Principles of Graphic Design
(Source information: http://graphicdesign.about.com/cs/designbasics/ and the page layout was reedited for easier reference)

Graphic design is the process and art of combining text and graphics and communicating an effective message in the design of logos, graphics, brochures, newsletters, posters, signs, and any other type of visual communication. Today's graphic designers often use design software such as Adobe Photoshop, Illustrator, Macromedia Fireworks with various techniques to achieve their goals.

Elements of Design
All designs have certain basics elements or building blocks chosen to convey the message — beyond the actual words or photos used. The five elements of **lines, shapes, mass, texture and color** are the building blocks of design.

Other concepts sometimes list as elements of design are form, space, and value (as in lightness or darkness of color).

Explore each of these elements of design in-depth

**Elements of Design: Lines**
Lines are one of the basic elements of design. These lessons define and explore the appearance, patterns, and uses of lines in desktop publishing and graphic design projects.

Alone or in combination with other lines or shapes they can:

- organize
- texturize
- guide the eye
- provide movement
- make a statement
- convey universal meanings

**Lines**

In Lesson 1 we'll look at what a line is and the different looks of lines. In Lesson 2 we'll combine lines and see how the patterns we create convey different ideas. Then in Lesson 3 we'll look at how lines are used in design and some practical uses of lines in common desktop publishing projects.

**Lesson 1 - Appearance**

A line is a mark connecting two points. How we get from point A to point B gives the line its distinctive character and appearance. Lines can be long or short, straight or curved. Lines can be horizontal, vertical, or diagonal. Lines can be solid, dashed, thick, thin, or of variable width. The endings of lines can be ragged, blunt, or curved.
**Patterns**

Lines are often found in pairs or groups. Lines of the same general appearance or lines that are quite different can form a variety of patterns that create textures, suggest movement, or lead the eye - the same as single lines.

If you aren't creating original illustrations or doing logo design, your main concern with this part of the study of lines is being able to recognize these patterns in the illustrations you may select for your work and understand how these patterns may or may not project the image you want for your project. These bits of line patterns illustrate static, dynamic, and random use of lines.
**Upper Left**: Uniform vertical black and white lines alternate at even intervals. Static. Orderly. Conservative.

**Upper Right**: Uniform horizontal black lines are widely, but evenly spaced. Static. Stable. Orderly.

**Middle Left**: Uneven spacing of otherwise uniform lines creates the impression of movement. Dynamic. Orderly progression.

**Middle Right**: In this example the progression moves in from either side giving the illusion of roundness. Dynamic. Orderly progression. Dimension.

**Lower Left**: Varying line widths and distances create a random pattern. Dynamic. Chaotic. Disorderly.

**Lower Right**: While the uniform size and spacing of the lines in the upper examples are static, make the lines into curves and you get movement although it is a controlled movement. Dynamic. Orderly flow.

**Practical Applications**

Some ways that you might use lines in your design are to:

- Organize, connect, separate
- Create movement
- Provide texture
- Convey a mood or emotion
- Define shapes
- Provide emphasis
- Provide a framework

The examples below demonstrate a few of the ways lines might be used in page layout or illustration. You can probably find examples all around you as well.

Above, a solid line separates columns of text, a pair of lines set apart a phrase, and a short dotted line separates a section of text from other parts of the page.
A few simple lines added to a piece of clip art gives a sense of movement to the airplane. Short, choppy, vertical lines create a grooved texture along the edge of the timepiece sketch.

Dashed lines suggest a coupon, whether there is one or not. It causes many of us to take a second look at this ad because the familiar dashed line makes us think "I can save money!"

In **Lines Rule!** you'll find examples of how rules (typically solid or dashed horizontal or vertical lines) are used in desktop publishing along with additional design tips.

**Lines Rule!**

*quick design lesson: using rules or lines in your page design*

by *Jacci Howard Bear*

**Rule** is another name for a line in graphic design. Use rules as decorative elements and as functional parts of the overall layout to separate, offset, or anchor areas of the page.

**Examples of horizontal rules**

Rules are normally expressed in point sizes although some programs use inches by default. A hairline rule is the smallest size and is usually about one-fourth of a point. Most page layout programs come with several preset "one-click" width rules usually from hairline to 8, 16, or 24 points. However, you can customize rules for other sizes including partial sizes such as 1.5 or 2.6 points.

Solid rules aren't the only possibility. Some software programs offer a wide variety of pre-set rules styles or you can create your own. Make rules from round, square, or diamond-shaped dots. Mix dots and dashes in a pattern. Combine solid or non-solid rules in different sizes. And don't forget, rules can be vertical and diagonal too.

Due to varying screen resolutions, the widths in image are only approximate representations.

**Designing with rules**

Some ways to use rules in your design:

- Add a border to a graphic or table.
- Place above and/or below headlines, titles.
- Use at the top and/or bottom of pages to define the shape of the page or to separate header and footer text from other copy.
- Separate columns of text.
- Offset sidebars, pull-quotes, or other blocks of text.
- Use rules with restraint and appropriately:
  - Too many rules are distracting and interrupt the flow of text. Don't box in every element on the page.
  - Use appropriate size rules. Thick rules can overpower delicate text and rules that are too thin fade away into the background.
  - Pay attention to spacing. Put enough space between text and rules to avoid ascenders or descendents running into the rules.
When placing rules above and below or to the left and right of a block of text, make sure the distance between text and rules is visually balanced on both sides.

Some ways to create attractive rules:

- Use dots or dashes instead of solid lines.
- Pair up thick and thin rules for double lines.
- Use rules in a spot color or tint.
- Use a group of rules in the same or varying thicknesses and lengths as design elements that draw the focus to an important element of the design.
- Reverse text out of a thick rule.

Rules tips and how-to's
Most page layout programs have the ability to create a variety of default rules and often you can create custom rules within the program. More elaborate rules may require a graphics program.

- **Not all hairline rules are created equal.** Specify a specific size, such as .25 pt. to avoid surprises when printing to different printers, especially imagesetters.
- **Another reason not to use pre-defined hairline rules.** The hairline rule you define in your drawing program may have a different weight then the rule you specified in your page layout program.

**Lines in Logos** is part of a longer feature on logo design. This page shows examples of how changing the appearance of lines can convey different messages in a logo.

**Basic building blocks in Logo Design**

*by Jacci Howard Bear*

The basis of many logo designs and graphics are simple geometric shapes -- lines, circles, squares, and triangles. Even the graphically-challenged can create great graphics for logos, newsletters, fliers, or web pages using these basic building blocks. As Dmitry Kirsanov says "...it's not the complexity of your custom graphics that makes a quality design."

This is not a logo design tutorial. Instead I want to introduce (or re-introduce) ways to use simple shapes to create logos and other graphics. You don't need graphic software for many of these designs. Most word processors and page layout programs already have the tools needed to create lines, circles, and squares.

I did the examples throughout this article in CorelDRAW, a vector drawing program. But I used only the most basic tools -- no fancy filters, fills, or complex manipulations. This article is heavy on the visuals. In the logo or graphic examples, look for the simple shapes that make up each design.

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**part 2: using lines in logos**

*by Jacci Howard Bear*

Lines come in a variety of shapes and sizes. Don't get stuck in a rut. Vary the thickness. Make lines of dots, dashes, or combinations. Look at the patterns that a series of lines make.

Use lines to direct eyeflow, form barriers, indicate connections, show movement. Be aware of what the shape of lines can convey. Sharp edges could indicate tension, crispness, hardness, formality, or high tech. Soft edges and curves may be softer, flowing, more casual, or more personal.
Even small changes in line thickness, endings, or shape changes can alter the look and feel of a design.

In the second example, the lines that make up the triangle (letter A) go from thick at the bottom to thin at the top. They also suggest a set of steps (advancement) leading upward.

Notice how the round line endings give this hammer -- drawn freehand with straight and curved lines -- a softer feel.

The second version of the ifiche logo uses rounded line endings and more curves (in the fins/lashes). Notice that a different typeface is chosen for each, to match the style of lines.

You can also create interesting patterns with a series of repeating lines. None of these designs rely on color -- although changes in color can further change the appearance of the lines.

**part 3: using shapes in logos**

*by Jacci Howard Bear*

Everything has a shape but the basic shapes of circles, squares, and triangles can be very effective in logo design, in part because of their simplicity. These shapes have certain sub-conscious meanings as well. The circle is protective or infinite. The square denotes stability, equality, and honesty. The triangle suggests tension or conflict or action.

There are so many things you can "draw" using only circles, squares, or triangles. Group several together to form interesting patterns. You can make one shape from another -- such as the group of circles that form a triangle, below.
Alternating direction or color, disrupting a pattern with another shape or a shape out of alignment can add interest or suggest abstract ideas. A triangle alone or a series of overlapping ones can "point" in one or more directions.

Replace letters in a word or name with shapes that suggest those letters. A triangle for A or V is obvious. Less obvious is the E made of squares (above) or perhaps two stacked circles for an S or a pair of triangles (one up, one down) for an N.

Logos don't need to be elaborate -- and usually work best when they are kept simple. So simple shapes work beautifully.

**part 4: putting it all together**

*by Jacci Howard Bear*

You don't have to know how to draw to create some seemingly complex illustrations. The logos and graphics shown here use nothing more than lines, circles, squares, triangles, and text.

Who needs clip art? A circle, a triangle, a square (the highlight), and a curvy line make a nice balloon. Repeat it a few times, changing the color and add a triangle bow. You could vary it even more by using an elongated ellipse for one or more of the balloons.

The checkerboard of squares is a versatile pattern. It could be a tile floor, a racing flag, or, as seen above, a tablecloth. Can you pick out the shapes used for the different eating utensils?

The SpiroBendo logo is nothing more than a rectangle, some circles, and some very thick lines with round ends (filled rectangles with rounded corners could work too).

Letters with a tail are fun. The tail on this Q (the circle) is a curvy line that does triple duty. It underscores the name, is the tail on the Q, and its curves suggest water -- an obvious tie-in with the surf supply company.
Again, a simple shape (triangle) does more than just sit there. Can you tell what they represent in the above logo?

Remember the stack of circles from earlier? Turn 'em purple, add a "leaf" that is really just a distorted polygon shape, a squiggly line, and some text for a nice logo. No art lessons needed.

Finally, **Lines with Photos** is part of a feature on creative use of mug shots in newsletters. On this page you'll see some examples of using lines to provide a framework, to connect information (photos), and organize images.

**Design Tip:** When using clip art in your page layout, pay attention to the lines within the image. The lines of the clip art shouldn't interfere with or conflict with the tone of the design or other line elements used in the piece.

**Personal Assignment (This is not a required IMED1341 assignment)**

The assignment for this class is a 5-question test with multiple choice or simple essay questions. While no one but you may see these assignments, take the time to do them just as if you were turning them in for a grade. It will help reinforce what you have learned.

**Class 2 Assignment**

1. A is... B is... essay
2. I chose A/B/C because... essay.
3. a/b/c/d (only one)
4. a/b/c/d (only one)
5. I now know... essay.

**How Well Do You Know Lines?**

1. Describe the differences between these two lines (length, width, general appearance, etc.):
   
   A

   B

2. Compare these groups of lines designed to suggest a column. If your hometown bank or savings & loan were trying to choose from among these (rough draft) patterns for a new logo, which do you think best suggests both stability and 'down home friendliness'? Explain why you chose A, B, or C -- especially how the appearance and patterns created by these lines convey that feeling. There is no absolutely right or wrong answer as long as you can explain your reasoning.
3. Sharp edges or line endings would typically convey:
   a. formality
   b. movement
   c. friendliness
   d. softness

4. A hairline rule is usually:
   a. dashed lines
   b. 1/4 of a point in width
   c. 24 points long
   d. made to be broken

5. In only one or two sentences, describe the main points you've learned from this class on LINES.

Class 3: Shapes

Shape is one of the basic elements of design. Alone or in combination with other shapes or lines they can convey universal meanings as well as guide the eye or organize information. The three basic types of shapes are geometric, natural, and abstract. Geometric shapes are structured, often symmetrical shapes. These include squares, circles, and triangles but also octagons, hexagons, and cones.

Natural shapes are found in nature or they can be manmade shapes. Leaves are an example of a natural shape. An ink blob is a natural shape. Natural shapes are often irregular and fluid.

Abstract shapes are stylized or simplified versions of natural shapes. Symbols found on signs, such as the stylized wheelchair shape for handicapped access, is one example.

For the purposes of this class we'll focus on the three basic geometric shapes of squares (and rectangles), circles, and triangles but lesson 4 will also briefly address natural and abstract shapes.

Squares

The square denotes honesty and stability. Squares are familiar, trusted shapes. Because the vast majority of the text we read is set in squares and rectangles, it has become familiar, safe, and comfortable.

Squares and rectangles are probably the most common geometric shapes we encounter. A few books, especially those for kids, may be cut in irregular shapes but adult (i.e. 'serious') correspondence comes in squares -- both the physical shape of the books, magazines, newspapers, and the rectangular columns of set text.

Some designers might equate square with boring. It's true that other, unexpected shapes, can grab attention better than the simple square but don't forget the importance of comfort and familiarity. Imagine how difficult it becomes to file everyday correspondence if letterhead came in a variety of triangles or freeform shapes. Try reading an entire book with all the text set in circles. Squares and rectangles definitely have a place in design.

Some ways you can use squares and rectangles:

- To symbolize honesty, stability, equality, comfort, or familiarity. It could also symbolize rigidity or uniformity.
• Related to the first bullet item, use repeating squares to suggest familiar themes (checkerboard pattern to represent a game board, the checkered flag at the end of a race, a tablecloth).
• To highlight, organize, or set apart information using a solid or outlined box.
• Use a square unexpectedly. Set a block of text in a solid or outlined but tilted box — with or without also tilting the text.

Circles

Circles suggest infinity. They are also protective (think of protective encircling arms). They can also denote free movement such as a rolling ball or a more controlled movement such as a spinning globe. The sense of movement is often enhanced through shading or the use of lines (as suggested in Class 2).

Outside of logo designs, circles are less common elements of design which makes them good for grabbing attention, providing emphasis, and breaking up familiar rectangular blocks of text. You could set text in circles or simply use a circle as the background for more traditional blocks of text.

Some ways you can use circles:

• To symbolize infinity and protectiveness. Circles could also suggest something well-rounded or complete. Similar to protectiveness, circles could also imply security.
• Related to the first bullet item, use circles to suggest familiar themes (bullet holes, a stack of cannonballs, a bunch of grapes -- or just about any round fruit or vegetable, a target, the earth).
• To highlight, organize, or set apart information using a solid or outlined circle. Try a freeform circle that looks like it was drawn with a marker or pen to highlight important text.
• Replace the letter O or other 'round' letters in text with a circular shape that suggests that letter. Try an orange in the word Orange or a basketball, baseball, or soccer ball to replace an O or other letter in the nameplate of a sports newsletter.

Triangles

Triangles suggest action. They are dynamic. Triangles may convey either conflict or strength. Triangles can direct movement (up, down, left, right — depending on which way they 'point') but rather than moving themselves, they point the way for the reader.

Triangles are suggestive of many different shapes and ideas. They can represent a religious Trinity, a pyramid, a flag or pennant, an arrow, a beacon.

Some ways you can use triangles:

• To symbolize action or conflict. In a logo, a triangle might be better suited to a growing, dynamic high tech company than the more stable, familiar square, for example.
• Related to the first bullet item, use triangles to suggest familiar themes (flag, pyramid, arrow or pointer). A single or a series of triangles can point the eye to important information or act as an arrow to get readers to turn the page.
• To highlight, organize, or set apart information using a solid or outlined triangle. Use a triangle to suggest progression. Place it behind a 'Top 10' list or the steps to accomplish a specific task.
• Replace the letter A or V in text with a triangular shape that suggests that letter. Try a wedge of pie for the letter A in the phrase Amy's Desserts.

Practical Applications

Some ways that you might use shapes in your design are to:
- Organize, connect, separate
- Symbolize an idea
- Create movement
- Provide texture or depth
- Convey a mood or emotion
- Provide emphasis
- Provide a framework

**Geometric Shapes**
In addition to the basic square, circle, and triangle discussed so far, other geometric shapes have specific meanings, some culturally-based. An octagon, especially a red one, usually means stop. A starburst is commonly used to grab attention and identify something that is new, improved, or 'on sale.'

**Natural Shapes**
Natural shapes can add interest and reinforce a theme. Rather than a plain box, frame text with a coiling rope or a spray of leaves or flowers. Use a freeform, non-symmetrical shape to convey a feeling of spontaneity.

**Abstract Shapes**
Some abstract shapes are almost universally recognized and easily 'read' even when the text is in an unfamiliar language. The stylized wheelchair, the male and female symbols for restrooms, and the jagged steps for stairs or an escalator are some examples. Icons are often abstract or stylized shapes. For example, a rectangle with a 'folded corner' often indicates a page in a document or a word processing program. A hollow circle or oval with smaller circles on the 'path' may be a literal representation of a planetary system or symbolic of a network, such as a computer network.

**Shapes in Logos** is part of a longer feature on logo design. This page shows examples of how you can use shapes to convey ideas plus more ideas on using shapes to replace letters.

In the same logo feature, **Building Logos** is about using the basic geometric shapes and lines to construct more complex images or to suggest familiar themes.

**Mass and Size**

**Mass** is one of the basic elements of design. Mass equals size. Each piece you create has a physical mass. Additionally, each element within the design (graphics, photos, lines, text blocks) have their own mass relative to the whole piece. Part of working with mass in desktop publishing is understanding how we measure the various parts of a design such as paper, type, and images.

**Mass & Size**
In Lesson 1 we'll look at the definition of mass and a few ways mass is incorporated into designs. In Lesson 2 we'll delve more into the nuts and bolts of size such as how we specify and measure the size of type and images and how paper sizes are specified in desktop publishing. This lesson incorporates a great deal of supporting material and although it is only one lesson, it will take much longer to complete than any lessons thus far in this course.

**Defining Mass**

As stated in the introduction, mass equals size. Each piece you create has a physical mass. The physical mass or size is the actual dimensions of the piece — height, width, thickness/weight (of paper), and depth (3D objects).

Additionally, each element within the design (graphics, photos, lines, text blocks) have their own mass relative to the whole piece. For example, a photo that is physically 3 inches by 5 inches can appear smaller or larger depending on the physical size of the paper it is printed on and the size and proximity (closeness) of other items on the page.
Some ways to use mass within your designs:

- **to accommodate information, content**
  Example: To present all the desired or needed information comfortably a designer may create a bi-fold rather than the usual single business card

- **to accommodate normal size restraints or expectations**
  Example: The postal service has limitations on the height and width of different types of envelopes. If a designer ignores those requirements it could incur additional mailing costs for the client.

- **to convey a mood or provide emphasis**
  Example: A place that is physically large (such as an amusement park) or a business that offers a huge assortment of products may use brochures or other marketing pieces that are larger (physical dimensions) or heavier (weight) than normal to carry out the 'bigger' or 'more' theme.

- **to create contrast**
  Example: A designer might design a full-page magazine ad using a single small image in the middle of the page with lots of white space. The contrast between the size of the page and the size of the content (image) draws attention to the image and can create a specific mood (depending on other elements) such as conservative, elegant, lonely, or open.

**Measuring the Size of Your Design**

What is large? What is small? In graphic design there are many ways to specify size.

**Personal Assignment (This is not a required IMED1341 assignment)**

This assignment consists of 10 fill-in-the-blank questions on mass and size measurements (including image resolution). Even though it looks simple, this is one of the more involved Assignments to date and you may have to refer back to already reviewed material or do a little research to come up with some of the answers.

1. Mass includes the physical dimensions of __________, __________, __________, and, __________.
2. A standard letter size A4 piece of paper is _____ by _____ inches.
3. The same picture displayed on a low resolution monitor looks __________ than it does on a higher resolution monitor.
4. Type is typically measured in __________.
5. Of SPI, PPI, DPI, and LPI, the measure of resolution that properly refers to display resolution and the size at which an image displays on-screen is __________.
6. In addition to inches, millimeters, picas, and pixels, two measurement systems found in many desktop publishing programs are __________ and __________. (Do the 4th exercise listed in Lesson 2 to find some of these methods of measuring size. If the programs you have do not have at least two more measurement systems then answer this question by telling me the name of the program and listing all the measurement methods it does have.)
7. The use of __________ and __________, two Principles of Design, are ways of using or altering the visual or perceived mass of a piece. (Not explicitly spelled out, these answers can be found in or inferred from material in Lesson 1.)
8. Basic or basis size is used to determine the _____ _____ for a ream of paper. (Remember the Glossary entries from the Paper Sizes material? That's where you'll find this information.)

**To answer 9 & 10:** Go back to the Class Sample that you originally used in the assignment for Class 1. Reread what you wrote (or didn't write) about the use of the element of MASS in that piece. Based on what you've learned in Lesson 1 and 2 of Class 4 complete the last two questions.

9. The physical dimensions* of this piece are: ____________ (unfolded) and ___________ (folded, if applicable).

*In the case of multi-page items like booklets, give the dimensions of a single page and the
Of the four ways to use mass found in Lesson 1 (accommodate information, content; accommodate normal size restraints or expectations; convey a mood or provide emphasis; and, create contrast) the one that most applies to the use of mass in this piece is ________________.

Texture

Texture is always a part of our designs whether intentional or not. It is the visual or tactile surface characteristics of a piece. In desktop publishing, texture comes from the paper we use. We may also add visual textures through the arrangement of lines and shapes or the use of photographic images of specific surfaces.

Texture

In Lesson 1 we’ll look at the paper on which most of our desktop publishing projects is printed with an eye on texture. In Lesson 2 we'll discuss the use of added visual texture as an overall background and as a fill for shapes. Lesson 3 covers the addition of texture through specific printing and finishing techniques such as thermography. Each lesson contains tips on using texture effectively.

Paper Textures & Finishes

Paper is often something we take for granted. It's just 'there.' Sometimes we have no choice about the type of paper on which our designs are printed. Normally we can't dictate the paper used for ads in newspapers or magazines. Even when we do have a choice, we're limited by budget, printing requirements, or other factors. However, paper can be an important textural element in our desktop published documents.

Some papers just 'feel' better than others. Grab up some paper from around you. Get a newspaper, a magazine, some paper from your printer, and a few different samples from your Class Samples. Close your eyes and touch the different surfaces. Can you identify the general type of paper (newsprint, etc.) simply by touch? Probably so. But also consider how they feel to your touch — smooth, rough, slightly patterned, fuzzy, bumpy, slick, shiny, dull, warm or cold.

Familiarize yourself with some of the various surfaces and finishes used in paper. Explore each of these paper terms related to the surface characteristics and appearance of paper. Some may be familiar to you already. Others will be new.

- Antique Finish
- Cast-Coated Paper
- Cockle Finish
- Dull Finish
- Eggshell Finish
- Embossed Finish
- English Finish
- Felt Finish
- Glazed Finish
- Granite Finish
- Laid Finish
- Linen Finish
- Machine Finish
- Machine Glazed
- Matte Finish
- Mottled Finish
- Natural Finish
- Onionskin Paper
- Parchment Paper
- Supercalendered Paper
- Vellum Finish
- Wove Finish
Design Concept & Texture
Varying paper surfaces can dramatically or subtly alter the mood you want your designs to convey. An exercise from Using Design Basics To Get Creative Results by Bryan L. Peterson uses the example of a piece of jewelry placed against two totally different surfaces — a shiny tile of black Formica vs. a piece of cement.

Translate this same concept to paper and imagine a photograph of a well-preserved vintage automobile printed on extremely smooth, glossy paper or printed on a rough, pepply surface. Neither one is necessarily better or worse. It depends on the mood you want to convey. Increased contrast between the image (and it's visual texture) and the actual surface of the paper can create interest in your design.

When selecting for your interface, choose a texture that is related to the concept of your design and doesn't overwhelm or get in the way of the message. While you can make a bold statement with texture, sometimes a subtle texture that stays 'in the background' is most appropriate. Make sure that your texture works with your choice of type and images so that text does not become unreadable or images unrecognizable. It may be necessary to use a bolder typeface if your interface is rough or strongly patterned.

Visual Textures

Everything around us has a texture. Sometimes we can simulate those textures with paper, but more often the textures we create in our designs are visual rather than tactile. However, those visual textures can be just as provocative or full of meaning as actual textures we can touch.

It's extremely easy to find or create visual textures for your designs. There are four basic ways to incorporate visual texture.

1. **Objects within a photograph**
   - Textures: fairly smooth surface of the chalk; rough surface of the cement
   - Textures: smooth glass bottles; fabric of the potholders
   - Textures: worn wooden mallet; grass

2. **Images created with photo-editing software**
   - These textures may mimic actual textures or be imagined textures
   - Texture: mimics drapes or folds in a satiny fabric
   - Texture: simulates a rough, rocky surface
   - Texture: random soft circles create an imaginary texture
3. **Digitized images of actual textures**
   (from scans, digital photos)

   Texture: a straw mat

   Texture: piece of door mat made from old tires

   Texture: tree bark

4. **Symbolic textures created with lines or shapes**
   these patterns suggest various textures and are similar to the use of symbols or icons to represent ideas or objects

   Texture: wavy lines could symbolize water, waves, rolling terrain

   Texture: overlapping circles give the look of fish scales

   Texture: a grid of lines could simulate plaid or linen fabrics, wire mesh, or other textures

You can enhance or alter the appearance of visual textures depending on the actual texture of the paper used. Keep this interaction in mind when using texture. While you can easily simulate a rough texture on smooth paper, using a 'slick' visual texture on some rough papers changes the visual appearance.

Choose textures that relate to the concept of the piece and are appropriate to the design. Just as some paper textures can interfere with the readability of text, so can visual textures used as backgrounds. Use caution when placing text over heavy or busy visual textures.

If you have access to photo-editing software (such as Adobe Photoshop) explore the options within the software for using existing textures or creating new textures. Many programs come with preset fills that mimic recycled paper, rippling fabric, cement, or other 'real' textures. Look for options to alter the colors to create a greater variety of visual textures.