

ROCKY MOUNTAIN  
**Alchemy**

TURNING THE PLAIN  
INTO THE PRECIOUS



DESIGNING ENGAGING SCREENS

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## Engaging Screen Design

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### Introduction

*Engaging* screens? Yes. If your screens do not invite learners to read them, explore them, perform the interactions, etc., then you have lost the competition for your learners' attention. True, navigation structures, interactions, and treatments work to engage learners, too, but screen design is the immediate attention grabber... or loser.

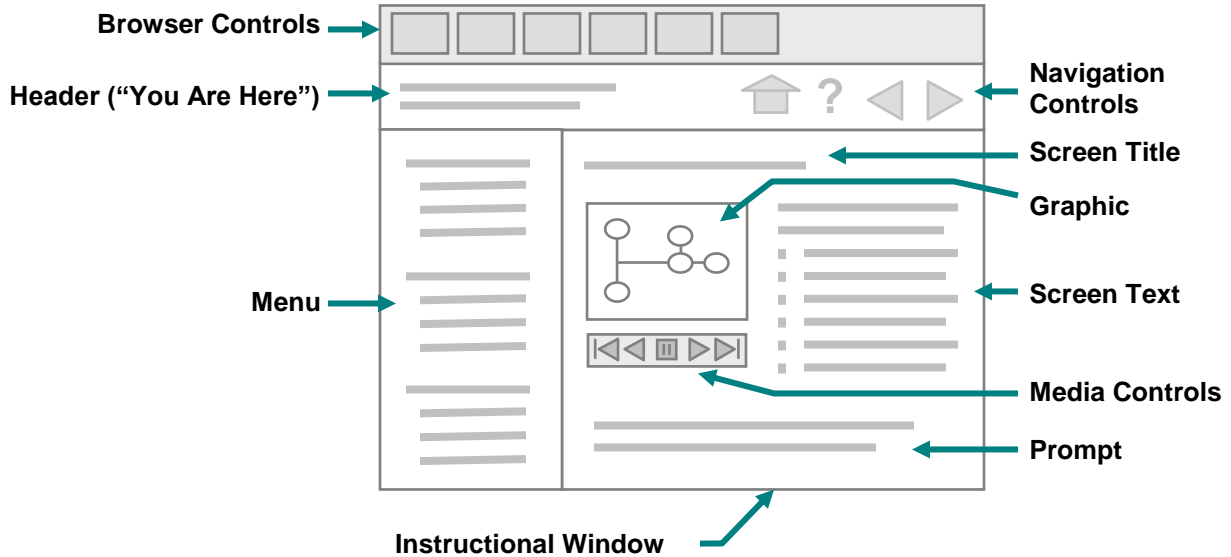
This section provides general guidelines for screen design, then provides several sample layouts to add to your toolbox.

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## Elements of a Screen

### Screen elements

Although your screen layout will vary (e.g., your menu may be across the top or be a pull-down list), your screens will typically consist of the following elements:



### Basic guidelines

The following table lists some of the basic guidelines to consider in the overall design of your screen:

Element	Basic Guidelines
Browser Controls	Unless you plan to deploy a pure exploration strategy with web access, consider turning the browser controls off to prevent confusing learners (i.e., learners will try to use the browser Next and Back buttons to navigate through the training, but these buttons typically will take you out of the training).
Header	Include the course structure information (course, module, lesson titles). Do not make this too prominent or distracting.
Menu	If your module, lesson, and topic titles are brief and clear, the menu will reflect this. Also, consider using drop down menus to free up more space in your instructional window.
Navigation Controls	Keep navigation controls in a consistent

Element	Basic Guidelines
	location, and make sure their function is logical (e.g., “Next” should take you to the next screen, not the next module or topic). If a control is unavailable (e.g., “Back” unavailable on first screen), dim it, but do not remove it.
Screen Title	Keep in a prominent location, and keep the text brief and to the point.
Graphic	Use instructional supportive and meaningful graphics in your training.
Screen Text	Practice efficiency in your text through bullets. Always edit what you’ve written to see if you can make it even tighter.
Media Controls	Use a common metaphor (e.g., tape recorder or VCR controls). Consider giving learners the ability to pause, rewind, and fast forward media.
Prompt	Clearly state what the learner needs to do to complete an interaction or continue with the training.
Instructional Window	This is your playground! Practice good layout design and structured writing techniques and experiment with various layouts to find the ones that best suit your objectives and your style.

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## Screen Layout Guidelines

### Intro

Screen design is a critical skill that is often overlooked. However, good screen design can aid in gaining attention, engaging the learner, encoding, and storage into memory. In other words, screen design directly support the learning process.

### Basic guidelines

The following table provides some of the basic guidelines to developing engaging screens:

Guideline	Description
Maintain a balance between consistency and variance in your screens.	<ul style="list-style-type: none"> <li>• Consistency reduces cognitive load by providing a predictable design – learners don't have to divert processing resources to "relearn" how to pull information from a screen or page.</li> <li>• Consistency can also lead to monotony, and you risk losing the learner's attention.</li> <li>• Variance engages the learner to increase cognitive work to process information</li> <li>• The goal is to strike a balance between consistency and variance. Use consistency to deliver like information (e.g., intros, summaries, builds); use variance to wake the learner up and bring attention to important or different information.</li> </ul>
"Tighten" text (i.e., make text concise) or break screens to avoid scrolling.	Although there is no evidence that scrolling lessens learning (Clark, 1999b, Technical Training), clearly scrolling dampens learner motivation and can lead to missing vital information beneath the scroll horizon.
Avoid intimidating the learner.	<p>Screens should invite the learner to read and explore them. Pages "crammed" with too much text, jargon, stuffy lingo, and irrelevant messages have the opposite effect of inviting them; these are the elements of intimidation. This can be avoided through using:</p> <ul style="list-style-type: none"> <li>• Clean and efficient layouts with headers and bullets</li> <li>• Graphics, instead of text, conveying the instructional message</li> </ul>

Guideline	Description
<p>Use meaningful and supportive graphics.</p>	<ul style="list-style-type: none"> <li>• Informal tone and appropriate humor</li> </ul> <p>Graphics can make a screen appear less intimidating. If, however, your graphics are no more than “eye candy,” they will end up distracting the learner rather than improving the learning. Meaningful and supportive graphics help enable you to:</p> <ul style="list-style-type: none"> <li>• Reduce the amount of text necessary to convey your message</li> <li>• Create and maintain an aesthetic look and feel to your learning product</li> <li>• Facilitate better learning through dual encoding (i.e., incorporating dual encoding results in increased understanding and retention)</li> </ul>
<p>Avoid the “feel” of an endless series of screens (or, “avoid creating page-turners”).</p>	<p>It’s funny that when critics want to praise the latest novel, they call it “a real page turner,” and when learners want to bash an online course, they call it the same thing. To avoid creating a page turner:</p> <ul style="list-style-type: none"> <li>• Provide interactions to keep the learner engaged.</li> <li>• Make the learner do something other than click next to continue through the training.</li> <li>• “Hook” the learner into a storyline.</li> <li>• Create relevance to the learner (the old reliable “what’s in it for me” or “WIIFM” still works wonders).</li> <li>• Use a “home base” approach to a page (i.e., by creating an explore it with an area that changes based on the learner’s selection, you can present several screens, yet learners “feels” they’re on the same screen!).</li> <li>• Incorporate build strategies for complicated concepts or graphics. As with a home base approach, several screens feel as though they’re one.</li> </ul>



## Screen Examples

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### Overview

The next couple of pages contain some basic layout examples; they are by no means exhaustive! When it comes to screen design, even though there are really only a few elements in play, how they can be employed and combined make an endless combination!

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### Using the layouts

The layouts in this section are basic presentation screens. The exact same layouts can also be used to accomplish a wide range of interactions (e.g., a screen with multiple customers could be used as an exploration strategy to link to other screens or trigger pop up windows and/or audio to learn more about each customer). Also, the basic ideas presented in this section can be applied to various interaction screens (e.g., when laying out a multiple choice interaction with a graphic).

The best advice is to play with several different layouts during your development process and show them to your peers and learners for feedback and additional ideas.

*Note: The layouts that follow only focus on the instructional window of the screen. Assume the screens live within an active interface containing the appropriate navigation controls.*

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## Text-Only Presentation Screens

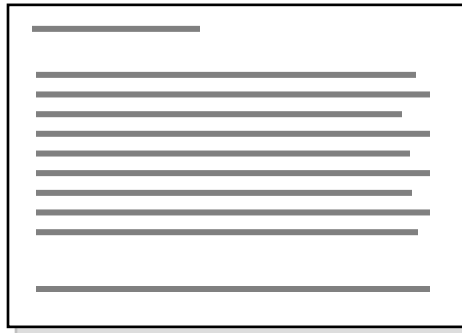
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### Introduction

When using text-only screens, apply information design principles. Specifically, use chunking, labels, and white space to make your text more inviting and easier to read for the learner.

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### Full Screen of Text



I can't think of too many situations where this screen is the "right" solution... If you MUST present full screens of text, make sure to keep the tone informal and avoid full justification (i.e., left and right justified text).

*NOTE: If your screens look like this, you're probably thinking of the screen as though it is a "page." Try to think of it as a "canvas" instead.*

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### Full Screen of Text - Columns

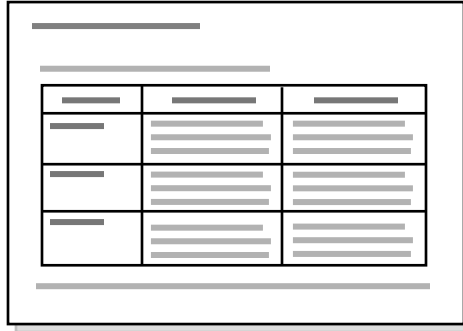


Chunking, headings, and white space make this text heavy screen easier to read, reduce tracking problems (reader unable to scan to next line of text), and enable speed reading.

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### Full Screen of Text - Table



Tables provide visual organizational clues and helps structure relationships to help tie into schema in long term memory. This layout is appropriate for presenting categories within one subject (e.g., presenting information about one product), as well as presenting multiple subjects that have similar organizational structures (e.g., presenting features, applications, and benefits of multiple products within the same product family). This layout is also excellent for illustrating similarities and differences (i.e., comparisons).

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### Full Screen of Text - Note



Most “nice to know” information should be left out of the product. At times there is ancillary information that helps build relevance, provides transfer cues, or really is of interest to your learner. Provide such information in a link or a “Did You Know” box (boxes can also be used to present important notes).

*NOTE: Highlight techniques can also be used to emphasize text.*

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## Text & Graphic Presentation Screens

### Introduction

Graphics used to support the instructional message include photos, illustrations, diagrams, schematics, charts, animations, and videos. This section illustrates a couple of the key layouts, but the actual combinations are endless.

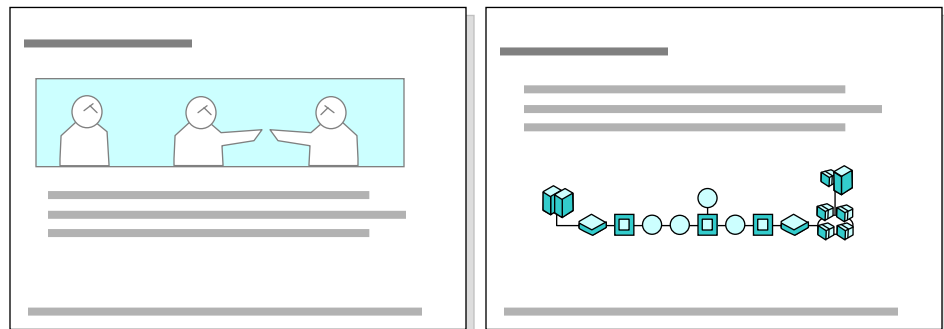
In presentation, graphics serve four primary purposes in a learning product (Alessi & Trollip, 2001):

- Present primary information.
- Reinforce analogies or mnemonics.
- Serve as organizers.
- Provide cues.

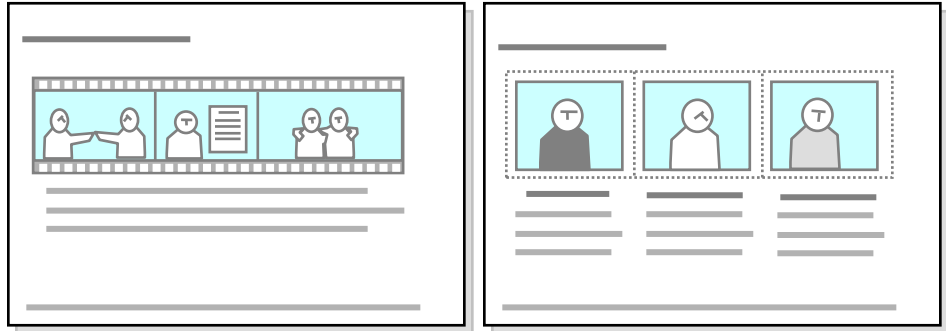
All too often, graphics used in training are not used for these purposes, and do not support of the objective or instructional message. Instead, they are used as “eye candy,” and actually can distract and interfere with the learning process.

*NOTE: One strategy to help ensure a consistent look and feel is to create and follow a set of graphic standards (e.g., drop shadows, frames, pallets, and sizes).*

### Wide Graphic – Single Scene



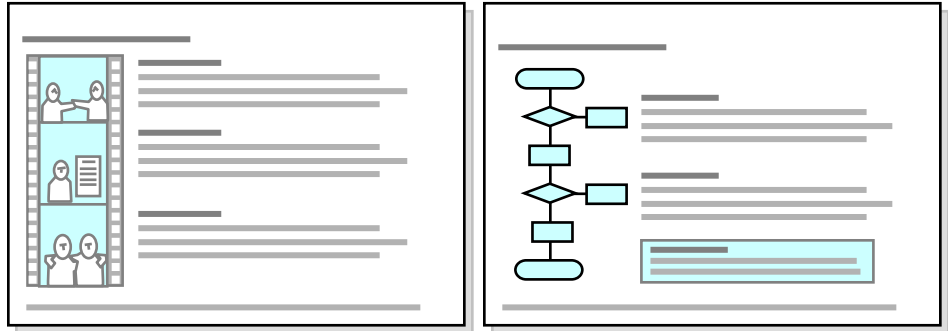
### Wide Graphic – Multiple Scene



Two variations of the multiple scene are illustrated above. One is done with a film edge treatment and represents the passage of time for the same storyline. The other example looks like three separate small graphics, but is actually one wide graphic (used to create image maps if your tool doesn't support graphics in tables or multiple graphics). This second approach could be used to show multiple customers, reps, perspectives, products, systems, etc.

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## Tall Graphics



Learners naturally read from top to bottom and from left to right. This can be exploited in the tall graphic design to present and reinforce linear or chronological information (e.g., processes). Tall graphics also help keep text lines shorter, aiding the reader in keeping place.

*NOTE: These examples show the graphic on the left, but they could just as easily appear on the right of the screen.*

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## Large Graphics



Your choices of working with large graphics are:

- Placement (top/bottom/middle and left/right/center)
- Text wrapping

*NOTE: These basic layouts can be used to support a home base strategy. To accomplish this, use an image map as your large graphic, then different areas of the graphic display different text in the text area.*

### Small Graphics



If you wish to include a graphic that is not instructionally supportive (e.g., picture of a coach or rep; icon or symbol for an intro, summary, test item, etc.), using a single small graphic is less distracting than a large irrelevant graphic. Small graphics can also be used to illustrate one or more simple examples/non-examples.

Multiple small graphics can also be used to illustrate key steps in a sequence, different customers or reps, or different products. As discussed under wide graphics, small graphics can also be used to represent the passage of time for a single scene.



## Full Screen Graphic Presentation Screens

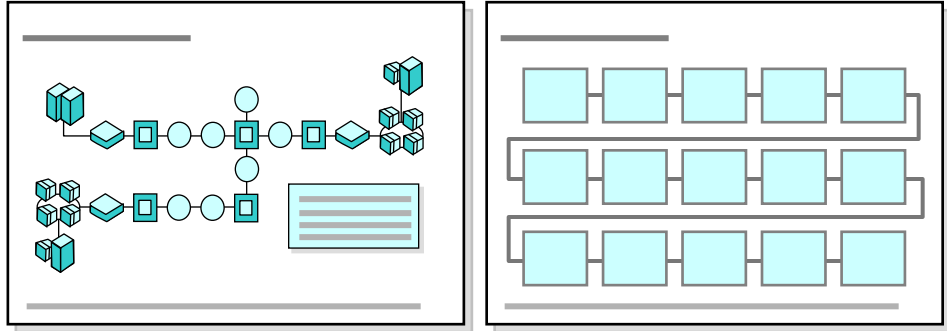
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### Introduction

In some cases, a well designed full screen graphic or a series of graphics may be used to convey your entire instructional message.

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### Full Screen Graphics



Full screen graphics may also include animations with or without audio (e.g., the network diagram above may be animated to illustrate how data flows through the network; the text area may change in synch with the animation as an alternative or support to audio) and may be programmed as image maps to control navigation to other screens or trigger pop-up windows and/or audio (e.g., the process flow above may have pop-ups associated with each step to provide greater details, allowing the learner to control how much information he/she receives and in what order).

*NOTE: Remember that large graphics (especially photos) may take longer to load. Also, when using annotated diagrams, keep in mind that screen text is easier to edit than text integrated onto a graphic.*

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## Summary

### Key points

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As you continue to develop more and more complex treatments, you will find even more variations of screen designs. As you continue to take training or see interactive games, keep an eye out for innovative screen designs that you can recreate and apply to your learning products!

*NOTE: When experimenting with screen design, just be careful not to fall into the common mistake of trying to make every screen different (that's just as bad as making every screen the same!).*

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