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Date:

Guidance Used

Guidance (if applicable):

Sample Slides with Explanation

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Frame Options

Every slide is produced with `\begin{frame}... \end{frame}`

Options

`\begin{frame} [noframenumbering]` – May be used for title slide to prevent a page number for that slide.

`\begin{frame} [fragile]` – This option is necessary if you want to use verbatim in your slide.

More Beamer commands

There are many other commands available in Beamer, the package that formats these slides. An example is `overlay`, allowing you to expose only part of the slide at one time, using the `\pause` command. See <http://tug.ctan.org/macros/latex/contrib/beamer/doc/beameruserguide.pdf> for more commands (p. 80 for overlay commands).

Here is a frame title
Here is a frame subtitle

Looking for the results

Here is more text.

.....

Here's how this was made:

```
\frametitle{Here is a frame title}
```

```
\framesubtitle{Here is a frame subtitle}
```

```
\midframetitle{1in}{Looking for the results}
```

```
Here is more text.
```

Two columns, organizing your slide

Since slides are in landscape mode, you may want to use two columns for many of your slides. Here is one method, entered between

```
\begin{frame}... \end{frame}
```

```
\dopage
```

```
\lside
```

```
%% Left side column text
```

```
%% Title in the left side column:
```

```
\midframetitle{<distance down from top of column>}{<title>}
```

```
\rside
```

```
%% Right side column text
```

```
\endpage
```

Using `dopage...endpage` for two columns

Default Font Sizes and Two-Column Text (and a long title)

- Default font for slides is Arial 28pt.

- We can size fonts up or down, depending on how much information we need to put on a slide.

In case you want to fit more on a page, you can choose a smaller font; or if you want to emphasize a phrase, you can choose a larger font:

In general, we don't want authors to make the fonts **too** small, but it is always a matter of opinion and requires flexibility.

Fonts Sizes

This is the default font size,
`\normalsize`, 28 point.

This is `\fiftppt`

This is `\thirtysixpt`

This is `\thirtppt`

This is `\twentyeightpt`

This is `\twentysixpt`

This is `\twentyfourpt`

This is `\twentytwopt`

This is `\twentypt`

This is `\eighteenpt`

This is `\sixteenpt`

To contain font change, precede it with `{` and follow changed text with `}`.

This code:

```
Here is {\sixteenpt sixteenpt  
text} and here is {\thirtysixpt  
thirtysixpt text}.
```

Produces this result:

Here is `sixteenpt text` and here is `thirtysixpt text`.

Alternative Two Columns commands

You choose the width of each column using `columns`:

```
\begin{columns} [T]
  \begin{column}{0.6\textwidth}
left column text...
  \end{column}

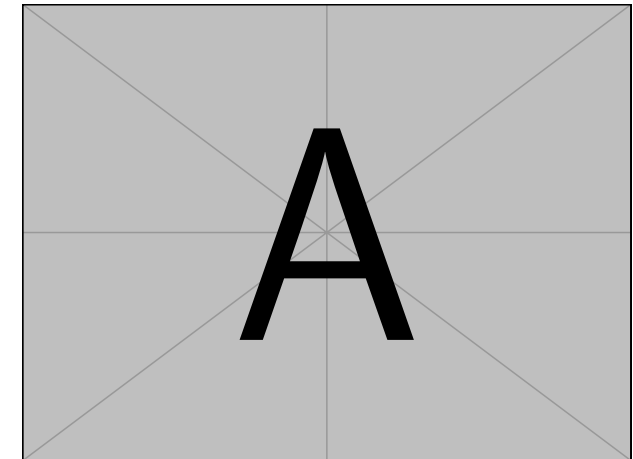
  \begin{column}{0.25\textwidth}
right column text
  \end{column}
\end{columns}
```

Using Columns Commands

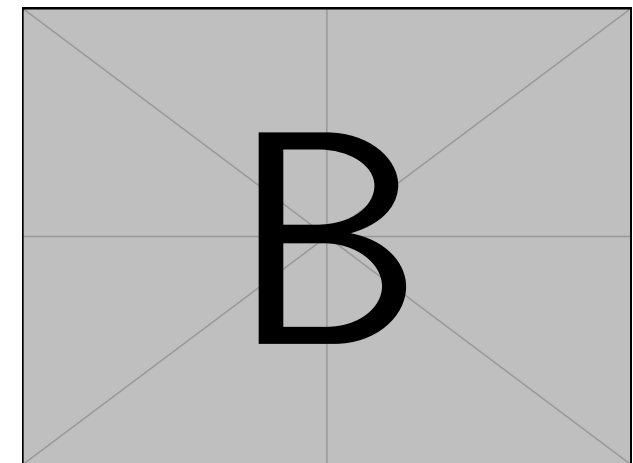
- These are two columns of width 0.6 and $0.25\text{\textbackslash textwidth}$
- The vertical alignment of the columns relative to one another can be changed

Figures and subfigures

- The `subcaption` package provides the `subfigure` environment
- The `subfigure` environment can be used to align and caption subfigures inside a `figure` float
- The `subcaption` package v3.3-111 and newer is compatible with Beamer



Subfigure label



Another subfigure label

Fig. 1. Figure caption.

More slide organization: Blocks and Tcolorbox

Blocks

- Block takes an argument: `\begin{block}...\end{block}{<title>}`
- You can use this to make : theorem, example, definition etc.

An Equation

Here's a block containing an equation:

$$\partial_t p(X, t) + \nabla \cdot \mathbf{v}(X, t)p(X, t) = \nabla \cdot [\mathbf{D}(X, t)\nabla p(X, t)] \quad (1)$$

Using tcolorbox

This one is a `tcolorbox` box, with an unnumbered equation:

$$\partial_t p(X, t) + \nabla \cdot \mathbf{v}(X, t)p(X, t) = \nabla \cdot [\mathbf{D}(X, t)\nabla p(X, t)]$$

Bullets Change as We Create Multi-Level Lists

- Features in Turing:
 - CUDA cores (SM, Streaming Multiprocessor)
 - ✓ Compute Capability 7.5
 - ✓ Traditional rasterized shaders and compute
 - ✓ Concurrent execution of integer and floating point operations
 - Ray-tracing (RT) cores
 - ✓ Bounding volume hierarchy acceleration[4]
 - ✓ Shadows, ambient occlusion, lighting, reflections
- This slide is for full-text content, no images.
- Font sizes reduce as we create the levels in a list, starting with Arial 28
 - Then Arial 24
 - ✓ And then Arial 20
 - And Arial 18 – I think that’s pretty small for a slide but someone may need it.
 - Turing architecture discussion from Wikipedia

Numbered Lists

- Like bulleted lists, numbered lists indent and reduce in font size.
- In the report template, the lists go from numbers, to lower- case alpha, to lower-case Roman, but people can pick others in the PPT version.

This is in 24pt Arial, set with `\twentyfourpt` after the initial `\begin{itemize}`.

1. This is a first-level numbered list
2. Arial 28 point, same as the bulleted list
 - a. This is a second-level numbered list
 - b. Arial 24 point.
 - i. And last but not least a third-level numbered list.
 - ii. Hopefully no one wants to go further than that.
 - iii. Font is Arial 20 point.
3. Computational functions
 - a. GPU accelerated video decoding
 - b. Video decoding processes that can be accelerated
4. 3 GPU forms
 - a. Terminology
 - i. Usage specific GPU
 - b. Dedicated graphics cards

Section heads with and without numbers

1 This is section

Test text for this sample.

1.1 This is subsection

Test text for this sample.

1.1.1 This is subsubsection

Test text for this sample.

1.1.1.1 *This is paragraph* Test text for this sample.

This is section

Test text for this sample.

This is subsection

Test text for this sample.

This is subsubsection

Test text for this sample.

This is paragraph Test text for this sample.

An Example Table or Two

- The command `\coppertoptable{<number>}` uses the argument to determine the number of columns, between 1 to 5 columns.
- The cells have alternating light and dark bands.

One Column Table

Cell Content goes here and wraps to fit. You may have a lot of content to fit in the table. A single column table may be the right format to use.

Single line

1234

An Example Table or Two

- This table has two columns.

Two Column Table	Col Two
Cell Content goes here and wraps to fit.	Second Column
Single Line	Single Line
1234	5678

Four Column Table

- This example has four columns

Typical Table	With Column Headings that wrap	Columns Resize to Fit Content	Four Cols
Cell Content goes here	Looks like the font adjusts to the table width. This is Arial 20	I'd go with whole numbers for font sizes, PPT does strange things.	Another
Single line	Single line	Single line	Single line
1234	567	89	10 11

Five Column Table

- Not too many commands to remember!

Typical Table	With Column Headings that wrap	Columns Resize to Fit Content	The Fourth	The Fifth
Cell Content goes here and wraps to fit	Looks like the font adjusts to the table width. This is Arial 18	I'd go with whole numbers for font sizes, PPT does strange things.	Another	Again
Single line	Single line	Single line	Single line	Single line
1234	567	89	10 11	12 13



Variable Column Width

- Now we try setting the width of each column explicitly with the `\setcolwidth{}{} command, used: \setcolwidth{<column number>}{<column width>}.`

Typical Table	With Headings that wrap	Col 3	Col 4	Col 5
Cell Content goes here and wraps to fit	This is Arial 18	I'd go with whole numbers for font sizes.	Another	Again
Single line	Single line	Single line	Single line	Single line
1234	567	89	10 11	12 13

Full Width Coppertop Table, One Col

One Column Table

Cell Content goes here and wraps to fit. You may have a lot of content to fit in the table. A single column table may be the right format to use.

Single line

1234

Full Width Coppertop Table, Five Cols

Typical Table	With Column Headings that wrap	Columns Resize to Fit Content	The Fourth	The Fifth
Cell Content goes here and wraps to fit	Looks like the font adjusts to the table width. This is Arial 18	I'd go with whole numbers for font sizes, PPT does strange things.	Another	Again
Single line	Single line	Single line	Single line	Single line
1234	567	89	10 11	12 13

Full Width Coppertop Table, Five Cols, Variable Width

Now we try setting the width of each column explicitly with the `\setcolwidth{}{} command, used: \setcolwidth{<column number>}{<column width>}`.

Typical Table	With Headings that wrap	Col 3	Col 4	Col 5
Cell Content goes here and wraps to fit	This is Arial 18	I'd go with whole numbers for font sizes.	Another	Again
Single line	Single line	Single line	Single line	Single line
1234	567	89	10 11	12 13

Example Large Table

Table with Optional Caption.^(a)

Experiment ^(b)	F (cm^3/hr)	ρ_b (g/cm^3)	θ	V_w (mL)	v (cm/hr)	t_o V_w	R	K_d (mL/g)
Sodium orthophosphate	30.37	1.478	0.386	20.89	16.01	11.22	5.54	1.19
Sodium pyrophosphate	41.93	1.44	0.385	20.33	22.18	15.90	7.61	1.76
Sodium tripolyphosphate	40.80	1.460	0.392	21.27	21.22	14.70	5.17	1.12
Calcium	31.41	1.478	0.386	20.89	16.57	11.95	14.14	3.44

(a) F = flow rate; ρ_b = bulk density; ω = average volumetric water content (standard deviation); V_w = average pore volume; v = average pore water velocity; t_o = step input; R = retardation factor; K_d = sediment water distribution coefficient based on R .

(b) Columns appeared saturated and had reached a stable water content.

Example Large Table, Numbered Table Caption

Table 1. Table with Optional Caption. The caption can continue for more than one line. If the caption continues for more than one line, this is what it looks like.^(a)

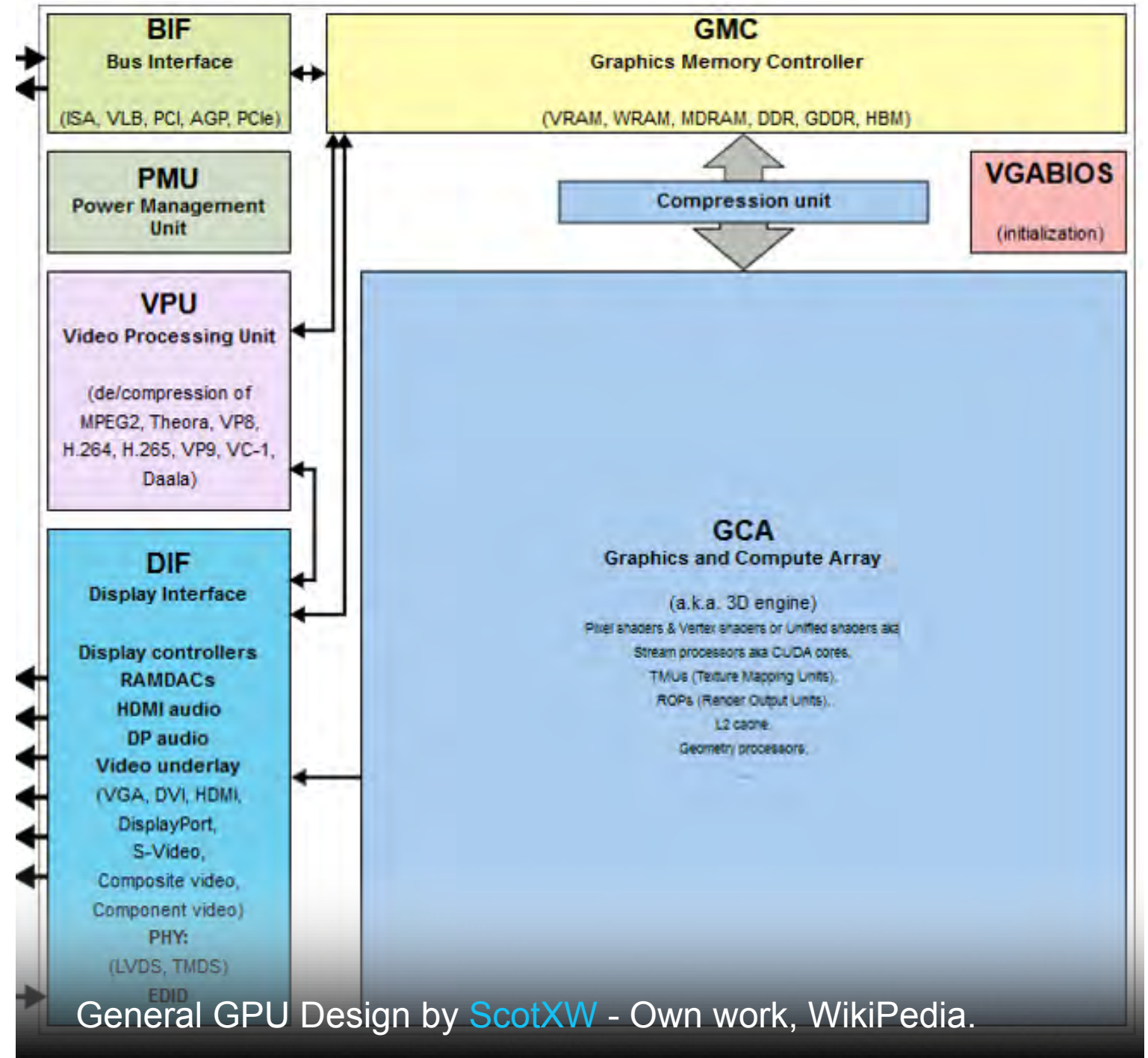
Experiment ^(b)	F (cm^3/hr)	ρ_b (g/cm^3)	θ	V_w (mL)	v (cm/hr)	t_o V_w	R	K_d (mL/g)
Sodium orthophosphate	30.37	1.478	0.386	20.89	16.01	11.22	5.54	1.19
Sodium pyrophosphate	41.93	1.44	0.385	20.33	22.18	15.90	7.61	1.76
Sodium tripolyphosphate	40.80	1.460	0.392	21.27	21.22	14.70	5.17	1.12
Calcium	31.41	1.478	0.386	20.89	16.57	11.95	14.14	3.44

(a) F = flow rate; ρ_b = bulk density; ω = average volumetric water content (standard deviation); V_w = average pore volume; v = average pore water velocity; t_o = step input; R = retardation factor; K_d = sediment water distribution coefficient based on R .

(b) Columns appeared saturated and had reached a stable water content.

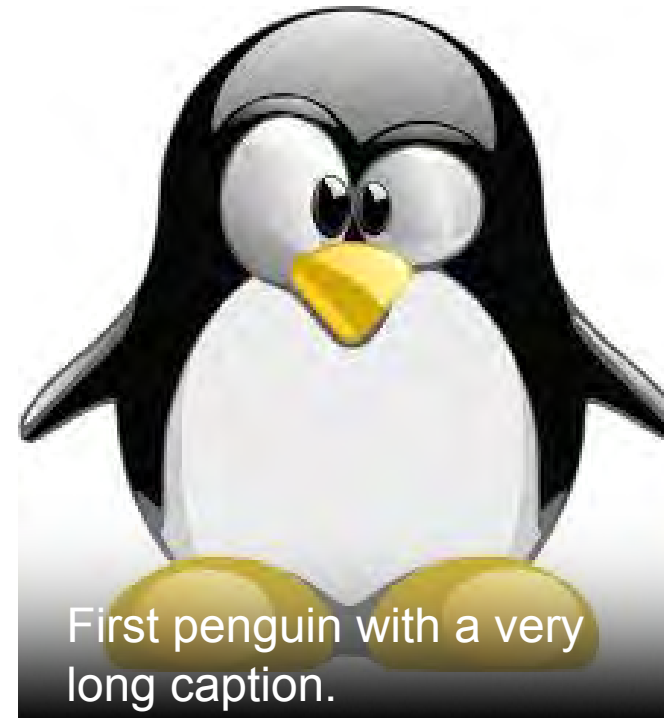
Turing Microarchitecture

- Turing is the codename for a graphics processing unit (GPU) microarchitecture developed by Nvidia as the successor to the Volta architectures.
- Caption is Arial 18 bold



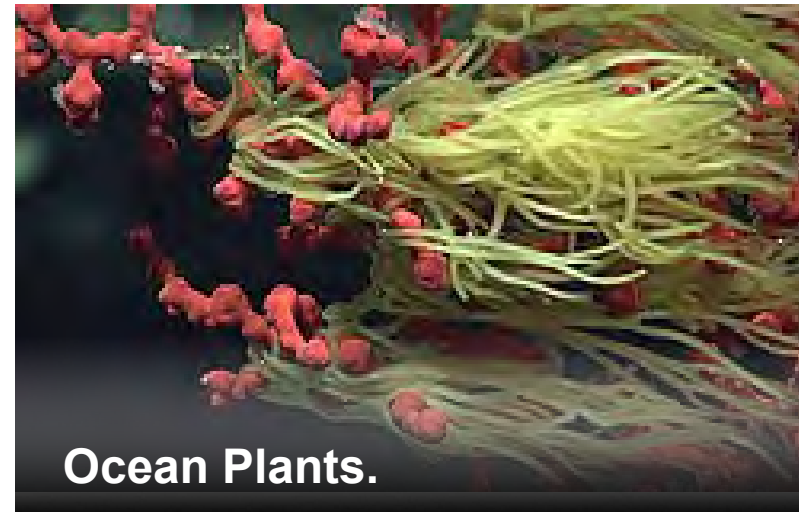
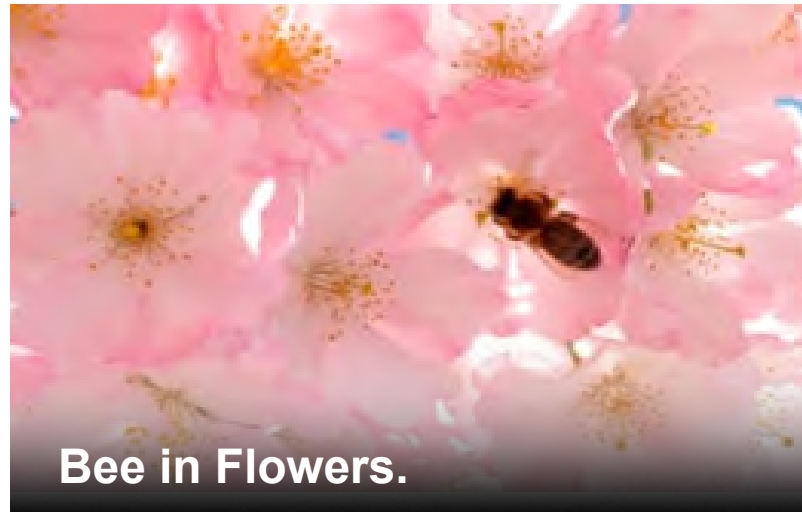
Slide with Four Images

- This particular template allows the author to insert four images with optional captions.
- Looks like images are cropped to fit into the square shapes.
- Author will need to resize images to make for a good fit if they aren't square to start with.

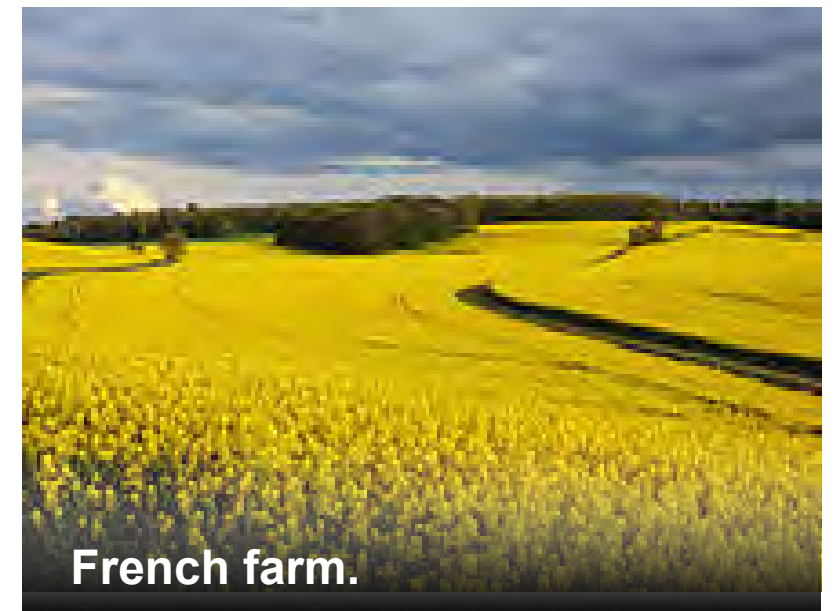
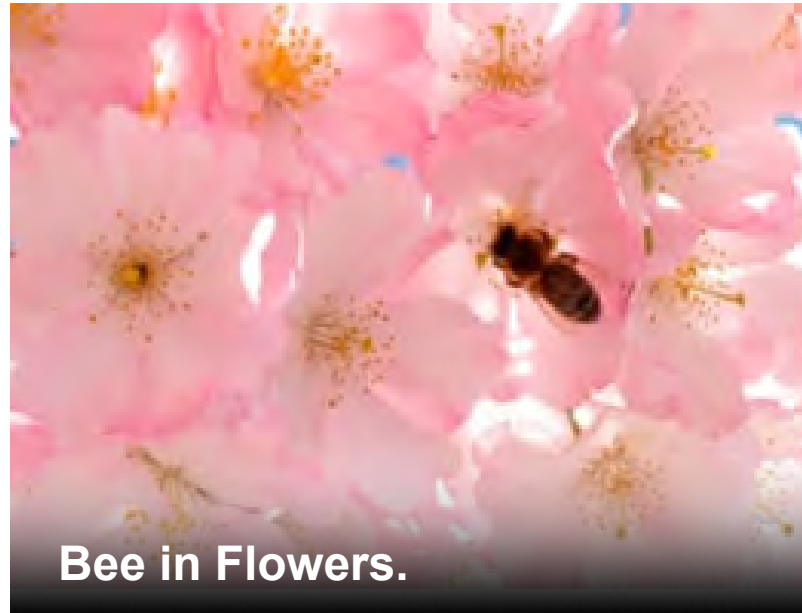


A Slide with Space for Six Images

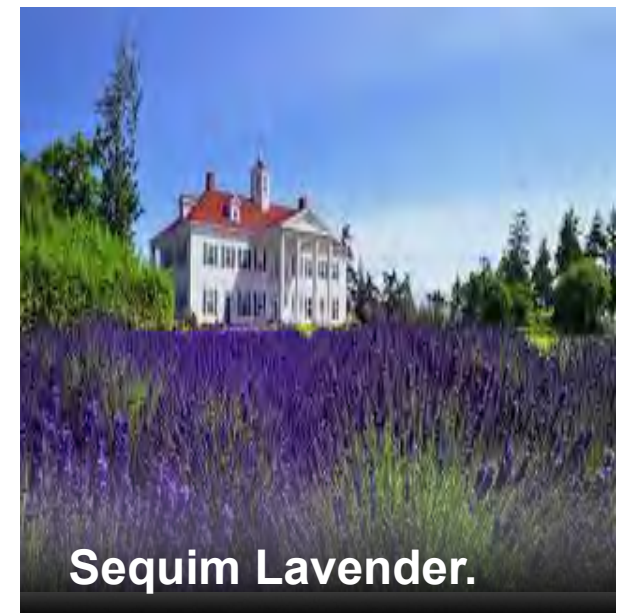
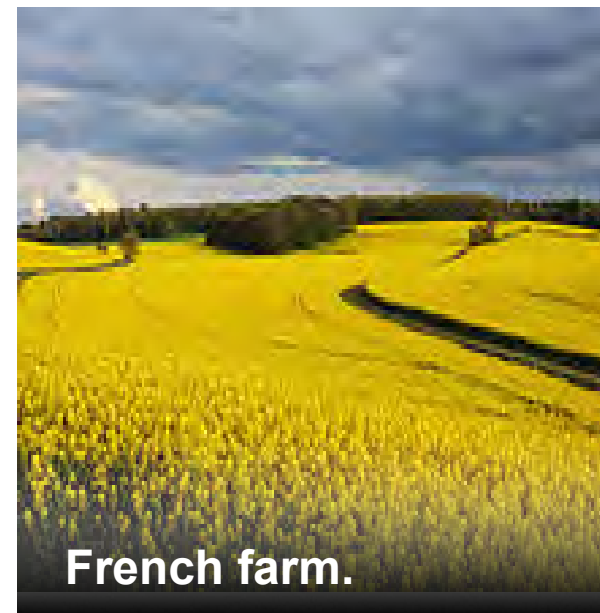
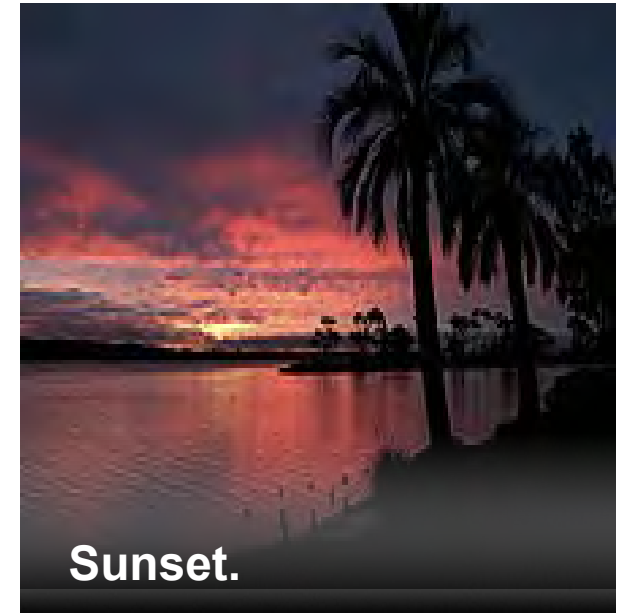
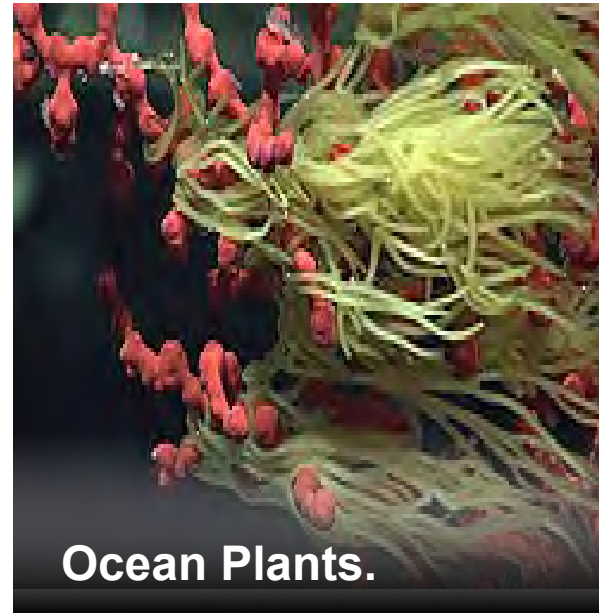
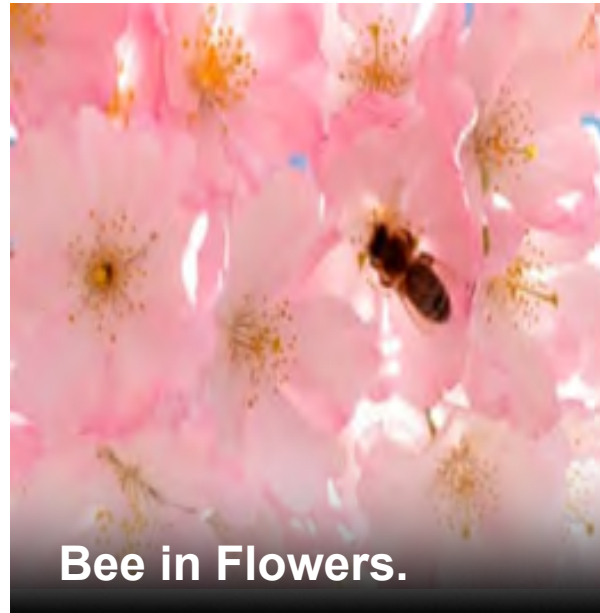
- Space in this area for explanatory text.



Six Images with No Text Area



Eight Images with No Text Area



Packages included in pnnl-slides.cls:

Included by the theme

- TikZ with the library `calc`
- `calc`, `setspace`, and `hyphenat`
- `fontspec` for font management
- `amsmath`, `amssymb`, `amsfonts` and `bm` for AMS-L^AT_EX math typesetting and good-looking bold symbols
- `graphicx` for including figures
- `subcaption` for subfigures and subcaptions
- `tcolorbox` for fancy boxes

Thank you

Remember to use the
`\finalslide` or `\thankyou`
command for the final slide.

(leave a blank line before ending the frame)