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OKLAHOMA COOPERATIVE EXTENSION SERVICE

The Volunteer Teacher Series:

Do-It-Yourself Visuals

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VISUALS — A HELPFUL TEACHING TOOL

Effective visuals help volunteer teachers explain concepts. Visuals increase learning in the following ways:

- Visuals help to focus the learner's attention on what is being taught.
- Visuals help people remember what was taught. Showing a word or object as you talk about it doubles the effect of your teaching.
- Visuals help to clarify the concepts you teach. Pictures can explain some concepts better than words.

As a volunteer teacher, you are concerned with how people learn *and* remember.

Learning: About 85% of learning occurs through vision. This includes reading, seeing demonstrations, seeing pictures and drawings, and observing daily life. About 10% of learning occurs through hearing. This includes lectures and public speaking, hearing instructions on how to do something, and listening to everyday happenings. Taste, touch, and smell account for the rest.

Remembering: Your task is to teach so that people *remember* and *apply* what they learn. As you choose the teaching methods and visuals you will use, refer to Edgar Dale's "Learning Cone of Experience" (see Figure 1). Use the list beside it to guide you as you prepare your lesson.[1]

[1]Wiman and Mierhenry, *Educational Media,* Charles Merrill, 1969.

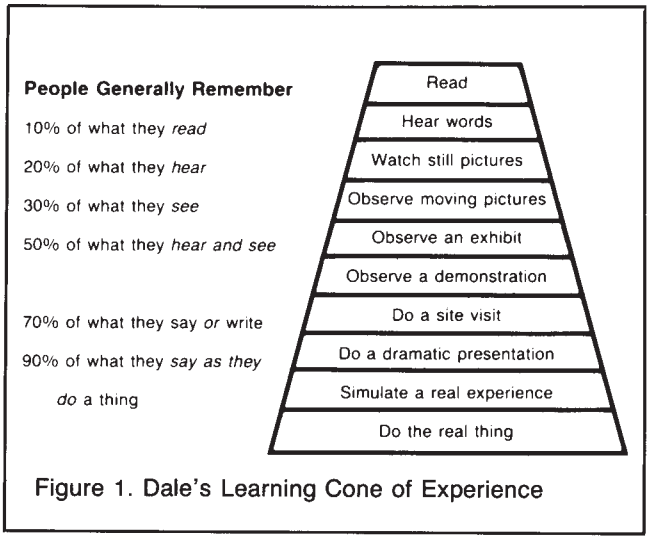

Figure 1. Dale's Learning Cone of Experience

HOW PEOPLE SEE

Youth and adults with normal health depend more on vision to learn than any other sense. Studies show that 85% of learning occurs through vision. Since vision contributes so much to learning, it's important to understand what affects how people see.

Visual acuity. As people age, there is a steady decrease in the average acuity or sharpness in vision, even in healthy eyes. Although vision peaks around 18 to 20 years of age, declines begin in youth. Around age ten, the distance at which an object can be seen clearly begins to move away. The biggest change occurs between 45-55 years of age.

What does this mean for your teaching? Choose visuals with lettering and figures of ample size for your audience. Keep drawings simple and uncluttered — tiny details can be confusing.

Light. Over the years, the pupils in our eyes let in less light. This results in a decreasing ability to adapt to the dark. It also makes eyes more sensitive to glare. Up to about age 20, we need 100 watts of light to see effectively. The amount increases up to about 180 watts for persons around age 50.

What does this mean for your teaching? In advance, always check the lighting in the room where you'll be teaching. If you're meeting in someone's home, cooperate with that person to use light bulbs with higher wattage. Display visuals in the part of the room with the best lighting — even move lamps or furniture to a brighter spot. If you're meeting at a public facility with poor lighting, move the meeting to another site if possible.

Visual recognition. The eye's ability to recognize what it sees declines with age. In particular, the speed with which it recognizes things is slower.

What does this mean for your teaching? Display visuals long enough for learners to recognize them and focus on them clearly. Use an easel to support visuals and keep them steady.

Contrast. At any age, people see better when visuals have the right contrast. Visuals should be set apart from the background to appear more distinct. This applies whether the visual is a demonstration model, a picture projected onto a screen, or simply words on a page or a poster. The need for good visual contrast increases with age.

What does this mean for your teaching? Use contrasting colors when preparing visuals. Display items against a plain background so details can stand out clearly.

Focus. As early as age six, the ability to focus on objects both far and near begins to decline. The decline continues to age 60, then levels off until about age 75. The loss of elasticity in the eye reduces the ability to focus, especially to change focus rapidly. Also, the older we get, the more difficult it is for our vision to adjust to objects close to the eye.

What does this mean for your teaching? Choose or make visuals as large as possible. Use an easel or display area to steady the visual and minimize movement. If you're demonstrating something, use smooth, deliberate movements so the audience can follow the action more easily. Be sure lettering on visuals has clean lines and edges. If you're providing photocopied handouts, use clean, clear originals with crisp type.

Color. Around age 35, there are changes in the way eyes handle color. Vision tends to yellow slightly with age, which makes it more difficult to register the color blue; therefore, more blue light is needed to get the sensation of blue.

What does this mean for your teaching? Use colors that contrast well (see the list of readable colors given later in this publication). If you're color coding items for elderly audiences, avoid pale blues in favor of shades of blue with a little more intense color — but remember, if you're using that blue paper for printed material, it must still be light enough to provide good contrast with the text on the page.

MAKING YOUR OWN VISUALS

As a volunteer teacher, you may need to make your own visuals. To do its job effectively, a visual must be well planned and prepared.

Selecting the type of visual: Choose visuals appropriate for the learners and the topic you're teaching. The best teaching aid is the real object or experience itself — actually using or making or seeing it. But that's not always possible. When you can't use the real thing, a model is the next best thing. Moving pictures are the next choice.

When the items above aren't available, simple visuals make good teaching aids. Simple visuals include still pictures and written words. They are easy to make and inexpensive. You can choose from several types of simple visuals, such as:

- posters
- flipcharts
- photographs and slides
- charts
- overhead transparencies
- flat maps
- drawings
- graphs

Use drawings when a photograph or slide of the real object is not available. Line drawings are also a good way to simplify a concept. Use charts and graphs to show comparisons or proportions, like comparing the volunteer teachers in your organization by age group or gender. Drawings, charts,

and graphs can be prepared on posters, flipcharts, slides or overhead transparencies. Use photographs and slides to show real objects.

A photograph is more appropriate for very small groups since it is usually not larger than eight by ten inches and has some detail. Flipcharts and posters are appropriate for groups of five to about 30 people (see flipchart in Figure 2). Slides and overhead transparencies are better for groups of 25 or larger since they can be projected to wall-size.

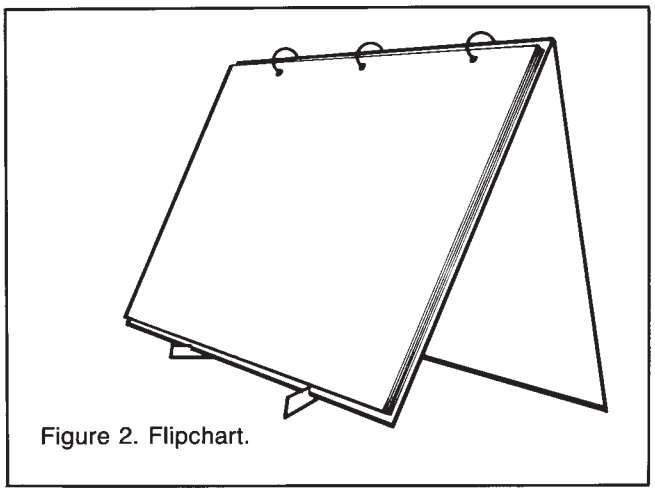

Figure 2. Flipchart.

Designing your visuals: As you design and prepare your visuals, consult the six tips that follow:

1. **Understanding** — Visuals should have a point. Organize ideas so that they make sense. Be sure ideas follow through logically, asking yourself "What do I want these people to learn?". If the visual is titled, the title should be at the top. The center of interest goes in the top third of the visual, since we read from left to right, top to bottom.
   Use familiar words. If you use a new or technical word, print it clearly and correctly.
   If you're giving a list of items or points, organize them in list form instead of paragraph form — it's easier for the reader to follow you.
2. **Simplicity** — Limit each visual to one or two ideas. Use more than one visual if you have several points to illustrate. Use few words. Short phrases are better than complete sentences.
3. **Neatness** — Keep your visuals neat. Avoid smudges which can make a visual hard to read. Make visuals in a clean area using clean hands and materials. Allow open space on the visual — both around the border and within your message. Avoid clutter. The openness is pleasing to the eye and makes reading text or understanding a picture easier. It's hard for the eye to read text that runs close to the edge of the paper or poster board. On larger items to be seen from a distance like displays or posters or large flipcharts, allow a border of two to three inches. On visuals smaller than 11 x 17 inches, borders of one and one-half to two inches are good.
4. **Color** — Use color to do the following things:
   - attract attention
   - emphasize a point
   - show emphasis or contrast
   - set a mood
   - identify something (like green for 4-H)

   Limit the lettering for each visual you make to two or three colors, including the background. Use bold colors on a neutral background.
5. **Readability** — There are several things you can do to make your visuals easier to read.

   Use readable colors — Contrasting colors make visuals easier to read. The following list gives color combinations with good contrasts. All are good choices.

   1. Black on yellow
   2. Green on white
   3. Red on white
   4. Blue on white
   5. White on blue
   6. Black on white
   7. Yellow on black
   8. White on red
   9. White on green
   10. White on black

   Use open space — Good margins make visuals easier to read — it's difficult for the eye to focus on pictures or letters that go all the way to the edge.

   Use readable letters — Use upper-case (capitals) and lower-case letters on your visuals. You may use all upper-case letters for titles or headings, but don't overdo it — they're harder to read. Print your lettering or use commercial lettering in a print style. Printed letters are easier to read than handwriting.

   Arrange letters to make readable words — Print words across the page, not up and down or diagonally. Space letters and words so they're easy to read — don't spread them out too much

or crowd them too close together. Equal distance between all letters won't always yield readable words because letters have different shapes (see Figure 3).

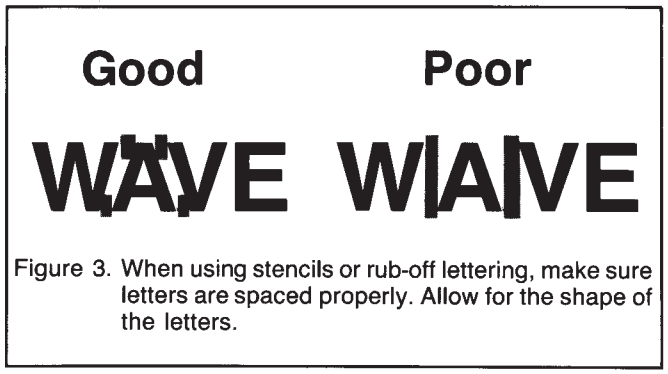

Figure 3. When using stencils or rub-off lettering, make sure letters are spaced properly. Allow for the shape of the letters.

Space words, sentences and lines properly — Allow one and one-half letter widths between words and three widths between sentences. A letter width is based on the width of the lower-case letter "m". For example, if the lower-case letter "m" in the lettering you're using is one-half inch wide, allow three-fourths inch between words and one and one-half inches between sentences. Allow enough space between lines of text for readability (see Figure 4).

6. **Size** — Letters, as well as details in pictures and figures, should be large enough to be seen clearly by those in the last row. A good rule of thumb is that the smallest letter or important detail should be at least one-half inch in height for each 10 feet of distance that the visual is from the learner. For example, let's say that the learner sitting farthest from your visual will be 30 feet away. For that distance, the lower-case letters on your visual should be at least one and one-half inches tall (one-half inch for every 10 feet). Of course, you may use letters larger than that, too. Remember to consider the age and vision characteristics of your audience.

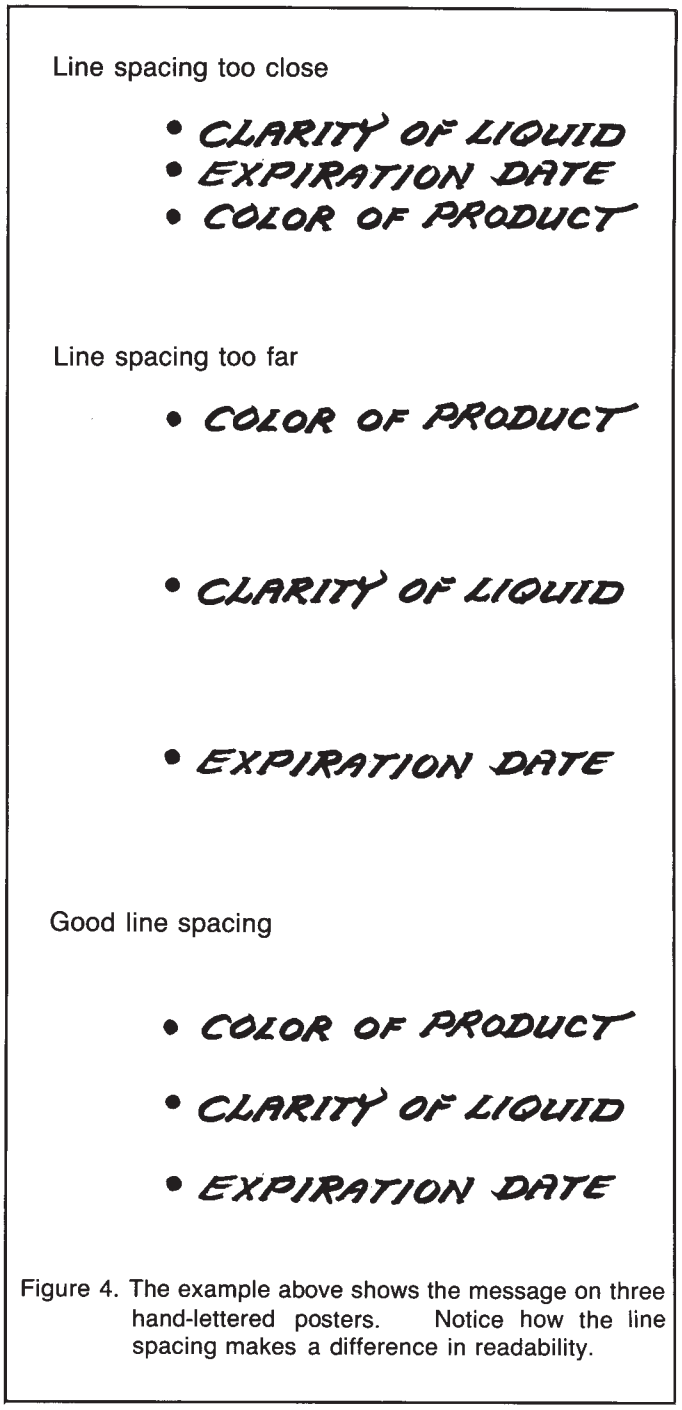

Figure 4. The example above shows the message on three hand-lettered posters. Notice how the line spacing makes a difference in readability.

CHECKING YOUR VISUALS

As you plan your visuals for a certain audience and purpose, consider the following points:

Cost — Is the visual economical as to cost and use of the materials selected? Is it economical as to the time and effort of the person or people needed to make it?

Usefulness — Is the design practical and portable? Can and will the visual be used more than once? The more use, the more economical the visual.

Message — Is the message on target for the audience and purpose? Is it informative or educational?

Style — Is the style of design appropriate for the audience? For the time the visual is to be used? Place? Subject?

Honesty — Is the message accurate and truthful? Believable?

Simplicity — Is each visual limited to one or two main ideas? Do the visuals contain unnecessary messages or art that complicate and clutter the main idea?

After you've made your visuals, critique them with the following points in mind.

Visibility — Does the visual stand out from its surroundings? Do the colors attract the viewer's attention and hold the eye?

Readability — Is the visual easy to read? Is the lettering style readable? Is the color of the lettering easy to read against the background color?

Layout — Do the text and art in the visual flow well? Are they grouped in a sensible way? Is there pleasing open space?

USING VISUALS TO TEACH A LESSON

Visuals increase the learner's understanding of what you're teaching. Follow these tips when you use visuals to improve your effectiveness in teaching:

1. Visit the meeting site in advance, and plan your visuals accordingly.
2. Arrive early at the meeting site for your lesson. Allow time to organize your materials.
3. Place visuals where everyone can see them clearly. Arrange chairs so you and the visuals are in clear view. Use an easel, wall, or other object to keep the visuals high enough so all can see.
4. Be sure your visual is well lit. Rearrange furniture or lighting if necessary. Remember, the visual can't do its job if it can't be seen.
5. Check for glare. Position your visuals then look at them from different parts of the room. Does the lighting cause a glare? If so, adjust the lights or tilt the visual forward or backward a bit to change the angle.
6. Practice your lesson several times until you are comfortable with using and handling the visuals.
7. Hold visuals steady. Use a wall or easel to support the visuals.
8. Hold a visual up long enough for all to see it clearly.
9. Talk to your audience, not the visuals. Glance at the visual if it helps to remind you of the next point you need to make.

THE VISUALS KIT

If you often volunteer to teach something, you'll find the following supplies useful in preparing visuals on paper or poster board. A vinyl tool kit or zip-top bag is a handy way to keep the small items organized.

- newsprint tablet *(for flipcharts and posters)*
- regular transparent tape
- removable transparent tape *(for guidelines when lettering)*
- masking tape
- markers in black, red, green, and blue (use markers with tips one-fourth inch wide since felt tip pens make lines that are too fine to be seen from a distance)
- giant-size markers (which make a stroke about five-eighths inch wide)
- transparent plastic ruler
- snap-off blade cutter or box knife *(to cut poster board)*
- rubber cement or a glue in stick form *(to mount photos or other visuals)*
- 10'' shears
- fine point pencil
- black fine point pen

Typically, you can find these items at office supply and hobby stores. Discount variety stores carry some of the items, too. Costs run about $30. You may belong to a group who could share these supplies, like an Extension Homemakers group — the group could buy the supplies and pass the kit around to the volunteer leader.

MAKE YOUR OWN EASEL

It's easy to make a table top easel from poster board or a cardboard box to support your visuals.

Poster board easel (see Figure 5). Enlarge the pattern to a suitable size. Following the solid black lines, cut the outline of the easel out of corrugated cardboard or poster board. From the back side of the board, score the board along the dashed lines, being careful to cut only halfway through the thickness of the board. Fold the wings of the easel to the front along the dashed lines.

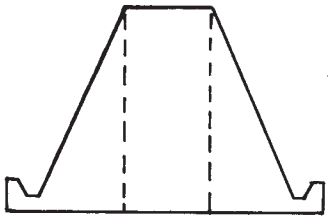

Figure 5. Poster board easel.

Cardboard box easel (see Figure 6). Draw a pattern on two adjoining sides of a cardboard box like the pattern in the drawing. Use a sharp knife, like a box knife, to cut along the lines. The cut out portion makes a self-standing easel.

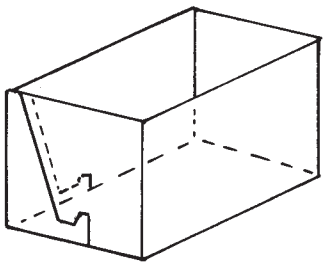

Figure 6. Cardboard box easel.

PRACTICE WHAT YOU'VE LEARNED ABOUT MAKING VISUALS

Your skill in making your own visuals will improve with practice. Be sure to plan well and consider your audience as you design and prepare visuals.

As a volunteer teacher, you'll learn more from the lesson because you've taken the care and time to teach it effectively. Enjoy the experience of learning and helping others learn, too!

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