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Lindee Goodall of LindeeG Embroidery





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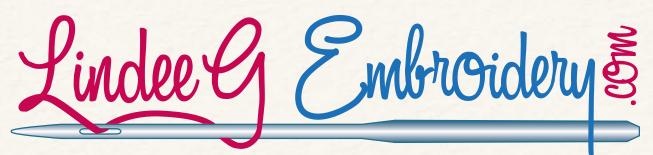




## Machine Embroidery Basics

Embroidery Recipe Understanding Ingredients & Their Impact Lindee Goodal -LindeeGEmbroidery.C

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## embroidery design & education





- \* Learn the ingredients to create quality embroidery
- Overview of various design attributes and how they impact fabric
- Discuss how fabric attributes impact design choice \*
- \* Find out what questions to ask to make the best design/fabric/stabilizer match
- Discover why there is no "one size fits all" design \* Hooping

## Agenda





## Have You Ever...

- \* Had the perfect design...
- The most wonderful fabric...
- The most luscious threads...
- The latest & greatest high-tech machine...

\* ...But a bad result?

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## Choice Not Chance!

- Successful result matter of choice & method
  - \* May not have absolute total control—bad things can still happen...
  - \* Not a matter of luck!
- \* Embroidery is a skill.



\* Just because you have a machine doesn't make you an embroiderer.





# The Embroidery Recipe

- \* Like a great cookie, great embroidery results from using
  - Quality ingredients
  - \* In the right amount
  - Appropriate utensils
  - Proper technique
- Ignoring may cause design to crumble!







# The Embroidery Recipe

## **Embroidery Recipe**



embroidery design & education

**EQUIPMENT:** Machine, needles, hoop

### **PREPARATION TIME:** Longer than you think!

### **INGREDIENTS:**

**Fabric** Design Thread

□ Backing **Topping** ☐ Adhesives

Stitch count \* machine speed + color changes

### **INSTRUCTIONS:**

Making sure design is compatible with fabric, hoop using appropriate hooping techniques in desired fabric location with appropriate backings, toppings, and adhesives. Season with threads as desired. Set machine tensions carefully to avoid burning. Sew until done in properly maintained machine. Trim threads. Remove from hoop promptly. Discard backing. Serve with pride and joy.

hoop promptly. Discard backing. Serve with pride and joy.

### **COOKING TIME:**



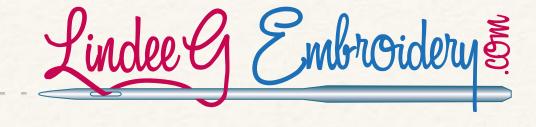




# Perfect Embroidery is a Myth!

## \* Fabric distorts

- Needle and bobbin threads create tension on fabric
- Needle can be deflected by previous stitches, fabric itself, or by tension jerks on thread
- \* Thread may occasionally loop even under the most ideal situations
- \* Good embroidery is much more than a well-digitized design
- \* All embroidery will have subtle flaws, each is unique

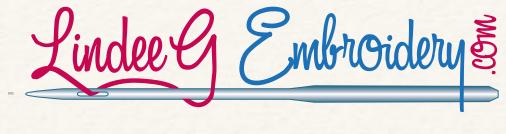




# Quality Embroidery Is Possible

- \* More than just a good embroidery design!
- Like baking, precise interaction of key ingredients
  - \* A well-prepared design that is suited to the fabric and item being embroidered

  - \* A properly maintained and tuned machine using the correct needle for the thread and fabric The right thread for the job—both top and bobbin
  - An item suitable for embroidery that is smoothly hooped at the right position in the right size hoop with the hoop properly tensioned, the right topping (if required), and the right backing
- Not enough time to cover all of these; that's what the book is for! \*





- \* No amount, type, or combination of stabilizers can make a bad design look good
- \* A great design can look bad...
  - \* When mated to wrong fabric
  - When rest of quality formula not followed
- Use quality designs from reputable sources
  - Or be prepared to edit the design or accept poor quality

# "Well-Prepared Design"



## "Reptile Dysfunction"





## Stock Designs

- \* Off the shelf: CDs, diskettes, cards, internet
- Attempt at "one size fits all"
  - \* Works with all fabrics like one-size-fits-all pantyhose fits all bodies
- Digitized for "average fabric" \*\*
  - Stable, firmly—but not too tightly—woven fabric in white or light neutral color with no pattern or texture
  - Tested in hoop slightly larger than design
- Appliqué closest to a "universal design"

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### One size fits all?





## Custom Designs

## Custom-tailored for specific

- Fabric type and color
- \* At a specific size
- \* For specific thread colors, type, and size
- Other considerations
  - \* Machine, backing, topping, needles



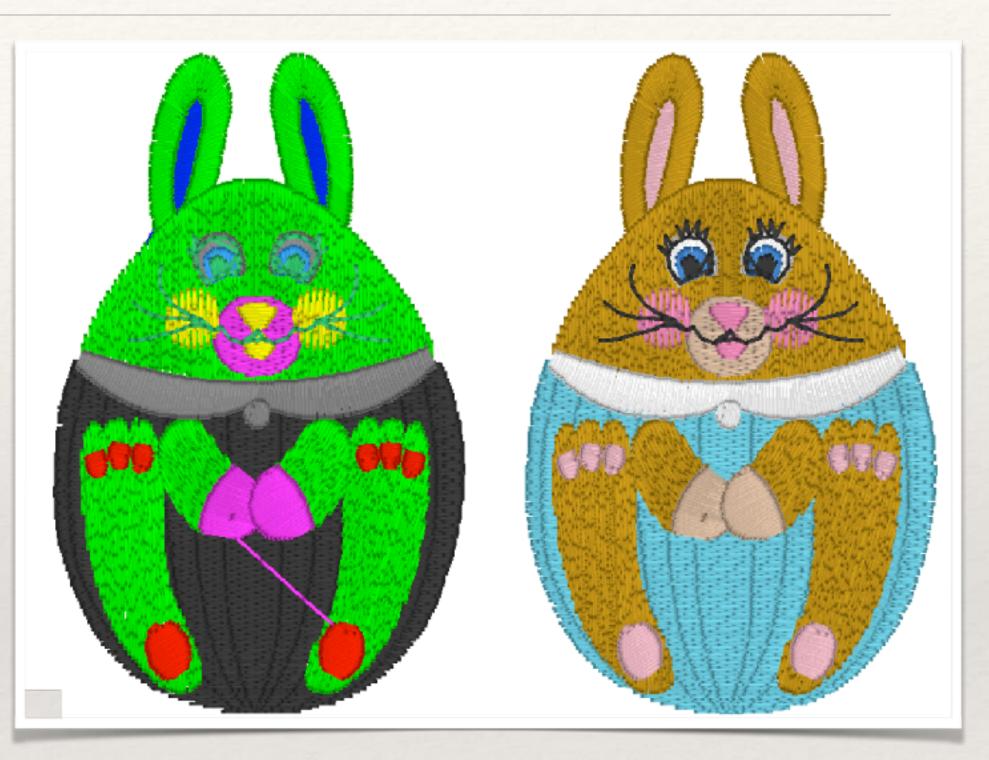




# Bad Design or Bad Art?

- Can be difficult to separate \*
  - Design can be technically good but poor art negates effect
  - \* Design can be technically correct but boring/uninteresting
  - \* Great art will not realize its potential if poorly digitized
    - Creative and appropriate use of stitch effects and attributes • as well as production-friendly sewing result in good design
- Can be neither •
  - \* Poor color selection can create an ugly result
  - \* Taste, style, technique
- \* Can be both bad art AND bad digitizing

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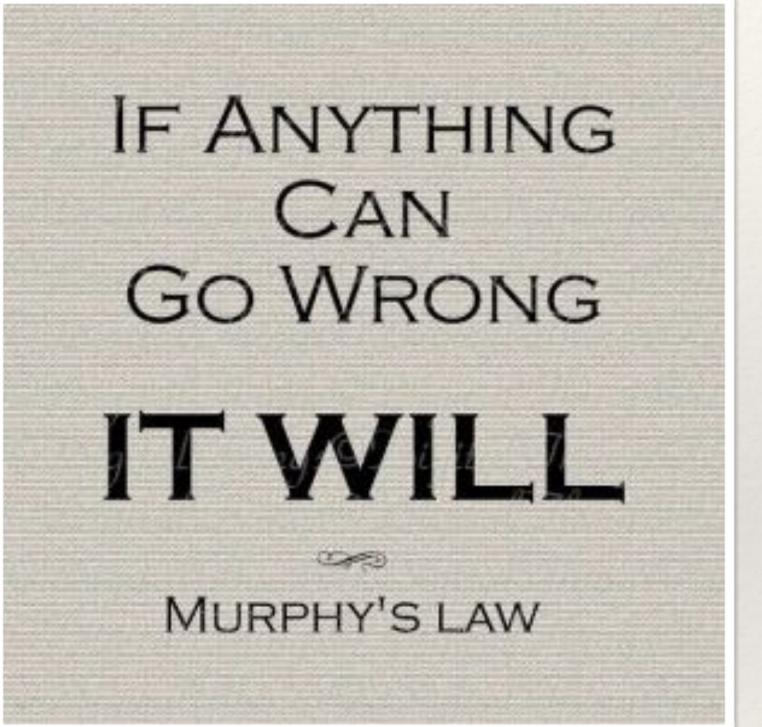






# Good Design, Poor Results

- \* A good design is only a part of the equation!
- Before fixing the design, fix your \* technique!
  - \* When using reputable designs, most problems result from incorrect technique
  - \* What do we mean by technique?







## Possible Problems

- Assuming a well-digitized design
  - Wrong design for the fabric
  - \* Poor stabilizer choice
  - Poor hooping technique
  - Needle problem
  - Thread problems
  - Machine problem (tensions #1)
    - Design did not load properly to machine (corrupted) \*
  - \* I/O error...







- No "one-size-fits-all" design
  - Closest is probably appliqué
- Can't really tell from an image
  - \* "3D" screen shot vs sewn scan
- Examining design's characteristics aids fabric, stabilizer, & thread choices
  - \* Fabric & thread choice impact needle selection
  - \* Fabric, design, & hooping technique influence stabilizer choice

The Design







# Design Characteristics

- \* Size
- \* Color
- Stitch types
- Stitch density
- \* Layering
- Use (free-standing vs direct embroidery)

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### Pen & Ink Flowers





## Comparing Designs



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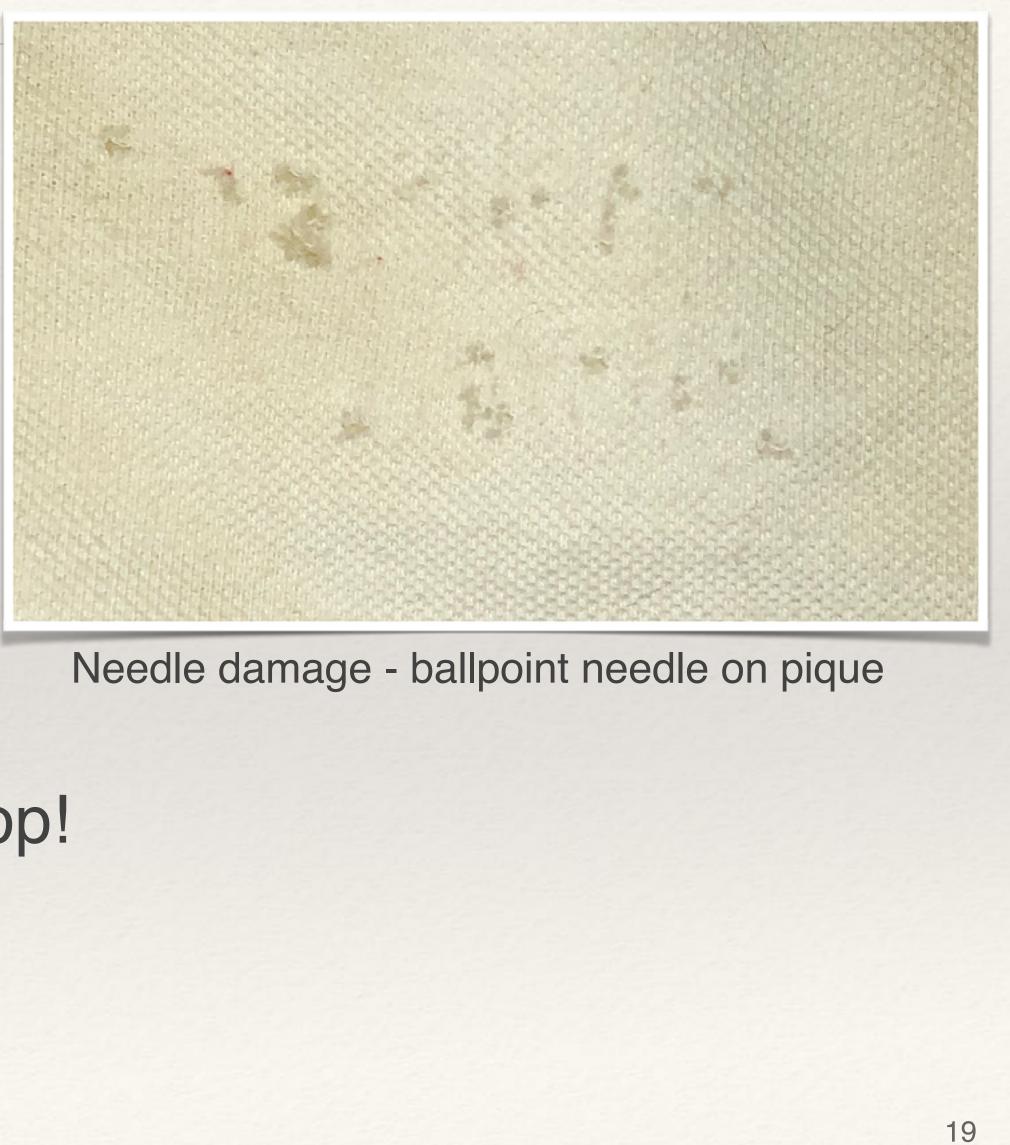


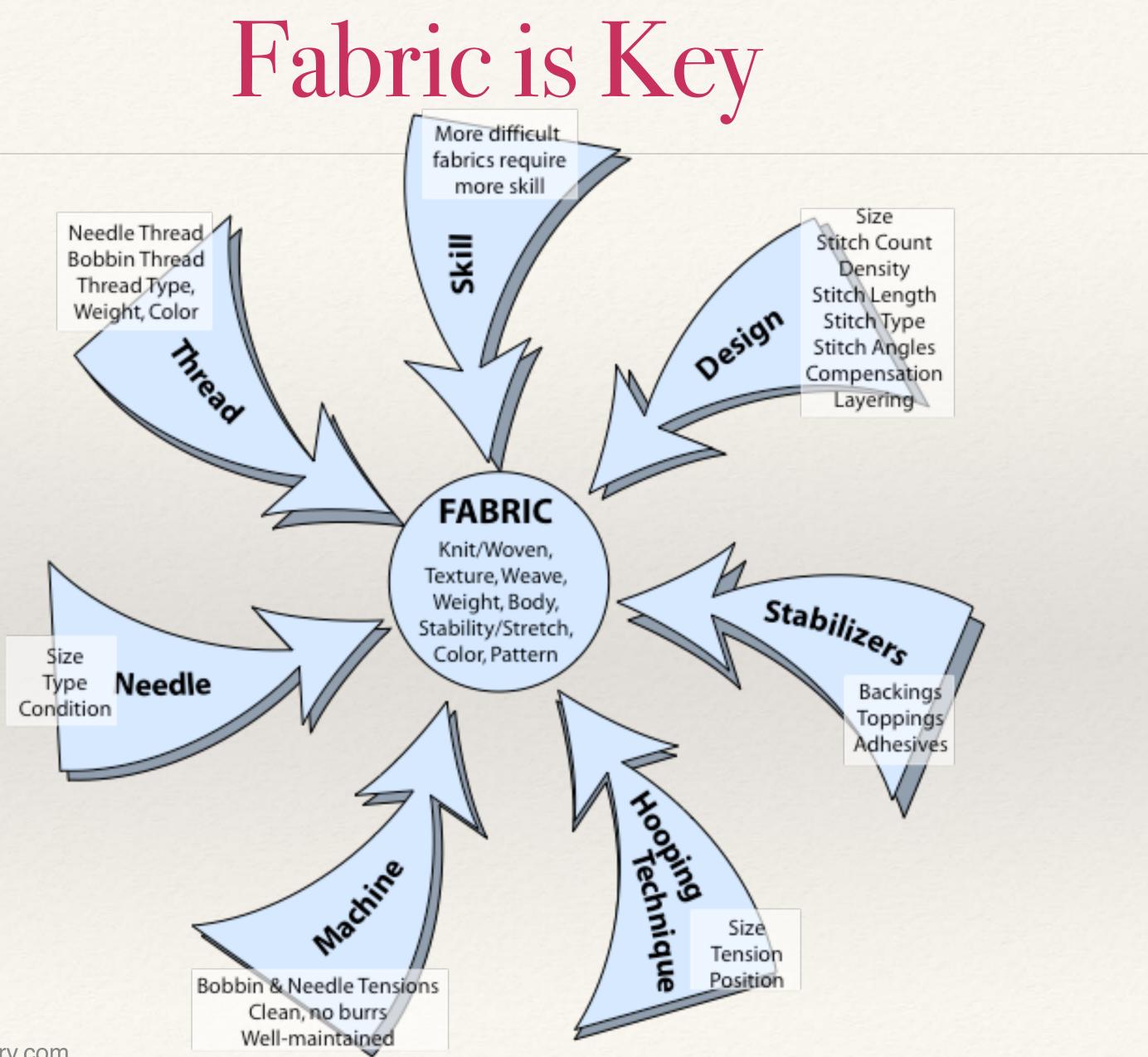


## Choices Make the Difference

- \* Embroidery lasts the life time of the garment
  - \* For better or worse, till death do us part...
  - Like a tattoo may be removable but will leave a scar
- Make selections thoughtfully! \*
  - A bad combination may have shortened the life time to soon after it comes out of the hoop!







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# Design Questions

- Does the design complement the project? \*
- Will the design be lost in the fabric?
- \* Will the design impact the hang or drape of the fabric?
- Will the design damage the fabric?





- \* Can the fabric support the design?
  - \* Can the fabric be made more stable through toppings, backings, or sprays?
  - Will the fabric be damaged by hooping?
- Will the fabric overpower the design?

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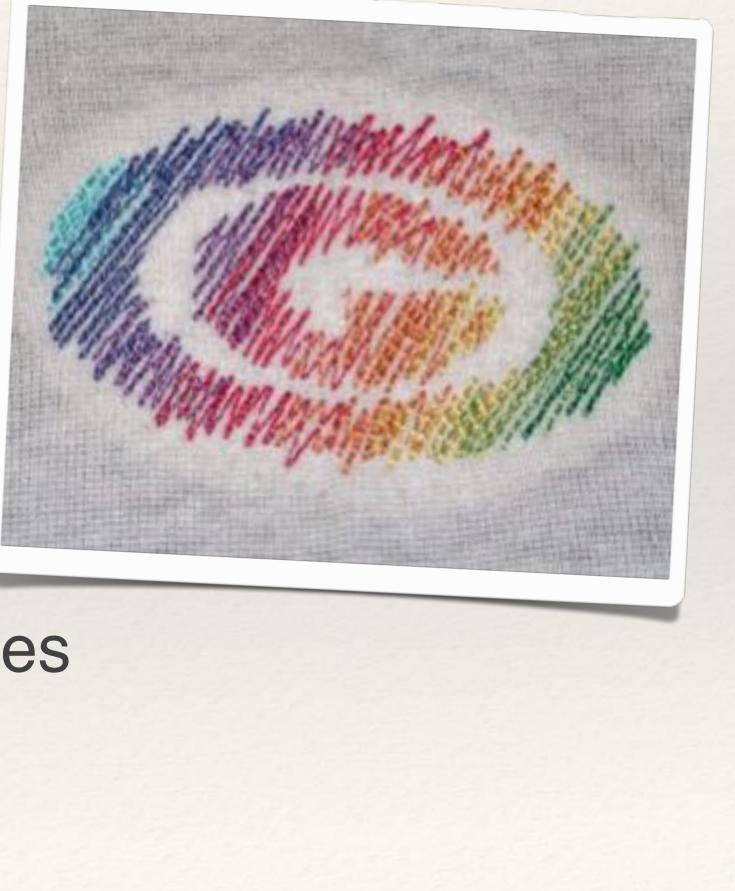


## Fabric Questions



# Stabilizer Questions

- \* Will the stabilizer provide the appropriate support without negatively impacting the result?
  - \* Will the stabilizer show?
    - \* transparent fabric, cutwork, two-sided?
    - \* "shadow" from cutaway?
    - \* radically change hang of fabric?
  - \* How you answer questions will help determine choices







- Expect design to sew out perfectly no matter what size or what sewn on/with \*
- Digitizing is only one part of producing quality embroidery \*\*\*
  - \* Embroidery technique is a huge factor
- If/how you alter and sew the design can have a much bigger impact \*
  - \* For better or for worse...

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## Expectations & Reality

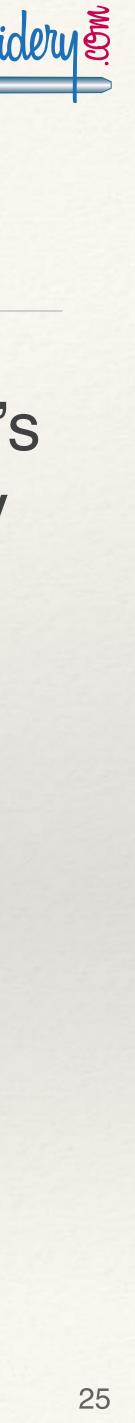






## Reasonable Expectations

- \* "Embroidery is an art form of distortion and each sample is an individual. It's an inconsistent process. Our ability to produce quality embroidery is simply based on our abilities to control its inconsistent nature."—Walter Florianni
- \* While perfection is a myth, need to have a certain level of quality...
  - \* Aim for accomplishment, not perfection.





- Test on a stable fabric
  - Sew on length of grain (no rotation!)
  - With proper backing/topping
  - Good hooping techniques
  - At original size
  - Using recommended thread type/size
  - With correct needle type & size
  - On a properly maintained and tensioned machine

# Assessing Quality



Just because it doesn't work perfectly on your goods, doesn't mean it is a bad design!



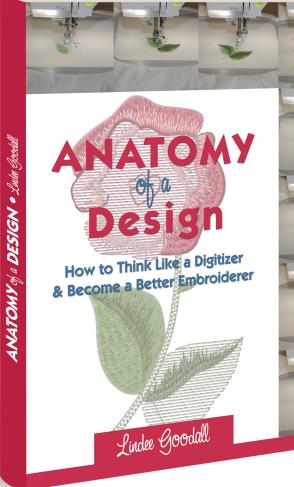


- \* Learn to be an embroidery detective
  - Test-sew design
  - Slow-motion on screen
- Watch underlay
- Check stitch lengths and densities
- Verify efficiency of color changes and trims
- Proof registration and distortion
- Check machine tensions, settings, & proper transfer of correct design

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# Analyze!











# All Designs Not Suitable for All Fabrics

- Learning how different fabrics react to stitches is key to producing good results!
  - Imagine same 6mm (.236") block letters on
    - Thick fleecy plum sweatshirt
    - Thin lemon pique
    - Thick fluffy red terry cloth towel
    - Black satin jacket \*
    - Natural canvas tote \*\*
    - Calf skin leather
    - Creamy ivory chiffon

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# Looking for a Soul Mate

- Consider fabric/design compatibility
- Like dating & marriage
  - Long term successful relationships not based solely on visual appeal
  - To find perfect partner you test & investigate
- If you base either relationship on beauty
  - You may get lucky; you may not
  - Clint Eastwood wants to know: Do you feel lucky?







## Other Potential Problems

- Rotating designs
  - Wovens and knits stretch more across width than along length
  - Wovens stretch most on bias
- Scaling designs
- Machine tensions
- Thread and needle choices
  - \* Metallic threads are not equivalent substitutes!



Paradox...





## Make Fabric More "Average"

- Often easier than editing
- Fabric prep
  - Starch, interfacing
- Backings •
  - \* More stable backing does not have to mean heavier (No Show Mesh, Organza)
  - \* Temporary embroidery spray adhesives & double stick tape can prevent goods from shifting
- Toppings \*
  - Temporary water soluble or permanent?
  - \* Color block (Hide It<sup>™</sup>, Lamé)

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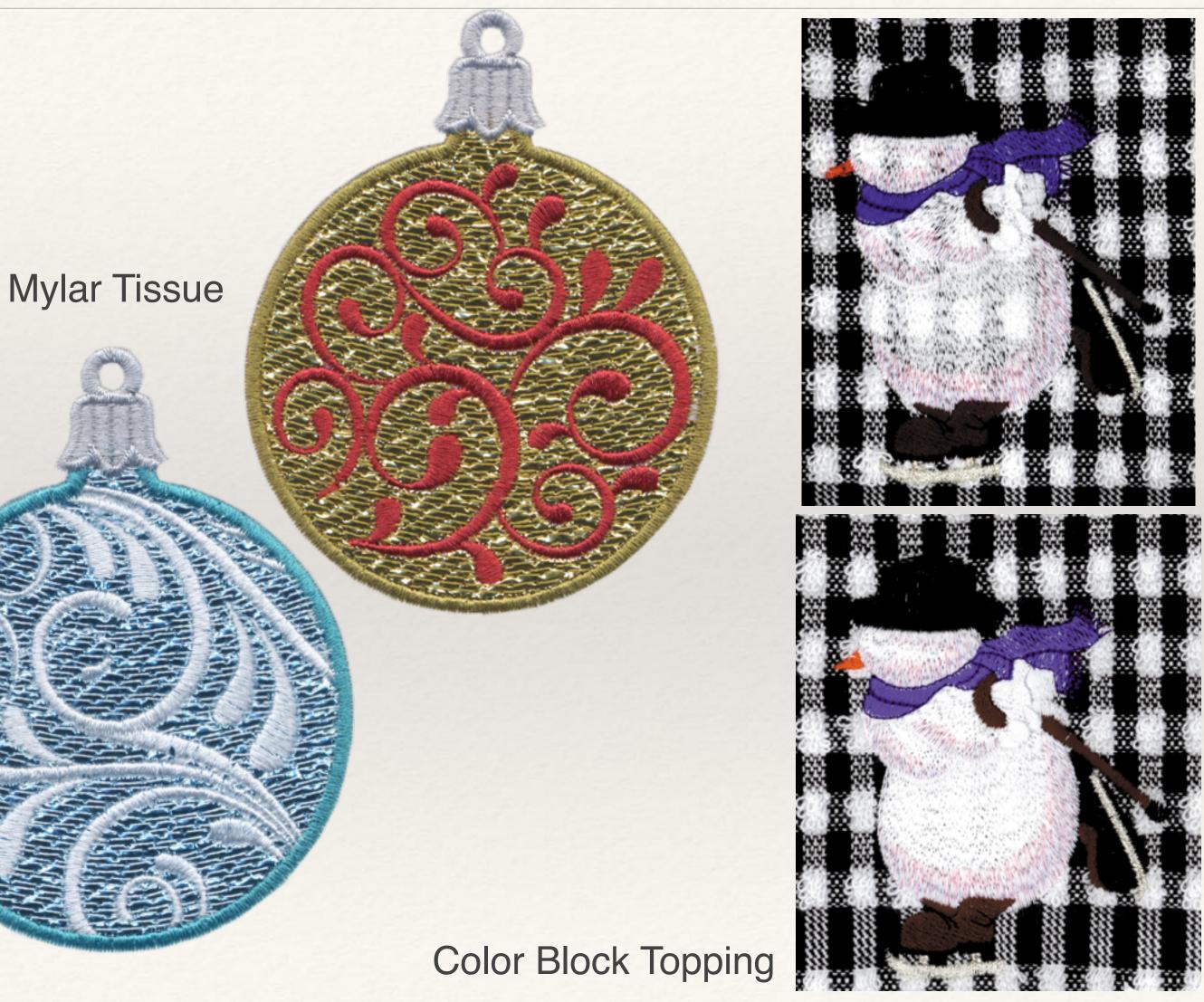


# Permanent "Artsy" Toppings

# Gold Lamé Fabric

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- The Embroidery Recipe eBook (\$47 value)
  - \* 360+ pages
  - Expands on the ingredients & quality formula
  - Jam packed with content, images, charts, and more
- Includes 20 designs for experimenting with different threads, fabrics, & techniques (not available individually, compare at \$39.95)
- Includes Design Evaluation for tracking your own experiments
- BONUS: Got Myths: 20 Popular Machine Embroidery Urban Myths & Their Corresponding Realities (ebook \$9.95 value, exclusive here)
- Place your order at virtualsewingguild.net

Package 1



### The Embroidery Recipe

How Your Ingredients Affect Your Results











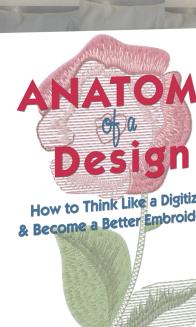
## \* Package 1

- \* The Embroidery Recipe ebook
- \* Eval Form, Designs, Myths ebook
- The Anatomy of a Design: How to Think Like a Digitizer & Become a Better Embroiderer (ebook \$37)
- Place your order at <u>virtualsewingguild.net</u>

Package 2









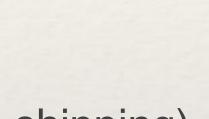






## Package 3

- Package 1
  - The Embroidery Recipe ebook
  - \* Eval Form, Designs, Myths ebook
- Hooping Station Deal U.S. Only (for shipping reasons)
  - The Small Echidna Hooping Station (\$229 value with shipping)
  - Exclusive Bonus Embroidery Collection CD with 50+ designs (Normally only available individually, value >\$300)
  - Coupon to get the large hooping station at the combo price difference (Combo is \$449, Large is \$349, +\$50 Shipping—Your Price: \$249)
    - Coupon is only valid if you purchase this package
- Place your order at <u>virtualsewingguild.net</u>
  - Hooping Station will be shipped from Tucson, AZ



Special Limited Bonus Collectic



- Package 2
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How to Think Like a Digitize

Package 4

The Embroidery Recipe How Your Ingredients Affect Your Result





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## Track Your own Experiments

- Create a binder with sample sewouts & track
  - Design name & source
  - Any design modifications (scaling, rotating)
  - Thread brands & type
  - Stabilizers •
  - \* Fabrics
  - \* Machine
  - Thread breaks & other sewing problems
  - Summary of results
- Included with The Embroidery Recipe

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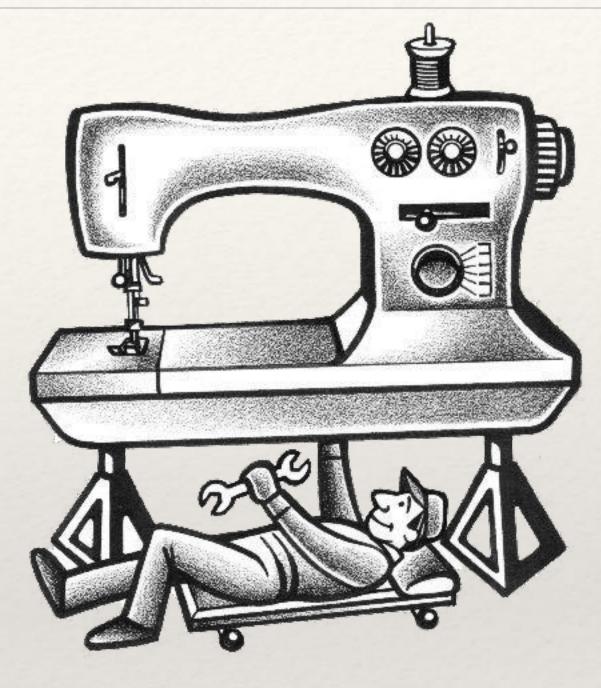




# "A Properly Maintained & Tuned Machine"

- Sewing problems if machine is
- Dirty (oil, residue, adhesives, thread fuzz)
- Out of time
- Poorly tensioned
- Nicks or burrs in thread path
- Learn how to keep your machine clean and happy \*\*
- Refer to your manual for any maintenance issues
- Make friends with your service department and schedule "machine physicals" as recommended
- \* "A clean machine is a happy machine"







### "Correct Tensions"

### Learn to manually adjust

- \* Both needle & bobbin!
- \* Get a second bobbin case

### \* Check your manual!

Both drop-in bobbins and front loading cases have adjustments



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### "Correct Tensions"

- Incorrect tensions cause:
  - \* Looping
  - Poor registration
  - \* Puckering
    - \* Magnified with poly thread and stretched fabric
  - Bobbin thread on top
  - Too much needle thread on bottom
- Use a tension gauge to measure for accuracy
- \* Embroidery Recipe book has link to a video demo

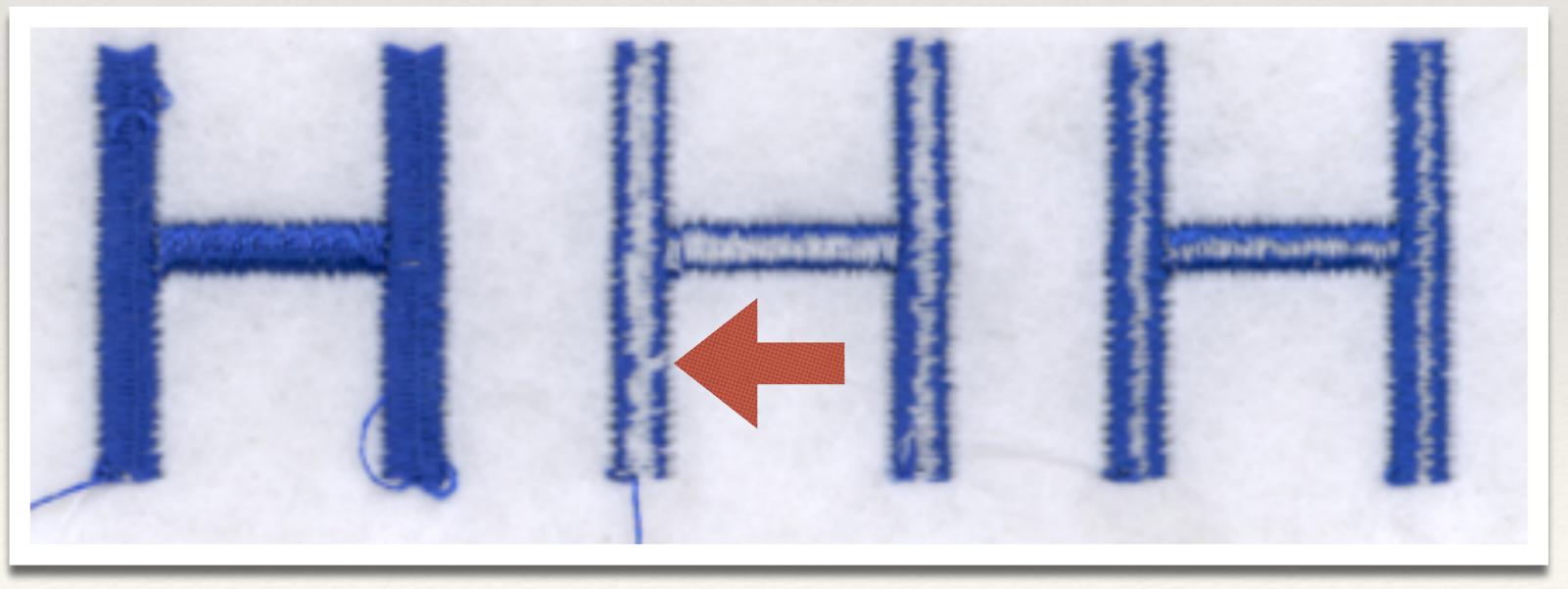








- Common test to evaluate tensions
- Approximately middle third should be bobbin
- \* "FOX" will check tensions in all directions
- Not too tight, not too loose, just right



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"H" Test









## Tension Headaches

### Same fabric, stabilizer, needle, machine



Rose part of bonus download with Anatomy of a Design ebook

Rayon

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Poly

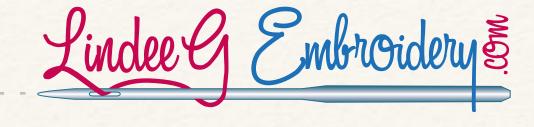




## Tension Headaches–Closeup



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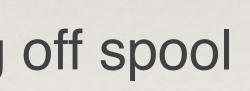


- Top thread pulled to bottom
- Causes:
  - Flagging
  - \* Tension imbalance
  - Upper thread jumping out of the thread path
    - Often take-up lever
    - A sudden large loop of thread coming off spool

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## Bird Nesting





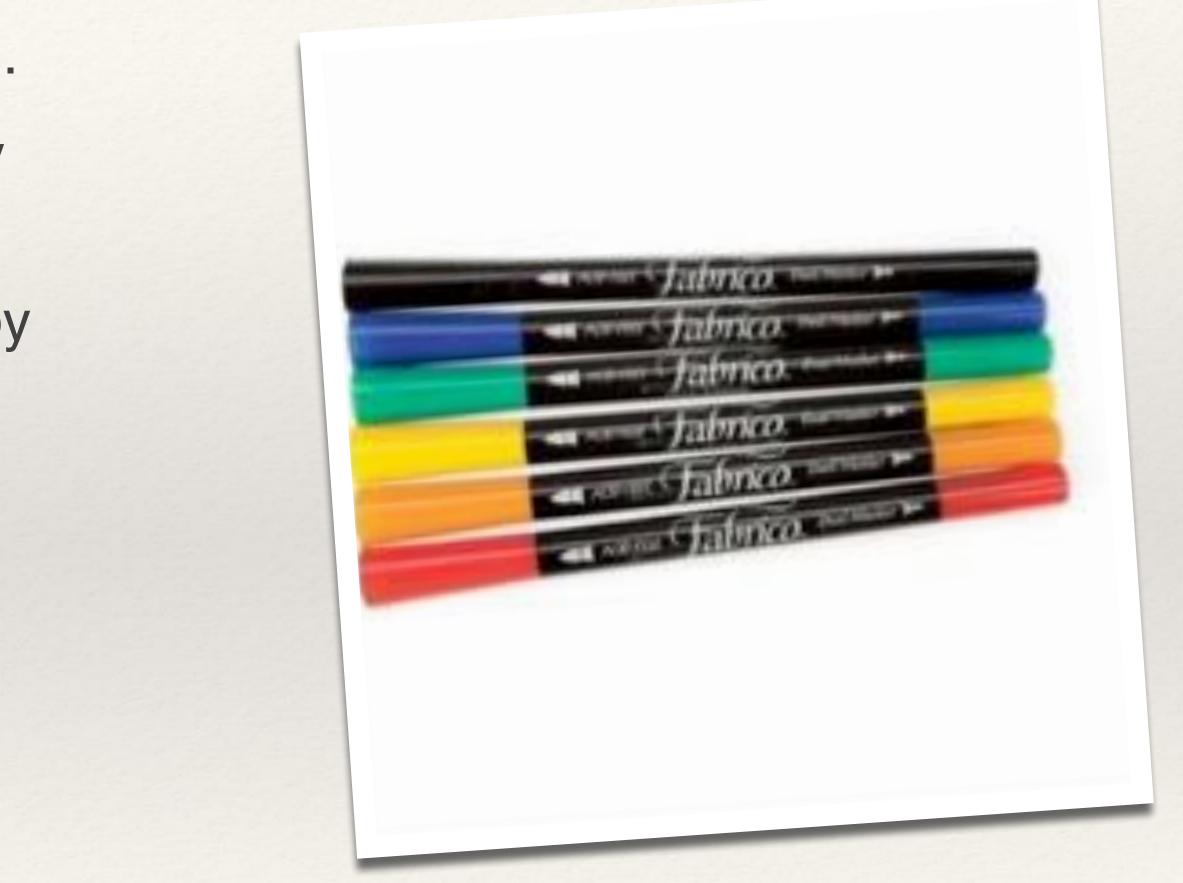






# Other Tension Myths

- #15: Looping is caused by poor digitizing.
  - More likely in longer stitches, especially in fills and runs
- #16: Bobbin pulled to the top is caused by a bad design/poor digitizing.
  - Correct your tensions
  - Touch-up pens for small corrections
- These are tension problems!!!







# "Using Recommended Bobbin"

- \* Use only bobbins recommended for your machine
  - \* Bobbin critical in proper stitch formation
    - \* Wrong bobbin may spin too freely or not enough
      - \* Can negatively affect tensions
      - Skipped stitches may result
      - \* Cardboard sides may absorb moisture and swell
  - Some machines cannot use any pre-wounds



or your machine mation



**Bobbin Center Pin** 

noisture and swell pre-wounds





# "Using Correct Needle"

- 1—Select a needle that will make a hole large enough to pass thread through fabric without breakage to thread or damage to fabric
  - Wrong point can damage fabric or not pierce fabric where supposed to
  - Finest, sharpest needle = most precisely placed stitches
- \* 2-Replace needle when needed
  - Dull or damaged needle can cause puckering, flagging, skipped stitches, poor stitch quality, thread or fabric damage
  - \* Sewing with a dull needle is like shaving with a dull razor





# "Right Thread for the Job"

- Most stock designs digitized for 40-weight rayon or polyester thread
- Metallic and other specialty threads may not be substitutable
  - \* Can be thicker, rougher, more fragile
- Use embroidery bobbin thread
  - \* Right weight and strength for embroidery
- **Always use quality thread!** 
  - \* Cheap thread is false economy! (causes baldness)

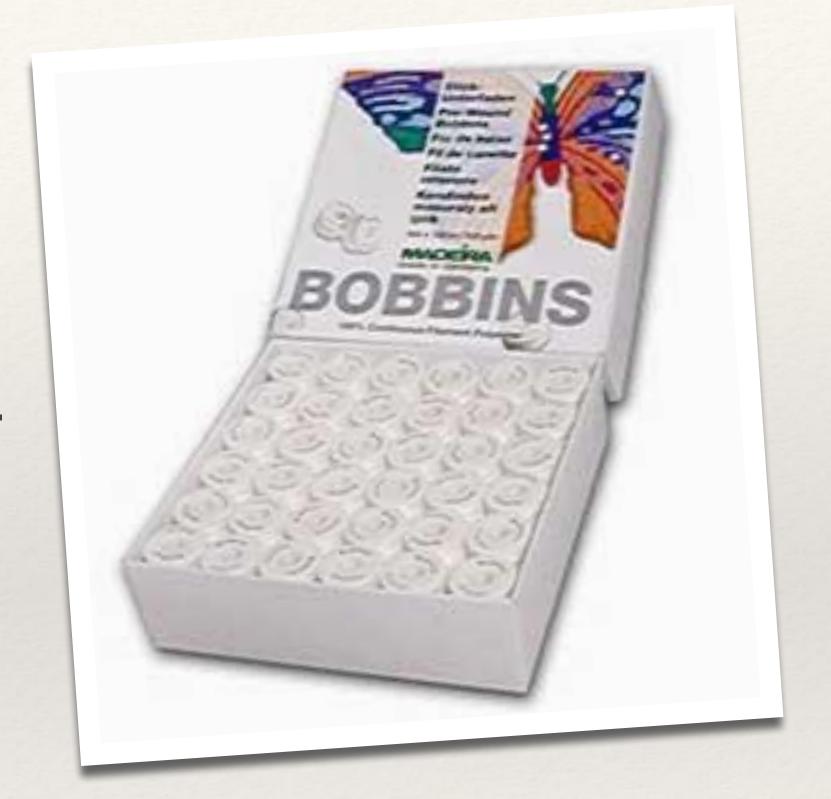






## Includes Bobbin Thread!

- Right weight & strength for embroidery
- Different types
  - \* Continuous filament poly popular
- \* Myth: Serger thread makes good bobbin thread.



### Also available in black





# "Smoothly Hooped"

- Fabric tension should be neutral
  - Not stretched, no ripples or puckers
  - \* May need to press area to be hooped
- Stabilizer tension should be taut
- Both fabric & stabilizer need to be hooped all the way around (no gaps) for best results
- Hooping on grain is best \*
- Demo...





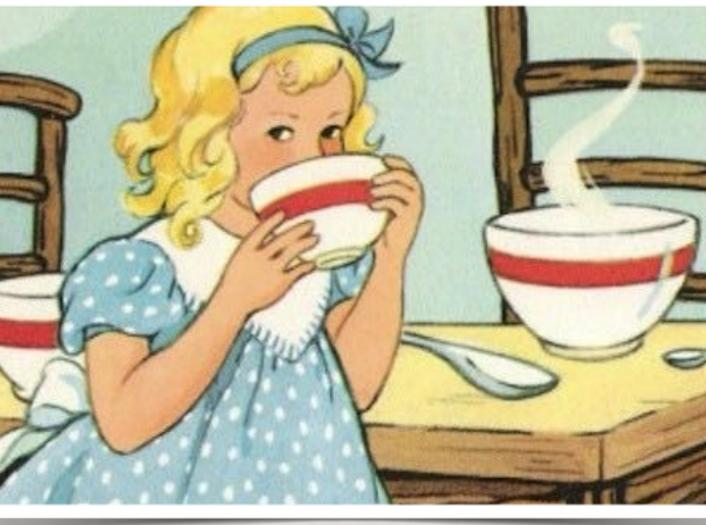


# "Properly Tensioned Hoop"

- Hoop should go in with "Goldilocks" pressure
  - Not too much; shouldn't have to bounce on hoop
  - Not too little; shouldn't just "fall" into place
  - \* Just right
- If screw needs adjusting, then rehoop to redistribute tension

  - the fabric there

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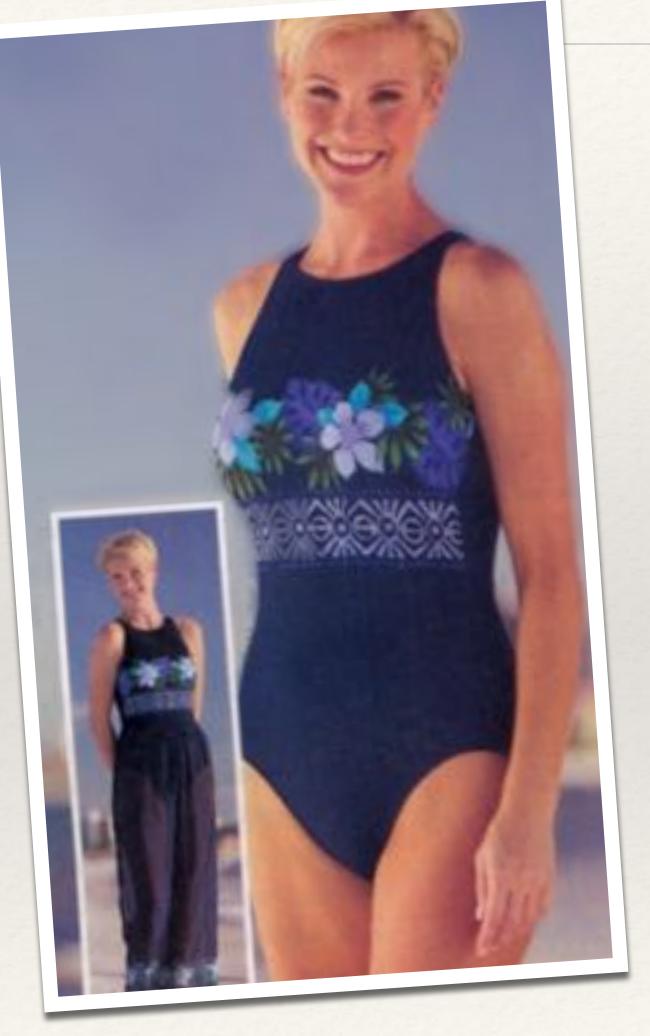
Tightening the screw after hooping doesn't evenly tighten the fabric \* Tightening the screw tightens the hoop at the screw area and LOOSENS





- First thing noticed is placement
  - Crooked? Off center? Bad location?
- Things I use for perfect placement
  - Printed design templates
  - Light box
  - PAL lamp •
  - **Echidna Hooping Station\*** \*
- \* Having the right gadget makes you more productive!

### "Right Position"



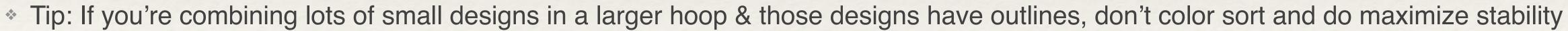
\*Available here





# "The Right Size Hoop"

- Size depends on whether you are floating or hooping
- How to select the hoop
  - One that will hold the fabric securely
    - \* Hoops can deform over time & may need to be replaced
    - While border hoops are easy to use, they may not be as secure as a standard "two-ring" hoop
    - Check magnetic style hoops for security
  - One that comfortably fits the design
    - Smaller hoops = more stable fabric
    - Ideally, you want to stitch in the center of the hoop rather than a corner of a large hoop
    - May go larger when floating









# Hooping

- \* A bad hooping can't be undone
  - \* Don't skimp/rush the hooping process
  - \* Can take longer to hoop than to stitch
- Best results achieved when hooped between rings
  Hoop is part of the stabilizing process!

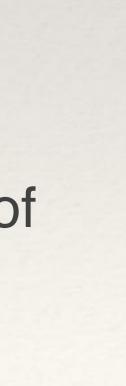




# Hooping Principles

- \* Use the smallest hoop that will comfortably accommodate the design
- \* Hoop only when you are ready to embroider
- \* Hoop as closely to the center of the hoop as practicable
- \* Make sure stabilizer is large enough to be firmly grasped by all edges of the hoop
- \* After hooping, slightly recess the inner hoop beyond the outer ring
- \* Hoop to keep bulk out of the way of the embroidery head
- Promptly remove finished item from hoop
- For best results hoop stabilizer, garment/item, & topping TOGETHER between the rings of the hoop



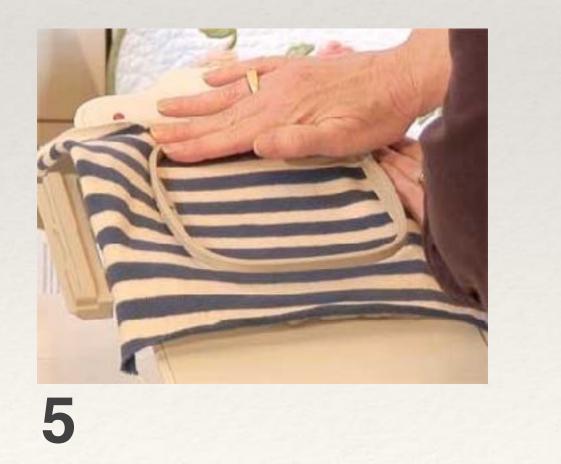








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# How to Hoop





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# Hooping Don'ts

- Don't pull on fabric
- Don't tighten screw
- Don't bounce on the hoop to seat an overly tight hoop •
- Don't force a too tight fit
- Don't use a hoop that is too large

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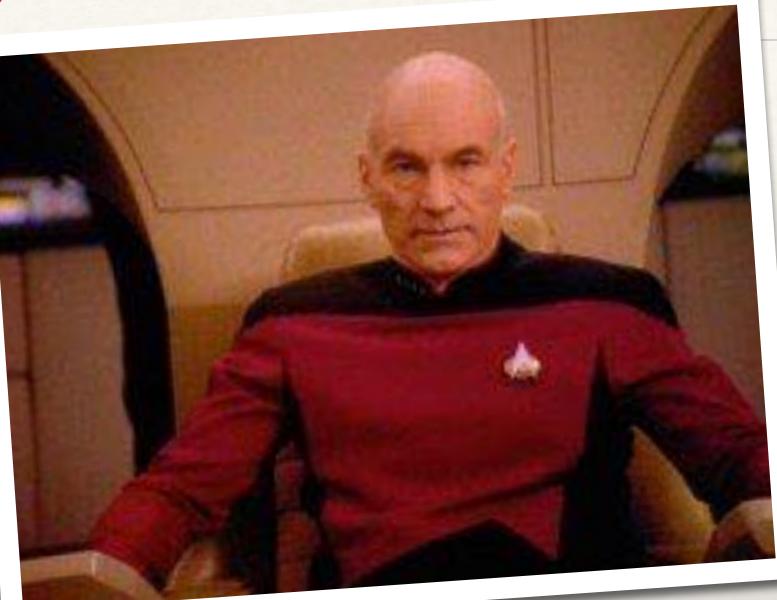






## Summary

- Make it sew or you won't know
  - \* A digital file is not embroidery! It's a pattern
- \* There are two kinds of embroiderers
  - \* Those who test and those who wish they had
- \* While perfect embroidery is elusive, quality embroidery is attainable and should be expected
- A mistake is a word not a sentence! •
  - \* Key is learning what caused it and how to prevent it thus making you a better a embroiderer



"Make it sew, number 1"









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BLOG

youtube.com/user/LindeeGVideos



pinterist.com/LindeeG



instagram.com/lindeegoodall/



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## Where to Find Me



Visit the shop to get freebies Sign up for newsletter for free set

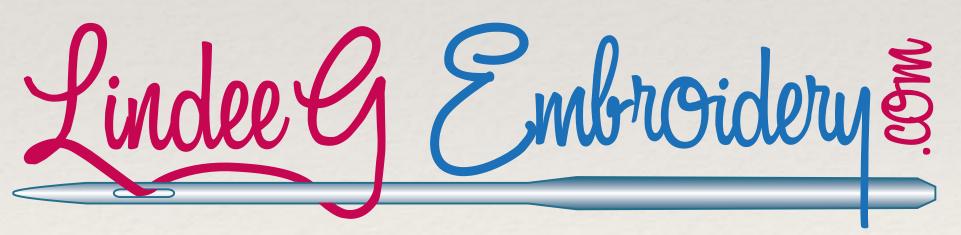




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- \* Over 100 articles all related to machine embroidery + more to add!
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embroidery design & education





- The Embroidery Recipe eBook (\$47 value)
  - \* 360+ pages
  - Expands on the ingredients & quality formula
  - Jam packed with content, images, charts, and more
- Includes 20 designs for experimenting with different threads, fabrics, & techniques (not available individually, compare at \$39.95)
- Includes Design Evaluation for tracking your own experiments
- BONUS: Got Myths: 20 Popular Machine Embroidery Urban Myths & Their Corresponding Realities (ebook \$9.95 value, exclusive here)
- Place your order at virtualsewingguild.net

Package 1



### The Embroidery Recipe

How Your Ingredients Affect Your Results









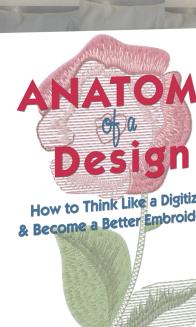
### \* Package 1

- \* The Embroidery Recipe ebook
- \* Eval Form, Designs, Myths ebook
- The Anatomy of a Design: How to Think Like a Digitizer & Become a Better Embroiderer (ebook \$37)
- Place your order at <u>virtualsewingguild.net</u>

Package 2









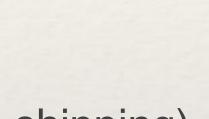






### Package 3

- Package 1
  - The Embroidery Recipe ebook
  - \* Eval Form, Designs, Myths ebook
- Hooping Station Deal U.S. Only (for shipping reasons)
  - The Small Echidna Hooping Station (\$229 value with shipping)
  - Exclusive Bonus Embroidery Collection CD with 50+ designs (Normally only available individually, value >\$300)
  - Coupon to get the large hooping station at the combo price difference (Combo is \$449, Large is \$349, +\$50 Shipping—Your Price: \$249)
    - Coupon is only valid if you purchase this package
- Place your order at <u>virtualsewingguild.net</u>
  - Hooping Station will be shipped from Tucson, AZ



Special Limited Bonus Collectic



- Package 2
  - The Embroidery Recipe ebook
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  - The Anatomy of a Design ebook
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How to Think Like a Digitize

Package 4

The Embroidery Recipe How Your Ingredients Affect Your Result





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# Thank you for joining us!

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