

15 Ways to Snare Attention for Safety and Avoid Visual Fatigue

TODAY'S VISUAL SOCIETY CREATES CHALLENGES FOR SAFETY



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It's a Visual World We Live In

By the time your employees arrive for work in the morning, or at the start of any shift, their brains have been bombarded by visual information in the past 24 hours.

It's a visual world we live in. Visual communication is everywhere today. Visual literacy is a pre-requisite for doing any task. We visualize data. We consume it. You could say we're addicted to it. We're constantly exposed to information architecture – how designs, graphics, and lettering are organized.

Here is evidence of the visual age we all live in:

- The television universe keeps expanding. Nielsen, the TV ratings organization, estimates 294 million Americans age 2 and older live in homes with TVs. Of course many homes have 2, 3, 4 or more TVs.
- No wonder the average person in the U.S. spends 4 hours and 39 minutes in front of a "boob tube" per day.
- Traditional TV is only the oldest and most common type of digital entertainment in homes. In our visual age we have millions of people watching "time-shifted" TV using DVRs; using a DVD/Blu Ray device; using a game console; using the Internet on a computer; watching video on the Internet; using a mobile phone; and watching video on a mobile phone, according to Nielsen.
- On average, a person spends 8.5 hours per day in front of some sort of digital screen.
- 2.5 billion mobile phones with cameras are currently in use globally.
- 700 YouTube videos are shared on Twitter every minute, according to Nielsen.
- 85 percent of the U.S. Internet audience watches videos online. The 25-34 age group watches the most online videos, and adult males spend 40 percent more time watching Internet videos than females, according to www.comscore.com.

- *Newspapers and magazine have gone image and visual heavy to survive the onslaught of web sites, YouTube, Facebook, Twitter, Netflix, satellite TV, cable TV, tablet devices and smartphones. One upon a time the only "infographic" in newspapers was the weather map. USA Today, with its embrace of colorful charts, maps, large photos and less "gray matter" (text) when launched in 1982, was a game-changer. It is a visual model still being imitated today.*

So how do you get your safety message across to a potentially visually fatigued workforce? Here are 15 suggestions.

1) Understand Visual Brainpower

There's a reason 90 percent of information transmitted to the brain is visual. For one thing, the brain can handle it. Visuals are processed 60,000 times faster in the brain than text, according to research by 3M Corporation. Other studies find that our brains decipher image elements simultaneously, while language is decoded in a slower linear, sequential manner.

2) Know We're Wired To Receive Visuals

We're also visual beings by nature. Or maybe visual addicts if you like, constantly browsing visual images and videos of fashion, food, films, animation, Facebook friends, sporting events, technology, advertisements, music videos, smartphone photo galleries, Google maps, Global Positioning Systems, and on and on. Thanks to millions of years of evolution, we are genetically wired to respond differently to visuals than text. Humans have an innate fondness for images of wide, open landscapes, evoking a sense of contentment. Psychologists hypothesize that this almost universal response stems from the years our ancestors spent on the savannas of Africa.

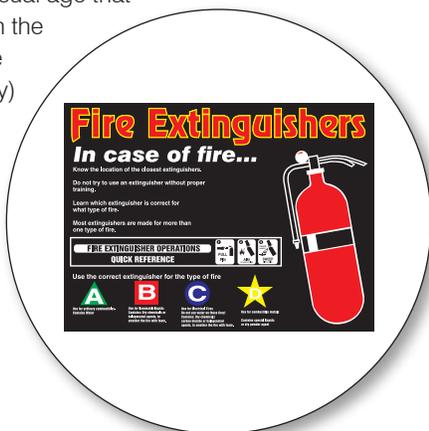
Our perceptions of the world and the workplace, the information we absorb and the signals we send, are overwhelmingly visual. We think and dream in pictures and symbolic images. We replay and re-create life visually in our heads. Even when reading, we transform words into mental images.

3) Rely On Visuals To Educate

Here is an aspect of the visual age that directly relates to safety on the job: 75 percent of what we know (say it is about safety) we learned visually. Think about your facility and how you communicate safety information. Think about how you present safety information.

"Seeing comes before words," says John Berger in his book, "Ways of Seeing."

"Unless our words, concepts, ideas are hooked onto an image, they will go in one ear, sail through the brain, and go out the other ear," says Dr. Lynell Burmark, of



the Thornburg Center for Professional Development. "Words are processed by our short-term memory. Images go directly into long-term memory." Think about how much easier it is to show a circle than to describe it – "a curved line with every point equal distance from the center."

4) Use Blended Learning: Visuals, Demonstrations And Text

Of all our primary sense receptors (smell, touch, hearing, sight, and taste), the human eye is by far the most dominant "information expressway" to the brain. Three days after being presented with information (say it was a safety orientation session), we retain 20 percent of what we heard; 40 percent of what we heard and saw; and 70 percent of what we heard, saw and was demonstrated to us.

Hands-on demonstrations are critical to safety learning. Before tackling a new job, an employee should watch a veteran break down the individual tasks of that job and show where the hazards are via job safety analyses (JSAs) or job hazard analyses (JHAs).

5) Safety Compliance Training Should Include Realistic Simulations

An employee must never, according to OSHA regulations, enter a confined space, lockout and/or tagout energized equipment, work at heights, work in a trench, drive a forklift or handle hazardous materials without training. And the most effective training allows employees to realistically visualize the safe way of mastering these dangerous tasks by demonstrations combined with video clips.

6) Teach Observation Skills

Observation has always been a critical safety skill. A keen observer makes for a good safety inspector, auditor, and accident investigator. Behavior-based safety, widely used in facilities since introduced to industry by safety management at Procter & Gamble in the late 1970s, calls for employees, supervisors on up to senior leaders to use checklists of the most dangerous behaviors (identified by going through injury reports) and observe whether peers are working safely or at risk of injury. After the observation, positive or corrective feedback is immediately given to the peer at work.

You can teach your employees to be good observers – something sports referees, competition judges, climatologists, journalists, photographers and physicians know how to do. Teachers at the Boston Arts Academy used a cardboard frame called a viewfinder to help students learn to focus and observe.



7) Use Visual Objects To Problem Solve

Safety problem-solving by teams, committees or work cells can be taught by tapping and critiquing employees' visual knowledge. Imagine these brainstorming sessions being conducted in an art class or studio. Use visual objects – charts and graphs of injury or near-miss incidents, demonstrations and depictions of work processes, videos taken on-site of work in progress. Instructors or facilitators lead the group in closely observing statistics to see patterns and trends. Through imagery (videos, illustrations, still photography sequences) employees come to understand how safety depends on the choices they make while in the process of working. During safety critiques and one-to-one safety coaching, employees are asked, "Is this the safest way of doing this job?" "Is this what you intended to do?" "Can you do this job in a safer way?" "What will you do the next time to make this job safer?"

8) Combine Observation With Conversation

These safety exercises show that combining visuals with verbal mentoring and instructional texts is the most effective way of transmitting safety information. Use an integrated, blended learning approach. The same holds true for observation and feedback sessions. Behavior-based safety employs a combination of observation and conversation.

9) Keep Signage Easy On The Eye

Most safety signs in the workplace combine imagery with words. In many instances, the fewer the words the better. You want your signs to inform, protect and motivate. Clean, bold, organized visuals and text accomplish this objective.

On OSHA's web site, a special section on heat stress prevention uses rotating photos of workers wearing appropriately "cool" clothing that also shields them from the sun. The text is plain and simple: "A little bit of shade goes a long way."

"Stopping for water keeps you going." The clean, well-organized heat stress web site page makes good use of "white space" and is headlined using a large horizontal graphic. It includes an iconic illustration: the sun radiating its harmful rays. And the text: "Water. Rest. Shade. The work can't get done without them."



10) Orient Employees To GHS Pictograms

GHS Pictograms or poster (page 766) or wallet cards (page 761) OSHA's revised hazard communication standard includes the use of pictograms – images or icons without words that represent various hazards. As of June 1, 2015, the hazard communication

standard will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

For instance, a bold, black exclamation mark indicates that the substance being labeled poses these hazards:

- Irritant (skin and eye),
 - Skin Sensitizer
 - Acute Toxicity
 - Narcotic Effects
 - Respiratory Tract Irritant
 - Hazardous to Ozone Layer (Non-Mandatory)
- A flame pictogram represents these hazards:
- Flammables
 - Pyrophorics
 - Self-Heating
 - Emits Flammable Gas
 - Self-Reactives
 - Organic Peroxides

The famous skull and crossbones icon indicates the substance is acutely toxic, and possibly fatal. In all, the Globally Harmonized System (GHS) for classifying and labeling hazardous substances uses nine different pictograms. These simple, stark, bold illustrations placed inside diamond-shaped red framing borders will be used not only by OSHA but by all countries that have adopted the United Nations-sponsored GHS.



11) Choose Colors To Tap Different Emotions

It comes as no surprise to safety professionals that the color red has been chosen to frame these pictograms. Color is a crucial component of safety signage. Visual colors affect us emotionally. Research shows that exposure to the color red can heighten our pulse and breathing rates. That's because psychologically the color red has long been associated with danger. The colors blue or green would be less startling and more relaxing. That's not the response regulators want when workers are handling dangerous substances.

12) Remember, Some Signs Need No Words

Workplace traffic signs often require few words because the visual images have been burnished into our brains since childhood. A sign with two stick-figure students walking indicates a pedestrian crossing or pedestrians are nearby. The stick figure in a wheelchair indicates parking space or access for the disabled. Two parallel wavy arrows pointing upward indicate temporary traffic controls. Speed limit and STOP signs are designed to be clean, bold, and visible from a distance.



Other signs that rely on visuals and no words: the three folded-over arrows forming a triangle (recycling); stick figures falling off a ledge, down stairs, or on flooring (slip and fall hazards); the use of personal protective equipment indicated by the outline of a skull wearing a respirator mask, hard hat, safety eyewear, or hearing protection; a cigarette with a red slash through it (no smoking); and a fire extinguisher and flames (indicating placement of a fire extinguisher).



13) Motivation And Awareness Visuals Can Be Creative & Playful

The other area of safety where visual communication – signs, banners, posters, scoreboards, wall and window graphics, and safety awareness kits – comes into play is motivation and awareness.

Here the themes and messages are very different from traditional safety warnings and hazard alerts. The visual can be more playful. One example: posters that look like they were drawn by children, depicting a family at home, showing the value of staying safe on the job for the sake of your family. These motivational pieces use a variety of bright colors such as yellows, greens, blues that create an upbeat emotional appeal. Other motivational signs and banners use icons such as the American eagle to appeal to the emotion of pride, or the color green used in simple wordage such as “Think Green” to promote sustainability and environmentalism.

14) Personalize It

Videos of recognizable areas of your workplace, photographs of your employees, use of your company logo and/or motto all pull at the emotions of workers, especially in smaller enterprises where everyone knows each other and a family feeling culture exists. Customized visual aids send the message that your company is not

simply generically supporting safety, but is willing to put its name and reputation on the line. Employees are more likely to believe their company sincerely “buys into” safety.

Many companies today are publicly promoting their vision and goal of zero injuries on site. One electronic scoreboard automatically updates the days worked without a lost-time injury in large LED digits for visibility. Scoreboard colors are often done in traditional “safety green.” Some are three-dimensional, with imagery or colors and lettering wrapping around the sides. And some are more “infographic” than others, with wording spelling out “This plant has worked XXX days without a lost-time injury. The best previous record was XXX. Do your part! Help make a new record.”



15) Where You Place Your Signage Is Key

Placement of your safety visuals is an important part of your overall safety communication efforts. Some signs and labels must be placed on hazardous containers or very close to at-risk jobs. Thematic banners, general safety messages, and motivational scoreboards should be placed in high traffic areas, visible to employees, outside contractors, and business visitors. Some displays are constructed for harsh outdoor conditions, for the benefit of outdoor workers and also public passersby. Taken together, your workplace collection of safety signage, both warnings and inspirational messages, help brand your company as one that values its employees’ well-being, values the environment, and is socially responsible.

Accuform is prepared to help. For more information, visit www.Accuform.com or call 1-800-237-1001.

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