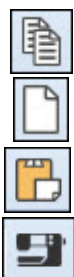- With the cut file selected, click on the Edit Toolbox; then Outlines and Offsets.
    ◊ Uncheck Object Outlines.
    ◊ Check Offset Outlines
    ◊ Change the offset to 1 mm.
    ◊ Select Single for the type.
    ◊ Click OK.
- In Color Film, select the outline and then click on Move to Start.
- Save this file as CutWork petal.
- Close the file.

PunchWork File
- Select the PunchWork leaf and the blanket stitch in Color Film.
- Select Copy; then open a New Blank Design; select Paste.
- Rotate the design to fit in the Medium Hoop.
- Select File> Save As.
- Name the file PunchWork Leaf.
- Click on Write to Card Machine.
- Select the method to send the design to your machine.
- Click OK in the dialog box that opens.
- Close the file.

Sending the Main File
- Return to the combined file.
- Select File> Save As and name the file Base Design.
- Select the PunchWork leaf and all the petals and press Delete.
- Only the flower center, fringed flowers, stem, and lettering should be left.
- Click Save.
- Click on Write to Card Machine.
- Select the method to send the design to your machine.
- Click OK in the dialog box that opens. Close the file.

Stitching the Design: StumpWork Ripple Petals
- Use the printed pattern to cut two petals.
- Thread machine with same color of thread, top and bobbin.
- Hoop Aqua Mesh in Medium Hoop.
- By-pass the ripple stitch to stitch the Stabilizing Run. This will serve as a placement line for the cut petals.
- After stitching the placement, place one of the petals over the placement line.
- Stitch the ripple stitch.
- By-pass the stabilizing run and stitch the double placement line for the wire.
- Use the foot control with slower speed to stitch the tack down while shaping the wire to fit in between the placement lines.
- Stitch the cover and the stabilizing run.
- By-pass all the cut lines and use scissors to cut the petal.
- Repeat for the second petal.

Stitching the Design: Sheer Fabric Petals
- Layer three synthetic sheers on top of Heavy Weight Tear-Away.
- Stitch the file—stabilizing run, double placement, tack-down, and final embroidery.
- Set up the machine for the CutWork tool to cut around the petal.
- Carefully remove the stabilizer from the edges.
- Use a heated soldering iron to remove any frayed edges.

Notes:

Set the machine for embroidery using the CutWork needle plate.

Remove the needle thread and place the CutWork Tool in the machine.

Stitching the Design: CutWork Petals
- Layer two pieces of fabric over Heavy Weight Tear-Away.
- Stitch the stabilizing run.
- Set the machine for CutWork—CutWork needle plate, CutWork tool set at position 1, and remove the upper thread.
- Cut out the petals.

Stitching the Design: PunchWork
- Hoop felt in the medium hoop.
- Stitch the placement line.
- Set the machine for PunchWork—PunchWork needle plate, PunchWork needles, and remove the upper thread.
- Lay fibers over the placement line.
- If needed, go back to the beginning of the PunchWork and needle punch again.
- Clean and oil machine.
- Set up for the blanket stitch: CutWork needle plate, insert needle, use even tension; not embroidery tension.
- Stitch blanket stitch.
- Trim around the felt, close to the blanket stitch.

Stitching the Design: Base File
- Back the fabric with Heavy Weight Cut-Away stabilizer.
- Switch back to embroidery tension.
- Set up for Couching: Foot #43, yarn inserted into foot.
- After the machine ties off at the beginning of the couching design, stop machine to trim yarn tail.
- Stitch the couching design.
- Reset the machine for the stem and the fringed flowers using Foot #26.
- Trim through bobbin thread of fringe flowers. Pull threads to right side. Can either leave looped or trim edges.
- Puffy Foam Letters: Place 2 mm foam on top of the background area for the lettering.
- Stitch the letters; then pull foam away from the lettering. You can use a pair of tweezers to remove bits of foam that will remain.
- Use a steam iron held over the lettering or a hair dryer to shrink foam so that the remaining bits of foam disappear.

Attaching Petals
- Set machine for stitching using Foot # 20D and a straight stitch.
- Pin petals and needle punched leaf in place as desired.
- Stitch along the base of the petals.
- You may create dimension with the CutWork petals and tack down the rounded edge of the petals to hole the petals in a desired shape.
- Couch a yarn down the center of the PunchWork leaf with an open zigzag stitch while attaching it to the background.
- Bend the wire of the StumpWork petals to create shape.
- Back and bind the piece as desired.

Notes:

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