

To reinforce the importance of the upper-left hand corner, use a frame transition that will reveal that part of the slide first. A good example is the wipe right transition. As the new material becomes visible, the viewer's eye is naturally attracted to the change. After a few frames, the viewer has become accustomed to having new material presented in the upper left hand corner for the frame, and so this is where the eye will enter the frame. In general, it is a good idea to place the material that is most important, whether it is text or an image, in the upper-left hand corner.

Like any consistent practice during a presentation, giving special status to the upper-left hand corner sets the stage for another way to emphasize an important point. When the eye expects the transition to be a simple wipe right, it magnifies the impact of a different transition, like a box-out or a dissolve. The viewer probably will not consciously recognize what has happened that was so different, but the change is noticeable. Similarly, placing an amusing image in the lower-right corner catches the viewer off-guard and can make a mildly amusing picture seem much more striking.

Once the viewer's attention has been captured in the upper-left hand corner, the build (or animate) function can be used to guide the eye through the frame at a pace that matches the presentation. Exposing all of the text on a frame immediately invites the viewer to ignore the speaker and read through all the text. That is fine if the frame contains all of the material that is to be presented; but if that is the case, why not just hand out a printed copy? The goal of using presentation software is to make the speaker more effective, not to make the speaker redundant!

For many types of presentations, it is reasonable to have the build function eliminate preceding lines. This further helps to keep the audience up with the speaker. Unfortunately, like many capabilities of presentation software, this is not appropriate for a classroom session where students are trying to take notes. It is reasonable to change the color and make the previous points less obvious, but totally eliminating lines with the build process will be quite likely to produce student rebellion.

Most professors spend hours organizing lectures to make them more effective and memorable. The goal is to present material in such a way that it gives the maximum support for student learning. When properly used, presentation software can help to accomplish this purpose.



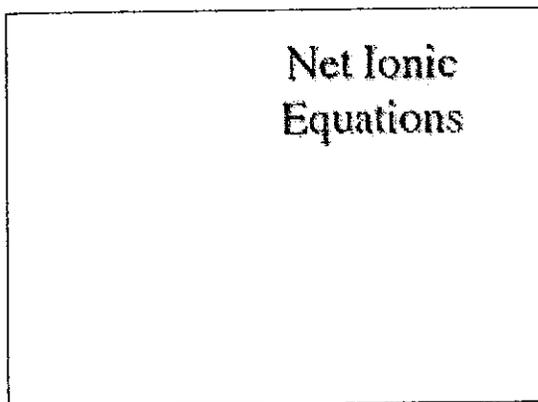
Building a PowerPoint Presentation
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Jack and I decided to keep his paper in his Acrobat format since much of the concern of the paper is formatting PowerPoint slides. The paper begins on the next page.

Building a PowerPoint™ Presentation

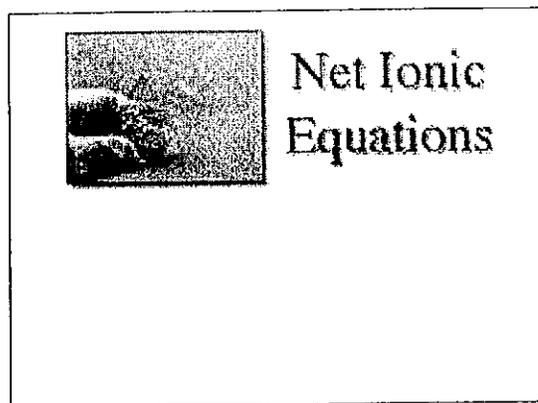
The purpose of this document is to illustrate how one can build a PowerPoint slide to be used to illustrate one idea, here the concept of net ionic equations. The directions are based on the version of PowerPoint (Version 8.0) in Microsoft Office 98 for the Macintosh. To do this one must also have the *Saunders Interactive General Chemistry* CD-ROM mounted in the CD drive.

Adobe Acrobat versions of the PowerPoint slides used in some sections of General Chemistry 111 at SUNY-Oneonta are found at <http://www.oneonta.edu/~katzjc/genchem.html>. Users of Saunders textbooks can download the PowerPoint slides for all of general chemistry from the website for the Saunders general chemistry books: <http://www.saunderscollege.com>.



STEP 1: SLIDE TITLE

In the "Insert" menu request "New Slide." A plain white background is used here but we often use blue. In the area for the title type in the title of the slide, here *Net Ionic Equations*. Note that the title is in a 72-point serif font and a light gray shadowing has been added.



STEP 2: INSERT MOVIE

In the "Insert" menu go to "Movies and sounds." You will see a dialog box asking what movie. Navigate to the CHAPTERS folder on the *Saunders Interactive General Chemistry* CD-ROM. In that folder go to the MEDIA folder and within that find CH04_MED. The latter contains all the media for Chapter 4 on the CD-ROM. On a Macintosh one can see a thumbnail of the movies. Find 04M14VD3.MOV. This code tells you the chapter number (04), that the number of the screen on which the movie is found in that chapter is 14, that the video is the third one on that screen (VD3), and that it is a Quicktime movie (.MOV). [Note: animations have AN in the code instead of VD.] Place the movie where you want it on the screen.



Net Ionic Equations

$$\text{Mg(s)} + 2 \text{HCl(aq)} \rightarrow \text{H}_2(\text{g}) + \text{MgCl}_2(\text{aq})$$

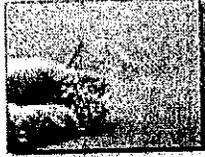
We really should write

$$\text{Mg(s)} + 2 \text{H}^+(\text{aq}) + 2 \text{Cl}^-(\text{aq}) \rightarrow \text{H}_2(\text{g}) + \text{Mg}^{2+}(\text{aq}) + 2 \text{Cl}^-(\text{aq})$$


Net Ionic Equations

$$\text{Mg(s)} + 2 \text{HCl(aq)} \rightarrow \text{H}_2(\text{g}) + \text{MgCl}_2(\text{aq})$$

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The two Cl⁻ ions are **SPECTATOR IONS** — they do not participate. Could have used NO₃.

Tip: When using PowerPoint and showing slides, set the application to use as much memory as can be spared in RAM. We generally use 15-30 MB.

STEP 3: INSERT MAIN TEXT

Type in the main text for the slide. Here, as in almost all slides, we have used a san serif font (Arial), boldfaced and shadowed. 28-point type is used here, but we often use 32-point type as well.

STEP 4: ADD HIGHLIGHTS

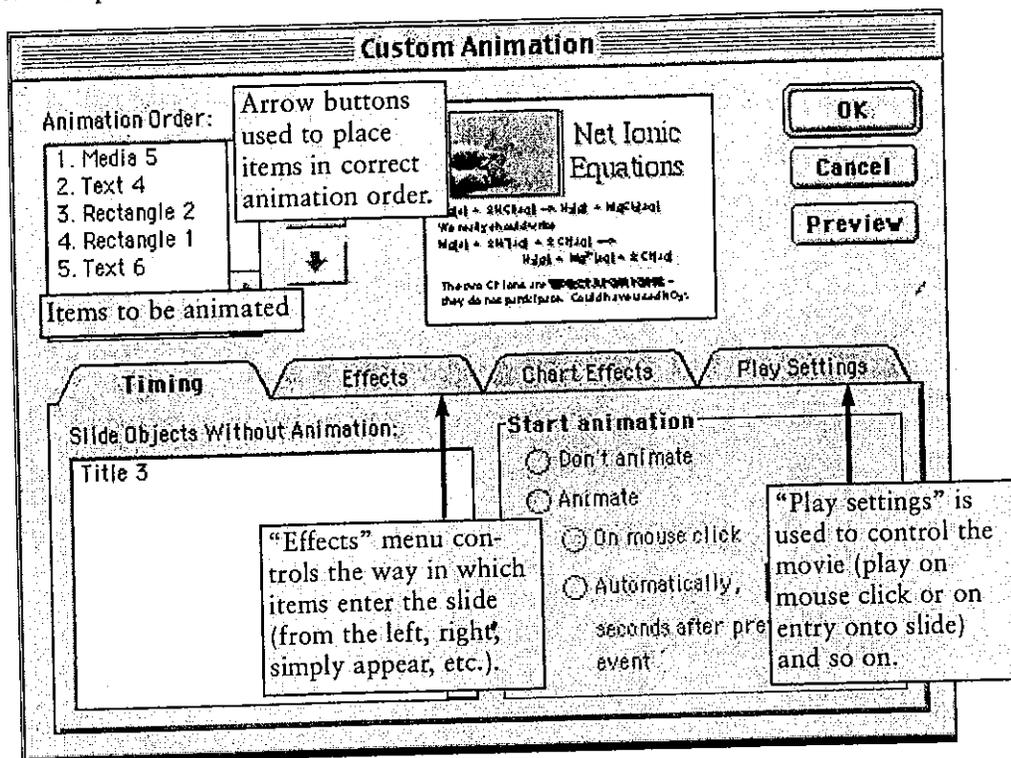
Here we want to call attention to the spectator ions in the equation, so yellow rectangles are arranged under the chloride ion symbols. (This can be tricky to do. Here rectangles were drawn using the PowerPoint drawing tool and filled with yellow color. The “Send to back” tool was used to put the text in the background so the yellow rectangles could be placed in the correct position. Then the “Bring to front” button was used to bring the text to the foreground, leaving the yellow highlight behind the text.)

STEP 5: ADD SECOND TEXT

The last two lines with a light yellow background were typed in, and the background of the text was filled with the lightest yellow available in the color palette. Again a 28-point san serif font was used except for the words **SPECTATOR IONS**, which were given a contrasting color and were 32-point type.

STEP 5: ANIMATE THE SLIDE

To animate the objects on the slide, click on the “Animate” button (or go to the “Slide show” menu). The “Custom Animation” window opens. In the “Timing” menu click on the items to be animated and place in them in the correct order with the arrow buttons.



After setting the animation, the slide is shown as follows:

1. The slide appears on screen with the title and the movie frame.
2. The movie plays when clicked with the mouse. (We always do the same reaction “live” in a dish on an overhead projector at the same time and ask the students to make observations.) We also try to get the students to write the overall, balanced equation.
3. Next a mouse click brings the first equation on the screen. The students are asked to write out the species as they would actually occur in solution, that is, write the equation with HCl and MgCl₂ broken into their ions. Another mouse click brings the second equation onto the screen.
4. We then look for the spectator ions, and mouse clicks cause the yellow rectangles to appear to highlight those ions.
5. Finally, the last sentence is brought onto the screen with a mouse click.
6. Other reactions are demonstrated in the lecture and students are asked to write net ionic equations on a worksheet provided in the lecture.

RECORDING SOUND: As a final point, note that one can add voice-overs to slides. Go to the “Insert” menu, then to “Movies and sounds,” and then to “Record sound.” After the sound is recorded, a “speaker” icon appears on screen. Clicking on this plays the recorded sound. This is useful when you want to students to look through the slides by themselves but you want to fill in details and add context.