

# Bundles All The Way Down

- |  |                        |
|--|------------------------|
| 1. Media's coming to core                    | Conceptual             |
| 2. Set up a bundle                           | Sitebuilding           |
| 3. Theme a bundle                            | Theming                |
| 4. Bundle a bundle in a bundle               | Sitebuilding + Theming |
| 5. Make a ( <i>nice</i> ) embedding workflow | Sitebuilding + Theming |
| 6. Responsive Bundles                        | Sitebuilding           |
| 7. Lazy Loaded Bundles                       | Sitebuilding           |

# Obligatory Meet-Your-Host Slides

Name: John Jameson

I am: Front-end Dev  
& Themer for  
Princeton.edu

I am @: itmaybejj

I am not: Irish Whiskey →

**JAMESON**<sup>®</sup>



SINE METU

# Obligatory Meet-Your-Host Slides

Princeton U.'s main site migrated to D8 in 2017. We needed Media to make it...

- ...actually easy to **create** images and videos. No more IMCE-type-things.
- ...actually easy to **select and embed** things.
- ...actually easy to **preview** embeds and swap layouts right in WYSIWIG. No more “save and preview and then edit again.”
- ...actually easy to **combine** embeds into clusters and slideshows.

And we needed HUGE images that didn't slow the site down on mobile...



[News](#)

[Events](#)

[Work at Princeton](#) ▾

[Links for](#) ▾

[Alumni](#)

[Giving](#)



[Meet Princeton](#)

[Academics](#)

[Research](#)

[One Community](#)

[Admission & Aid](#)



Let it flow: Ideas, creativity, findings, impacts, benefits to society

In the lab of engineering professor Howard Stone, the flow of creativity — sometimes related to studying everyday objects — leads to findings with the potential to benefit society.



I also wanted the config and dev work to be easy but it wasn't which is why I learned enough to fill this hour and have a bunch of slides left over.

# No, You Can't Have a Pony



NOT YOURS

So now we have lots of inline embed options.

- Column width with caption at right
- Full page width
- Floating ½- and ⅓-column-width
- Actual size (aka teeny)

The screenshot shows a news article on the Princeton University website. The article title is "Richardson directed students as they cleaned a storeroom filled with books and toys at the YWCA Princeton." The main image shows Undergraduate Student Government President Myesha Jamison speaking at a podium during an orientation program. A pink arrow points from the text "Column width with caption at right" to the social media sharing icons on the left. Another pink arrow points from the text "Actual size (aka teeny)" to a small image of students climbing a rock formation. The article text includes quotes from students and a caption for the rock climbing photo.

www.princeton.edu/news/2017/09/07/orientation-class-2021-emphasizes-service-connection

Meet Princeton Academics Research One Community Admission & Aid News Events Work at Princeton Links for Alumni Giving

Richardson directed students as they cleaned a storeroom filled with books and toys at the YWCA Princeton. The students had participated in volunteer activities in high school, and were eager to offer their skills and time to the larger Princeton community.

Undergraduate Student Government President Myesha Jamison speaks to an audience family members during the Orientation welcoming program at Richardson Auditorium. Photo by Amanda Zellner

"I feel very welcome here," said Dylan Kim from Marietta, Georgia. "[Community Action] has been a great way to meet a wide variety of people with diverse perspectives."

"I'm super-excited to be here," added Sophia Hu from East Brunswick, New Jersey, saying she intends to continue participating in service projects, such as teaching English as a Second Language, in the coming years.

"Princeton really opened my eyes into their community," said Cynthia Vu from Garden Grove, California.

"It's really nice to meet new people that I may not have otherwise, and to have mentors close to our age," said Tonkovic-Capin. "I've been able to ask questions about academics, social life and clubs, and that's been really helpful."

Carlie Littlefield from Des Moines, Iowa, spent Wednesday morning helping Brandywine Living residents paint carnival games for an upcoming National Assisted Living Week celebration. Having only visited the University, and not the surrounding area, Littlefield was eager to connect with the community. "It is really special," she said. "I've made a bond with the group that I served with, and made a

Outdoor Action students climb up a rock formation at Coopers Rock State Forest in West Virginia. Photo courtesy of Outdoor Action

## And bundles-of-bundles:

- Clusters  
(side-by-side images,  
masonry-like arrays)
- Slideshows



www.princeton.edu/news/2017/09/07/orientation-class-2021-emphasizes-service-connection

Meet Princeton Academics Research One Community Admission & Aid News Events Work at Princeton Links for Alumni Giving


community engagement, including the Pocono Environmental Education Center in Dingmans Ferry, Pennsylvania; Trenton Circus Squad in Trenton, New Jersey; Hawthorne Avenue Farm (an urban farm plot in Newark, New Jersey); and the Kate Gorrie Butterfly House at the Stony Brook-Millstone Watershed Association in Hopewell, New Jersey.

Through peer-led small groups, the students examined social issues and reflected on their own social and civic identity.

**1** Community Action participants get a lesson in juggling with the Trenton Circus Squad in Trenton, New Jersey, which aims to empower low-income and at-risk youth through circus arts. Photo by Estibaliz Matulewicz, Class of 2020

**2** First-year students Paige Thompson, from Los Angeles; Arielle Mindel, from Cherry Hill, New Jersey; and Mollie Price, from Rogersville, Tennessee, work with Community Action leader Martin Kurian, a senior, to build a rain chain display for the Pocono Environmental Education Center in Dingmans Ferry, Pennsylvania. Photo by Community Action Fellow Heather Waters, Class of 2020

**3** First-year student Adam Hazelton (right) from Bakersfield, California, helps Allison Jackson, senior naturalist at the Stony Brook-Millstone Watershed Association, collect butterflies for the Kate Gorrie Butterfly House at the watershed association's 950-acre reserve in Hopewell, New Jersey. Photo courtesy of the Stony Brook-Millstone Watershed Association



## Body

Format Styles *I*<sub>x</sub>     **B** *I* ” x<sup>2</sup> x<sub>2</sub>

            Source

Our editors can pick *in the node editor* from about a dozen of these view modes.

Each view mode can show different fields, render different responsive image styles, trigger different CSS/JS, and display correctly(ish) in-editor.

### Embed media ✕

#### Selected entity

 PACE car and researchers

#### Display as \*

Column Width

Left Fixed Size

Left Half

Left Third

Page width

Right Fixed Size

Right Half

Right Third



Our in-WYSIWYG  
pop-up browser is  
delightfully  
overengineered.

Manage ☆ Shortcuts 👤 jjameson 📄 Local ✓ Subscription active (expires 2019/9/29)





Content Structure Appearance Extend Configuration People Reports Help

### Select media to embed

Library Upload Create Embed

Type:  Media name:  Credit:

Uploaded by:

Select	TITLE // ALT	TYPE	CREDIT	AUTHOR	UPDATED	OPERATIONS
<input type="checkbox"/>	 Robertson	Image	Denise Applewhite	jjameson	01/02/18	<input type="button" value="Edit"/> <input type="button" value="▼"/>
<input type="checkbox"/>	 Yessica Martinez	Image	Denise Applewhite	jjameson	01/02/18	<input type="button" value="Edit"/> <input type="button" value="▼"/>
<input type="checkbox"/>	 Portraiture - Critique group	Slides		maggiew	01/02/18	<input type="button" value="Edit"/> <input type="button" value="▼"/>
<input type="checkbox"/>	 Portraiture - NY gallery group	Slides		maggiew	01/02/18	<input type="button" value="Edit"/> <input type="button" value="▼"/>

▼ Categorization

Title \* Person Category



And (Almost) Everything We Used  
Is On Its Way to Core

# Media into Core

From  
[drupal.org/project/ideas/issues/2786785](https://drupal.org/project/ideas/issues/2786785)

All "80% use cases" functionality should eventually become part of core. Everything else that will cover very specific cases will most likely stay in contrib in the foreseeable future.

This effort [involves the existing Drupal 8 media modules](#). Modules that are currently considered part of the Media extras are:

- [Embed](#)
- [Entity embed](#)
- [URL embed](#)
- [Entity browser](#)
- [DropzoneJs](#)
- [Crop API](#)
- [Image widget crop](#)
- [Focal point](#)
- [Field formatter](#)
- [Fallback formatter](#)

# Media into Core

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- Entity embed
- URL embed
- Entity browser
- DropzoneJs
- Crop API
- Image widget crop
- Focal point
- Field formatter
- Fallback formatter

What we're talking about today... fielded files and an embedding workflow.

*What-we're-not-but-it's-cool-look-it-up:*

- *Drag-to-upload*
- *Better cropping*
- *Paste in a url and let Media guess whether you mean YouTube or Twitter*

# Media into Core

Here's the modules you'll need for now:

- **Media Entity** (*maybe... JUST appeared in 8.4 core...I haven't tested yet...*)
- **Entity Embed** for WYSIWIG integration
- **Entity Browser** and **cTools**
- **Media Entity Image** and **Video Embed Field** and any other Type Providers your site needs (see [drupal.org/project/media\\_entity](https://drupal.org/project/media_entity) for the full list)

Let's Make a Bundle!





Back to site | Manage | Shortcuts | itmaybejj

Content | **Structure** | Appearance | Extend | Configuration

## Structure ☆

Home » Administration

- Block layout  
Configure what block content appears in your site's sidebars and other regions.
- Comment types  
Manage form and displays settings of comments.
- Contact forms  
Create and manage contact forms.
- Content types  
Create and manage fields, forms, and display settings for your content.
- Display modes  
Configure what displays are available for your content and forms.
- Media bundles**  
Manage media bundles.

### Media bundles ☆

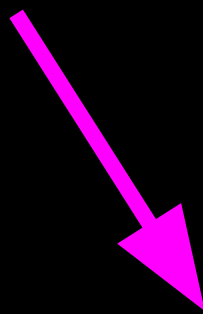
Home » Administration » Structure

[+ Add media bundle](#)

NAME
------

With those modules installed, “Media bundles” will appear under “Structure.”

Let’s add one.



- **Label**

- **Type**

*(from provider Modules...handles thumbnails, oembeds etc.)*

- **Type Provider fields**

*(may appear after picking a type).*

## Add media bundle

[Home](#) » [Administration](#) » [Structure](#) » [Media bundles](#)

**Label \***

 Machine name: image [\[Edit\]](#)

The human-readable name of this media bundle.

**Description**

Describe this media bundle. The text will be displayed on the *Add new media* page.

Media type provider plugin that is responsible for additional logic related to this media.

**TYPE PROVIDER CONFIGURATION**

**Field with source information**

Field on media entity that stores Image file. You can create a bundle without selecting a value for

Now add some fields...

- Add a **Reference field** for whatever type of media you're adding
- Pick an **Allowed Number of Values**

Home » Administration » Structure » Media bundles » Edit *Image*

+ Add field

LABEL	MACHINE NAME
No fields are present yet.	

Home » Administration » Structure » Media bundles » Edit *Image* » Manage fields » Image File

These settings apply to the *Image File* field everywhere it is used. These settings impact the way that data is stored in the database and cannot be changed once data has been created.

**Upload destination**

Public files

Select where the final files should be stored. Private file storage has significantly more overhead than public file storage, but allows restricted access to files within this field.

**DEFAULT IMAGE**

If no image is uploaded, this image will be shown on display.

**Image**

No file chosen

Image to be shown if no image is uploaded.

**Alternative text**

This text will be used by screen readers, search engines, and when the image cannot be loaded.

**Title**

The title attribute is used as a tooltip when the mouse hovers over the image.

**Allowed number of values**

Limited

Save field settings

Add field ☆

Home » Administration » Structure » Media bundle

**Add a new field**

✓ - Select a field type -

- General
  - Boolean
  - Comments
  - Date
  - Email
  - Link
  - Timestamp
- Media
  - Video Embed
- Number
  - List (float)
  - List (integer)
  - Number (decimal)
  - Number (float)
  - Number (integer)
- Reference
  - Content
  - File
  - Image**
  - Taxonomy term
  - User
  - Other...
- Text
  - List (text)
  - Text (formatted)
  - Text (formatted, long)
  - Text (formatted, long, with summary)
  - Text (plain)
  - Text (plain, long)

Add additional fields as desired. Interface is the same as content types.

Common additions:

- Caption
- Credit or Byline
- Link

## Here's our "Image" bundle:

- Caption
- Two credit/bylines...
  - ...by taxonomy
  - ...freeform for one-offs
- "Credit prefix" (e.g., "Photo by" or "Video by")
- The actual file reference

Edit

Manage fields

Manage form display

Manag

+ ADD FIELD

**LABEL**

**MACHINE NAME**

Caption

field\_media\_caption

Credit

field\_byline

Credit (Freeform)

field\_byline\_freeform

Credit prefix

field\_byline\_prefix

Image

image



We can now do the same, over and over again.

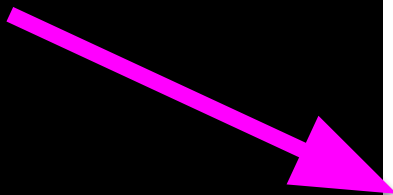
E.g, for YouTube/Vimeo we'll need the Video Embed Field provider, with the "Video Embed Media" submodule (it's available under "Extend" after installing the provider but isn't enabled by default).

The screenshot shows the Drupal administration interface. At the top, there is a navigation bar with 'Home', 'Manage', 'Shortcuts', and a user profile 'itmaybejj'. Below this is a secondary navigation bar with tabs for 'Content', 'Structure', 'Appearance', 'Extend', and 'Configuration'. The 'Extend' tab is active, displaying a list of modules under the heading 'VIDEO EMBED FIELD'. Three modules are listed:

- Video Embed Field** ▶ Provides a field type for displaying videos from 3rd party pr
- Video Embed Media** ▶ Integrates video\_embed\_field with the media\_entity module
- Video Embed WYSIWYG** ▶ Integrates video\_embed\_field directly into ckeditor. Useful f

The 'Video Embed Media' module is highlighted with a red rectangular box.

Each new provider adds to the list of types of bundles you can create, and types of reference fields you can add to the bundle.



## Add media bundle

[Home](#) » [Administration](#) » [Structure](#) » [Media bundles](#)

**Label \***

The human-readable name of this media bundle.

**Description**

Describe this media bundle. The text will be displayed on the *Add new*

**Type provider**

- Generic media
- Image
- Video embed field

in that is responsible for additional logic rela

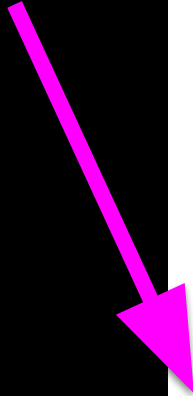
### TYPE PROVIDER CONFIGURATION

This type provider doesn't need configuration.

Some extend the base provider. For Video Embed Field, for instance, the field shows a list of installed oEmbed providers you can enable.

Additional providers can be found at:

[drupal.org/project/video\\_embed\\_field](https://drupal.org/project/video_embed_field)



## Video URL settings for Video ☆

[Edit](#) [Field settings](#)

[Home](#) » [Administration](#) » [Structure](#) » [Media bundles](#) » [Edit Video](#) » [Manage fields](#)

**Label \***

**Help text**

Instructions to present to the user below this field on the editing form.  
Allowed HTML tags: <a> <b> <big> <code> <del> <em> <i> <ins> <pre> <q> <small>  
<img>

This field supports tokens.

Required field

▼ **DEFAULT VALUE**

The default value for this field, used when creating new content.

**Video URL**

**Allowed Providers**

- Vimeo
- YouTube
- YouTube Playlist

Edit	Manage fields	Manage form display	Manage display
------	---------------	---------------------	----------------

+ ADD FIELD

LABEL	MACHINE NAME
Caption	field_media_caption
Cover image	field_media_video_cover_image
Credit	field_byline
Credit (freeform)	field_byline_freeform
Credit prefix	field_byline_prefix
Save to my media library	field_media_in_library
Video URL	field_media_video_embed_field

That's it. You're done.

At Princeton we've added a "cover image" -- we display a static image with a play button and only summon the embed JS on click.



Looks nice and really helps page load speed since JS blocks the render thread..

We have a lot of bundles.

Not yet mentioned...but basically work straight out of the box much as you'd expect:

- Facebook
- Instagram
- Tweet
- Document
- Audio (local MP3)
- Video (local MP4)

🔍 **Document**

A locally hosted document, such a PDF.

---

🔍 **Facebook Post**

A facebook post to embed.

---

🔍 **Slides**

A group of other media items. Used for image groups and slideshows.

---

🔍 **Image**

Locally hosted images.

---

🔍 **Instagram**

Instagram posts.

---

🔍 **Audio (Local)**

Locally hosted audio files.

---

🔍 **Tweet**

Represents a tweet.

---

🔍 **Video**

A video hosted by YouTube, Vimeo, or some other provider.

---

🔍 **Video (Local)**

A locally hosted video file. Typically reserved for small video clips; everything



If you don't make it to Media Explained in the next hour and you get stuck getting these to embed in CKEditor, there's some bonus slides at the end of my deck on how to set up Entity Embed and Entity Browser.

Let's Theme a Bundle



# Theme a Bundle

A new bundle barfs *all* its fields onto the page by default.

Switch to the “Manage Display” tab and disable everything you don’t want.

## Manage display ☆

[Edit](#) [Manage fields](#) [Manage form display](#) [Manage display](#)

[Home](#) » [Administration](#) » [Structure](#) » [Media bundles](#) » [Edit Video](#)

FIELD	LABEL	FORMAT
✚ Media name	- Hidden -	Plain text
✚ Created	- Hidden -	Default
✚ Publisher ID	- Hidden -	Author
✚ Thumbnail	- Hidden -	Image
✚ Video URL	Above	Video

**Disabled**

*No field is hidden.*

[Save](#)

# Theme a Bundle

Much Better.

Manage display ☆

Edit Manage fields Manage form display Manage display

Default Column Width

Home » Administration » Structure » Media bundles » Edit Video » Manage display

FIELD	LABEL	FORMAT
⊕ Video URL	- Hidden -	Video
<b>Disabled</b>		
⊕ Created	Above	Time ago
⊕ Publisher ID	Above	Author
⊕ Thumbnail	Above	URL to image
⊕ Media name	Above	Plain text

Save

# Theme a Bundle


Now when we embed this  
in a test page we just get  
a nice video:

Test page

View Edit Delete Revisions

eff

Princeton Racing Electric designs sustai... ⌚ ↗



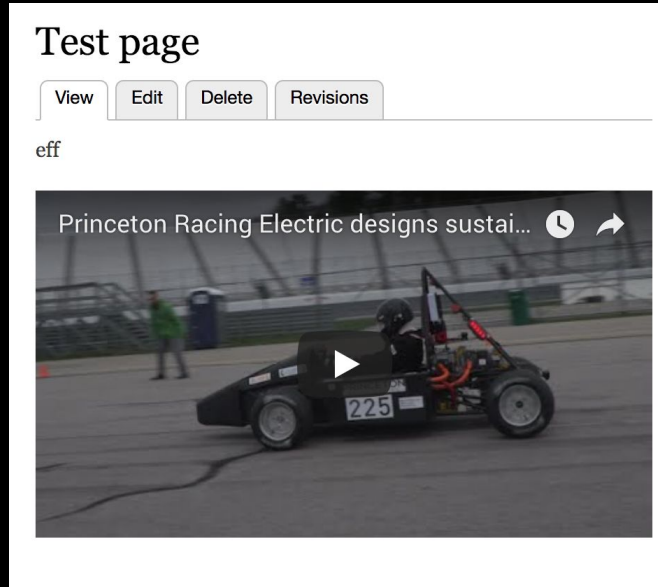
# Theme a Bundle

If you're developing on Classy, it provides some nice wrapper classes for the type and view mode:

Media

Media-**video**

View-mode-**column-width**



```
"article" class="contextual-region node
node--type-page node--view-mode-full
clearfix" about="/node/1" typeof=
"schema:WebPage" data-quickedit-entity-
instance-id="0">
  <header>...</header>
  <div class="node_content clearfix">
    <div property="schema:text" data-
    quickedit-field-id="node/1/body/en/
    full" class="clearfix text-formatted
    field field--name-body field--type-
    text-with-summary field--label-
    hidden field__item quickedit-field">
      <p>eff</p>
      <article class="embedded-entity">
        <article data-quickedit-entity-
        id="media/1" class="media media-
        video view-mode-column-width
        media--type-media--unpublished"
        data-quickedit-entity-instance-
        id="0"> == $0
          <div data-quickedit-field-id=
          "media/1/
          field_media_video_embed_field/
          en/column_width" class="field
          field--name-field-media-video-
          embed-field field--type-video-
          embed-field field--label-hidden
          field__item">
            <div class="video-embed-
            field-responsive-video">
```

# Theme a Bundle

Now you have all you need for basic CSS...

Note that **targeting the bundle hits all that bundles view modes**, and **targeting a view mode hits all bundles with that view mode**. Target both if you want to be specific.

```
.view-mode-right-half {  
  float: right;  
  width: 50%;  
  padding: 0 0 1rem 3.5%;  
  Clear:right;  
}
```

```
.view-mode-left-third {  
  float: left;  
  width: 33%;  
  padding: 0 3.5% 1rem 0;  
  clear: left;  
}
```

# Theme a Bundle

We can also modify our view mode's markup using Twig.

**THIS IS OPTIONAL.**

You can skip this if you are OK with the out of the box markup.



# Theme a Bundle

Go find the “[media.html.twig](#)” in your base theme.

Look in:

core > themes > stable > templates  
or

core > themes > classy > templates

It should look like this:

```
{#  
/**  
 * @file  
 * Theme override to display a media item.  
 *  
 * Available variables:  
 * - name: Name of the media.  
 * - content: Media content.  
 *  
 * @see template_preprocess_media()  
 *  
 * @ingroup themeable  
 */  
#}  
{%  
  set classes = [  
    'media',  
    'media--type-' ~ media.bundle() | clean_class,  
    not media.isPublished() ? 'media--unpublished',  
    view_mode ? 'media--view-mode-' ~ view_mode.id() | clean_class,  
  ]  
%}  
<article{{ attributes.addClass(classes) }}>  
  {% if content %}  
    {{ content }}  
  {% endif %}  
</article>
```

# Theme a Bundle

It has helpful comments inline

**CSS class array** for the container

**the HTML** that will be output.

```
{#
/**
 * @file
 * Theme override to display a media item.
 *
 * Available variables:
 * - name: Name of the media.
 * - content: Media content.
 *
 * @see template_preprocess_media()
 *
 * @ingroup themeable
 */
#}
{%
  set classes = [
    'media',
    'media--type-' ~ media.bundle() | clean_class,
    not media.isPublished() ? 'media--unpublished',
    view_mode ? 'media--view-mode-' ~ view_mode.id() | clean_class,
  ]
%}
<article{{ attributes.addClass(classes) }}>
  {% if content %}
    {{ content }}
  {% endif %}
</article>
```

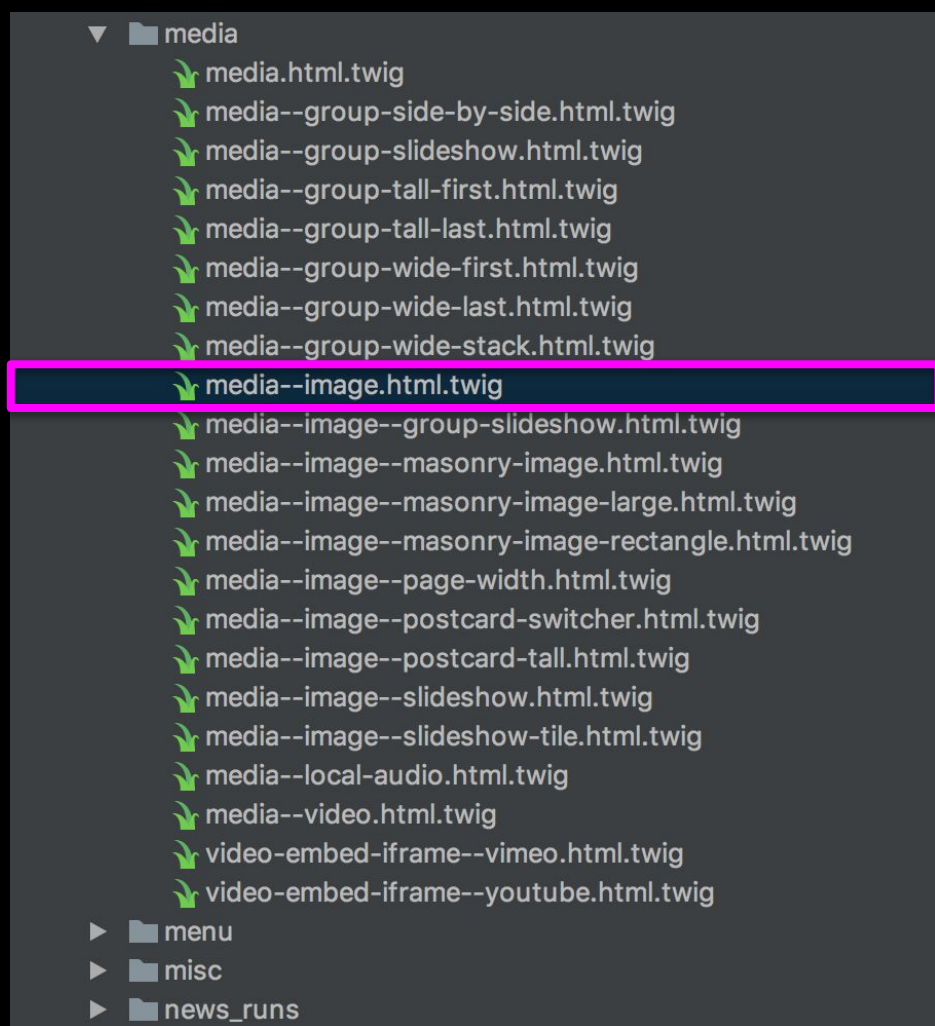
# Theme a Bundle

Copy it into your theme's templates folder. Maybe make a "media" subfolder to keep yourself organized.

**Rename** the copy in your theme to match your bundle's machine names:

media-[**bundle**].html.twig or  
media-[**bundle**]-[**view-mode**].html.twig

Always: two hyphens between names,  
one hyphen within names.



# Theme a Bundle

*Example:* Let's group an image's caption and byline in custom divs for our responsive CSS, and prefix the byline (e.g. "Photo by" or "Video by")

*Mobile is stacked:*

*Desktop has columns:*



First-year students Dylan Kim, from Marietta, Georgia; Sophia Hu from East Brunswick, New Jersey; Anna Nguyen from Ithaca, New York; and Cynthia Vu from Garden City, California, clean a storeroom filled with books and toys at the YWCA Princeton.

Photo by Denise Applewhite, Office of Communications




First-year students Dylan Kim, from Marietta, Georgia; Sophia Hu from East Brunswick, New Jersey; Anna Nguyen from Ithaca, New York; and Cynthia Vu from Garden City, California, clean a storeroom filled with books and toys at the YWCA Princeton.

Photo by Denise Applewhite, Office of Communications

# Theme a Bundle

*We add the div we want to the Twig file using plain old HTML:*

```
{{content|without('field_media_caption', 'field_byline_prefix', 'field_byline') }}  
  
<div class="image-caption">  
  {{ content.field_media_caption }}  
  <div class="image-byline">  
    {% if content.field_byline|length > 2 %}  
      {{ content.field_byline_prefix }}  
    {% endif %}  
    {{ content.field_byline }}  
  </div>  
</div>
```

# Theme a Bundle

The original file called `{{content}}`, which renders all the fields at once.  
We're going to use `{{content.field_machine_name}}` instead.

```
{{content|without('field_media_caption', 'field_byline_prefix', 'field_byline') }}  
<div class="image-caption">  
  → {{ content.field_media_caption }}  
  <div class="image-byline">  
    {% if content.field_byline|length > 2 %}  
      → {{ content.field_byline_prefix }}  
    {% endif %}  
    → {{ content.field_byline }}  
  </div>  
</div>
```

# Theme a Bundle

We render at least one field using `|without` and the list of all the OTHER fields. This way we get our all-important cache tags too.

```
← {{content|without('field_media_caption', 'field_byline_prefix', 'field_byline')}}  
<div class="image-caption">  
  {{ content.field_media_caption }}  
  <div class="image-byline">  
    {% if content.field_byline|length > 2 %}  
      {{ content.field_byline_prefix }}  
    {% endif %}  
    {{ content.field_byline }}  
  </div>  
</div>
```



# Theme a Bundle

We do some logic here too -- I'm only rendering the Byline's prefix ("Photo by") if there's content in the Byline field.

```
{{ content|without('field_media_caption', 'field_byline_prefix', 'field_byline') }}  
<div class="image-caption">  
  {{ content.field_media_caption }}  
  <div class="image-byline">  
    {% if content.field_byline|length > 2 %}  
      {{ content.field_byline_prefix }}  
    {% endif %}  
    {{ content.field_byline }}  
  </div>  
</div>
```

Documentation can be found at [twig.symfony.com](https://twig.symfony.com) if this syntax is new to you!

# Theme a Bundle

Done.

Custom container:

Fields are inside container:

This field only shows up if there's something following it.



First-year students Dylan Kim, from Marietta, Georgia; Sophia Hu from East Brunswick, New Jersey; Anna Nguyen from Ithaca, New York; and Cynthia Vu from Garden City, California, clean a storeroom filled with books and toys at the YWCA Princeton.

Photo by ||| Denise Applewhite, Office of Communications |||

Let's Bundle a Bundle in a Bundle



# Bundles of Bundles

Here's our goal -- a masonry-like cluster where:

- each image has a number
- each caption has a number
- the captions are in a separate div in the right order



1  
Community Action participants get a lesson in juggling with the Trenton Circus Squad in Trenton, New Jersey, which aims to empower low-income and at-risk youth through circus arts. Photo by Estibaliz Matulewicz, Class of 2020

2  
First-year students Paige Thompson, from Los Angeles; Arielle Mindel, from Cherry Hill, New Jersey; and Mollie Price, from Rogersville, Tennessee, work with Community Action leader Martin Kurian, a senior, to build a rain chain display for the Pocono Environmental Education Center in Dingmans Ferry, Pennsylvania. Photo by Community Action Fellow Heather Waters, Class of 2020

3  
First-year student Adam Hazelton (right) from Bakersfield, California, helps Allison Jackson, senior naturalist at the Stony Brook-Millstone Watershed Association, collect butterflies for the Kate Gorrie Butterfly House at the watershed association's 950-acre reserve in Hopewell, New Jersey. Photo courtesy of the Stony Brook-Millstone Watershed Association



# Bundles of Bundles

We have a bundle we named “Slides,” using the Slideshow type provider.

We’ve defined several view modes for Slides, notably **cluster**, **slideshow** and **side-by-side**.

Edit

Manage fields

Manage form display

**Name \***

Slides

Machine name: group

The human-readable name of this media type.

**Description**

A group of other media items. Used for image groups and slideshows.

Describe this media type. The text will be displayed on the *Add new media* page.

**Media source \***

Slideshow ▼

Media source that is responsible for additional logic related to this media type.

# Bundles of Bundles

It has...one field.



We can embed as many media items as we want, inside this media item.

That media item comes with all its fields.

Edit	Manage fields	Manage form display	Manage display	Manage moderation
<a href="#">+ ADD FIELD</a>				
LABEL	MACHINE NAME	FIELD TYPE		
Media	field_group_media	Entity reference		

## ▼ REFERENCE TYPE

### Reference method \*

Default

Create referenced entities if they don't already exist

### Bundles \*

Audio (Local)

Custom

Document

Facebook Post

Image

Instagram

Slides

Tweet

Video

Video (Local)



# Bundle of Bundles

*The DOM in our Twig file for the images...*

```
<article{{ attributes.addClass(classes) }}>
  <div class="cluster-items">
    {% for key, item in content.field_group_media if key|first != '#' %}
      <div class="cluster-half cluster-item">
        <div class="counter">{{ key + 1 }}</div>{{ item }}</div>
      {% endfor %}
    </div>
```



# Bundle of Bundles

...a *for* loop walks through the items in `field_group_media` and renders each with a counter in a `div`:

```
<article{{ attributes.addClass(classes) }}>
  <div class="cluster-items">
    {% for key, item in content.field_group_media if key|first != '#' %}
      <div class="cluster-half cluster-item">
        <div class="counter">{{ key + 1 }}</div>{{ item }}</div>
      {% endfor %}
    </div>
```

# Bundle of Bundles

The DOM in our Twig file for the captions...same *for* loop...

```
<div class="cluster-caption">
  {% for key, item in content.field_group_media if key|first != '#' %}
    <div class="cluster-caption-item">
      <div class="counter">{{ key + 1 }}</div>
      {{ drupal_entity('media', item['#media'].mid.value,
        'caption_and_credit') }}</div>
    {% endfor %}
  </div>
</article>
```

# Bundle of Bundles

...but this time we call the field via “`drupal_entity()`”...using the *Caption and Credit* view mode:

```
<div class="cluster-caption">
  {% for key, item in content.field_group_media if key|first != '#' %}
    <div class="cluster-caption-item">
      <div class="counter">{{ key + 1 }}</div>
      {{ drupal_entity('media', item['#media'].mid.value,
        'caption_and_credit') }}</div>
    {% endfor %}
  </div>
</article>
```





Note! you need to install the “*Twig Tweaks*” module to call `drupal_entity()`!

# Bundle of Bundles

...the bundles we're referencing have a “just caption” view mode the actual media item field DISABLED so we can do this...

Home » Administration » Structure » Media types » Edit *Image* » Image

Caption and credit

FIELD	LABEL	FORMAT
 Caption	- Hidden - ▼	Default ▼
 Credit prefix	- Hidden - ▼	Plain text ▼
 Credit	- Hidden - ▼	Rendered entity ▼
 Credit (Freeform)	- Hidden - ▼	Plain text ▼

# Bundle of Bundles

Note *you have to find the variable name for the ID* of the image to do this. This means exploring the render array using the Kint module...which is another talk.

```
<div class="cluster-caption">
  {% for key, item in content.field_group_media if key|first != '#' %}
    <div class="cluster-caption-item">
      <div class="counter">{{ key + 1 }}</div>
      {{ drupal_entity('media', item['#media'].mid.value,
        'caption_and_credit') }}</div>
    {% endfor %}
  </div>
</article>
```

Note! you need to install the **“Twig Tweaks”** module to call `drupal_entity()`!

# Bundles of Bundles

That's it.

Images are all in one container, captions and credits in another.



1

Community Action participants get a lesson in juggling with the Trenton Circus Squad in Trenton, New Jersey, which aims to empower low-income and at-risk youth through circus arts.

*[Photo by Estibaliz Matulewicz, Class of 2020]*

2

First-year students Paige Thompson, from Los Angeles; Arielle Mindel, from Cherry Hill, New Jersey; and Mollie Price, from Rogersville, Tennessee, work with Community Action leader Martin Kurian, a senior, to build a rain chain display for the Pocono Environmental Education Center in Dingmans Ferry, Pennsylvania.

*[Photo by Community Action Fellow Heather Waters, Class of 2020]*

3

First-year student Adam Hazelton (right) from Bakersfield, California, helps Allison Jackson, senior naturalist at the Stony Brook-Millstone Watershed Association, collect butterflies for the Kate Gorrie Butterfly House at the watershed association's 950-acre reserve in Hopewell, New Jersey.

*[Photo courtesy of the Stony Brook-Millstone Watershed Association]*



Olivia Richardson, a junior majoring in **ecology and evolutionary biology** who served as one of the 130 leaders, stressed the role of mentorship Community Action offers. "We [my co-leader and I] provide new students with both one-on-one and group mentorship," she said. "We're living together, eating together [and] cooking together to facilitate those sorts of strong bonds."

# Bundles of Bundles

The rest is CSS. Our clusters are defined using floats and defined widths because our editors wanted control. Masonry libraries work great too.

- General `.cluster-item` is half width:
- Specific cluster types go full width based on order, depending on the view mode:

```
&.view-mode-group-wide-stack .cluster-item,  
&.view-mode-group-wide-first .cluster-item:first-child,  
&.view-mode-group-wide-last .cluster-item:last-child {  
  width: 100%;  
  margin-left: 0;  
}  
&.view-mode-group-tall-first {  
  .cluster-item + .cluster-item {float: right; clear:right;}
```

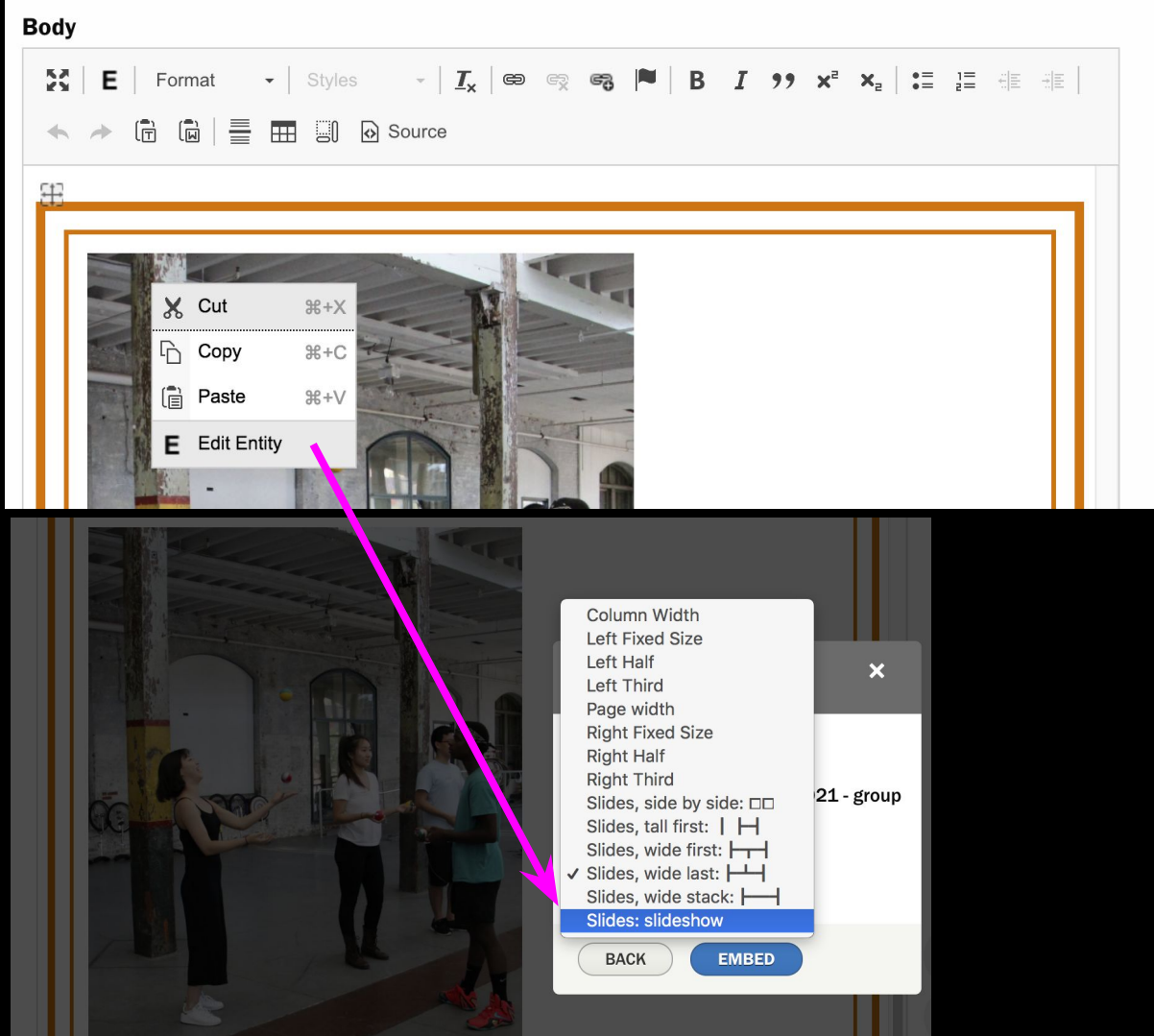
```
.cluster {  
  float: left;  
  width: 100%;  
  position: relative;  
  .counter {  
    font-size: .875rem;  
    color: $dark-gray;  
    font-weight: 700;  
  }  
  .cluster-item {  
    width: 47.8%;  
    float: left;  
    margin-bottom: 4.4%;  
    position: relative;  
    .counter {  
      bottom: 0;  
      background: $pu-orange;  
      position: absolute;  
      padding: .5rem .75rem;  
      text-align: center;  
      line-height: 1;  
      color: $black;  
    }  
    &:nth-child(2n) {  
      margin-left: 4.4%;  
    }  
  }  
  img {vertical-align: bottom;}
```



# Bundles of Bundles

And if we edit this page in the WYSIWYG editor and switch the view mode to “slideshow”...

**Body**



The top screenshot shows a WYSIWYG editor toolbar with options like Format, Styles, Bold, Italic, and a context menu with options: Cut (⌘+X), Copy (⌘+C), Paste (⌘+V), and Edit Entity. A pink arrow points from the 'Edit Entity' option to the bottom screenshot.

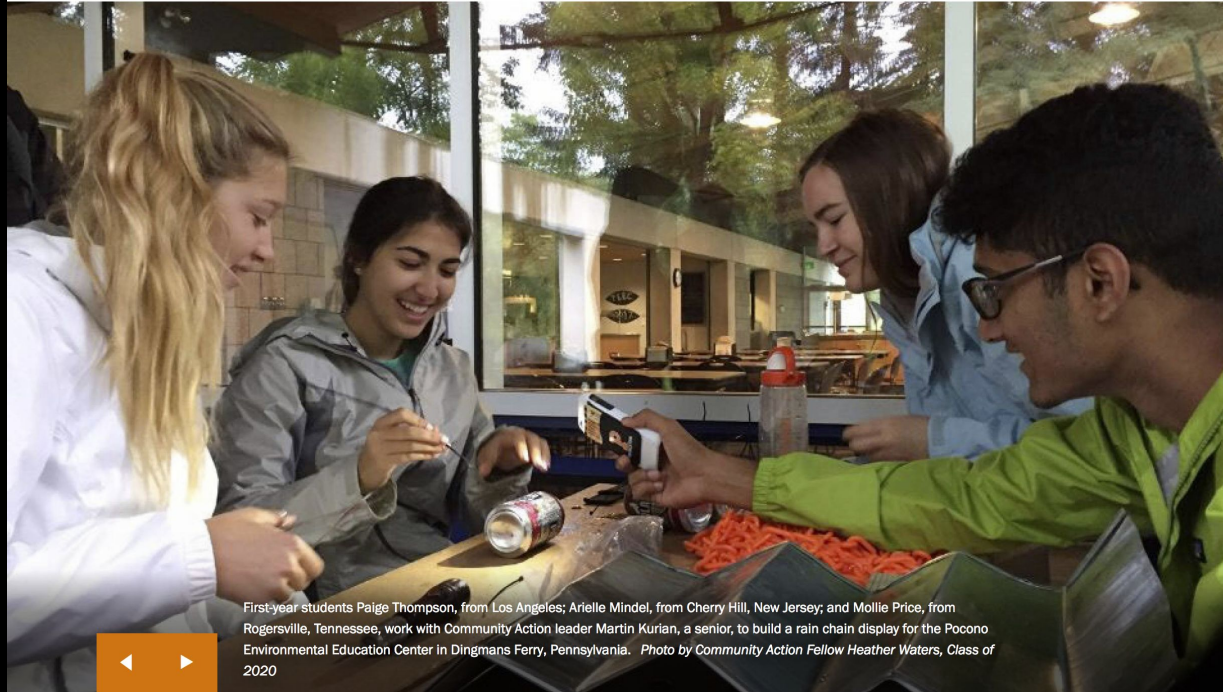
The bottom screenshot shows a configuration menu for a slide. The menu includes options: Column Width, Left Fixed Size, Left Half, Left Third, Page width, Right Fixed Size, Right Half, Right Third, Slides, side by side:  , Slides, tall first: | H, Slides, wide first: H H,  Slides, wide last: H H, Slides, wide stack: H H, and Slides: slideshow (highlighted in blue). At the bottom are buttons for BACK and EMBED. The text '21 - group' is visible on the right side of the menu.

# Bundles of Bundles

...we get a slideshow instead.

The Twig file for THAT view mode changes the classes on the containers to match what our slideshow JS is looking for.

Through peer-led small groups, the students examined social issues and reflected on their own social and civic identity.



First-year students Paige Thompson, from Los Angeles; Arielle Mindel, from Cherry Hill, New Jersey; and Mollie Price, from Rogersville, Tennessee, work with Community Action leader Martin Kurian, a senior, to build a rain chain display for the Pocono Environmental Education Center in Dingmans Ferry, Pennsylvania. Photo by Community Action Fellow Heather Waters, Class of 2020

Olivia Richardson, a junior majoring in **ecology and evolutionary biology** who served as one of the 130 leaders,

# Some Magick: A Better Embedder



# Common frustrations to (mostly) solve...

1. Media looks different from the live site in the editor. Editors often have to save, preview, edit again.
2. Media can be hard to “grab” and edit.
3. Alt elements are often invisible to everybody but the people who need them.

# Getting your frontend CSS into CKeditor

Edit your `themename.info.yml` file (frontend not admin) and add these two lines:

```
ckeditor_stylesheets:  
  - css/app.css
```

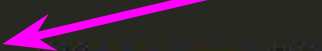
(where the path is the relative path to the css file(s) you want included)

You absolutely COULD include your all the CSS for your whole front-end theme, but you don't need to (and you might get some weird conflicts).

We include a subset -- media and typography only.

We're using SASS...our Gulp file compiles a subset of our CSS (~half):

```
gulp.task('sass', function() {  
  return gulp.src('scss/{app,app-for-admin,app-antique}.scss')  
    .pipe($.sass({  
      includePaths: sassPaths,  
      outputStyle: 'compressed' // was compressed  
    }))  
    .on('error', $.sass.logError)  
    .pipe($.autoprefixer({  
      browsers: ['> .05%', 'last 2 versions']  
    })))  
    .pipe(gulp.dest('css'));  
});
```



Our “app for admin” @include list comments out any of our CSS that isn’t relevant for inside CKeditor -- things like menu styles, page layout, footer styles...

```
7 @include foundation-global-styles;
8 @include foundation-grid;
9 // @include foundation-flex-grid;
10 @include foundation-typography;
11 @include foundation-button;
12 //@include foundation-forms;
13 // @include foundation-range-input;
14 //@include foundation-accordion;
15 //@include foundation-accordion-menu;
16 //@include foundation-badge;
17 @include foundation-breadcrumbs;
18 //@include foundation-button-group;
19 @include foundation-callout;
20 @include foundation-card;
21 @include foundation-close-button;
22 //@include foundation-menu;
23 //@include foundation-menu-icon;
24 //@include foundation-drilldown-menu;
25 //@include foundation-dropdown;
26 //@include foundation-dropdown-menu;
27 //@include foundation-responsive-embed;
28 //@include foundation-label;
29 @include foundation-media-object;
30 //@include foundation-off-canvas;
31 @include foundation-orbit;
32 @include foundation-pagination;
33 //@include foundation-progress-bar;
34 // @include foundation-progress-element;
35 // @include foundation-meter-element;
36 //@include foundation-slider;
37 @include foundation-sticky;
38 @include foundation-reveal;
39 //@include foundation-switch;
40 //@include foundation-table;
41 //@include foundation-tabs;
42 //@include foundation-thumbnail;
43 //@include foundation-title-bar;
44 //@include foundation-tooltip;
45 //@include foundation-top-bar;
```

# Note on Twig...

Confusingly...while CKEditor is happy to grab the CSS based on the Frontend library files...IT USES THE TWIG FILES FROM THE ADMIN THEME.

Rawr.

Just make sure to copy any custom Twig you need into your admin theme.



# Get it right and you'll have a true WYSIWIG experience:

to help attract high-quality goods from restaurants and markets in the area that would otherwise end up in compost. "It practices food sustainability as well as financial sustainability," she said. Bentley not only helps feed the families it serves — the group also assists them in monitoring and managing their finances. It also requires each family to volunteer time to the organization and eventually graduate from its program.



well as financial sustainability," she said. Bentley not only helps feed the families it serves — the group also assists them in monitoring and managing their finances. It also requires each family to volunteer time to the organization and eventually graduate from its program.



Another example: I add a nice thick border when you select a media item. Much easier to work with. This is in our *admin* theme:

```
.cke_widget_wrapper.cke_widget_block.cke_widget_selected .media {  
    border: 3px solid #e77500;  
    padding: 12px;  
}
```

## Body



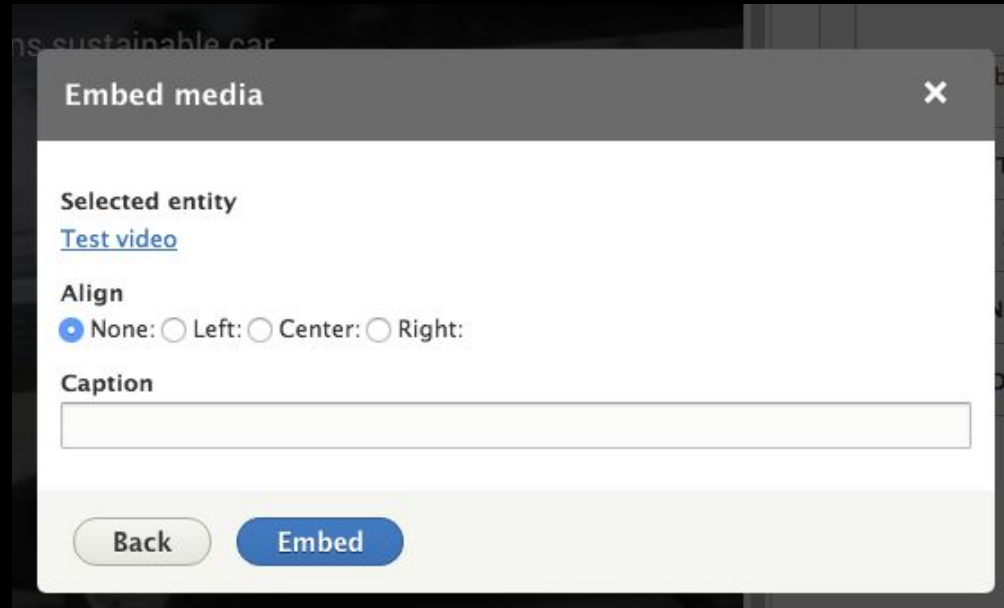
organizations with social service organizations, for example.



*Another example:*

When you edit an embed, the link goes to the entity view, **NOT the edit form**. Who wants that? I know what it looks like, I can see it in WYSIWYG:

Let's override the JS so that it jumps right to the edit form.



I've overridden the "entity\_embed" library in my admin theme to replace its JS:

In MyAdminTheme.info.yml:

```
libraries-override:  
  entity_embed/drupal.entity_embed.dialog: MyAdminTheme/entity_embed
```

In MyAdminTheme.libraries.yml

```
entity_embed:  
  Js:  
    js/entity_embed.dialog.js: {}  
  Css:  
    Theme:  
      ../../../../modules/contrib/entity_embed/css/entity_embed.dialog.css: {}  
  Dependencies:  
    - core/drupal  
    - core/jquery
```

I found where the link is created and appended `/edit` to the end of the href:

```
/**
 * Behaviors for the entityEmbedDialog iframe.
 */
Drupal.behaviors.entityEmbedDialog = {
  attach: function (context, settings) {
    /**
     * lines 33-35 are custom, to make the edit entity link jump straight into edit mode.
     */
    $('#entity-embed-dialog-form a').not('editified').addClass('editified').attr("href", function(i, href) {
      return href + '/edit';
    });
    $('body').once('js-entity-embed-dialog').on('entityBrowserIFrameAppend', function () {
      $('.entity-select-dialog').trigger('resize');
      // Hide the next button, the click is triggered by Drupal.entityEmbedDialog.selectionCompleted.
      $('#drupal-modal').parent().find('.js-button-next').addClass('visually-hidden');
    });
  }
};
```




And Now the link in our embed editor jumps straight to the entity editor. I even stuck in a little pencil:



## Embed media ×

**Selected entity**

 Migration vertical

**Display as \***





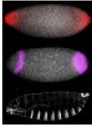


Right Third ▾

**BACK** **EMBED**



Example: your editors are new to writing good alt elements.

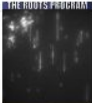






Select media to embed ✕

<input type="checkbox"/>		<b>BioNanomatrix-photo3forweb.jpg</b> <i>Bionanomatrix photo</i> <i>Suspicious text: "photo"</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Joseph-Robert-Scherrer-Hertz-Foundation-Photo-Submission.jpg</b> <i>Alternative text missing</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Photo5_1150.jpg</b> <i>Fox Theater in Detroit</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Tim-Vasen-Cat-Andre-Photo-by-Warren-Rieurtor-Louis_1150.jpg</b> <i>Timothy Vasen on stage with junior Cat Andre</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>RAS-cell-photo-3-576.jpg</b> <i>Fruit-fly embryos (above) showed how signals at the early stage of development (red in top photo) activate genes (purple in middle photo) and pattern structures in the fly larva (bottom photo.)</i> <i>Suspicious text: "photo"</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>20150905_OutdoorActionGroupPhotos_MC_018-1150.jpg</b> <i>Outdoor Action Group Photo</i> <i>Suspicious text: "photo"</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Acton_photo-9a_162.jpg</b> <i>Acton</i>	Image	communications	05/11/17	Edit ▾

Our entity browser view shows BOTH the media title and the alt text, to encourage review.

Bad and missing alts are now more apparent to the editors.

Select media to embed ✕




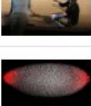



<input type="checkbox"/>		<b>BioNanomatrix-photo3forweb.jpg</b> <i>Bionanomatrix photo</i> <i>Suspicious text: "photo"</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Joseph-Robert-Scherrer-Hertz-Foundation-Photo-Submission.jpg</b> <i>Alternative text missing</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Photo5_1150.jpg</b> <i>Fox Theater in Detroit</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Tim-Vasen-Cat-Andre-Photo-by-Warren-Rieurtort-Louis_1150.jpg</b> <i>Timothy Vasen on stage with junior Cat Andre</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>RAS-cell-photo-3-576.jpg</b> <i>Fruit-fly embryos (above) showed how signals at the early stage of development (red in top photo) activate genes (purple in middle photo) and pattern structures in the fly larva (bottom photo.)</i> <i>Suspicious text: "photo"</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>20150905_OutdoorActionGroupPhotos_MC_018-1150.jpg</b> <i>Outdoor Action Group Photo</i> <i>Suspicious text: "photo"</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Acton_photo-9a_162.jpg</b> <i>Acton</i>	Image	communications	05/11/17	Edit ▾

**PLACE**



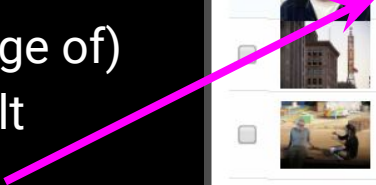
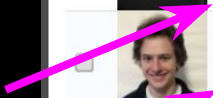
Select media to embed



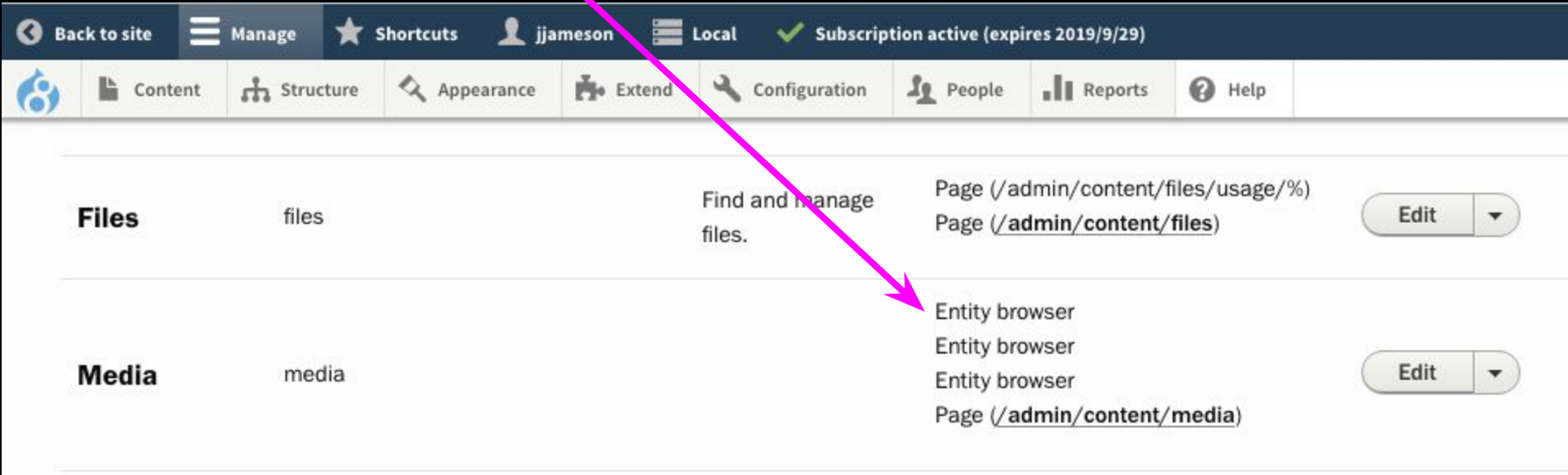
<input type="checkbox"/>		<b>BioNanomatrix-photo3forweb.jpg</b> <i>Bionanomatrix photo</i> <i>Suspicious text: "photo"</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Joseph-Robert-Scherrer-Hertz-Foundation-Photo-Submission.jpg</b> <i>Alternative text missing</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Photo5_1150.jpg</b> <i>Fox Theater in Detroit</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Tim-Vasen-Cat-Andre-Photo-by-Warren-Rieurtort-Louis_1150.jpg</b> <i>Timothy Vasen on stage with junior Cat Andre</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>RAS-cell-photo-3-576.jpg</b> <i>Fruit-fly embryos (above) showed how signals at the early stage of development (red in top photo) activate genes (purple in middle photo) and pattern structures in the fly larva (bottom photo.)</i> <i>Suspicious text: "photo"</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>20150905_OutdoorActionGroupPhotos_MC_018-1150.jpg</b> <i>Outdoor Action Group Photo</i> <i>Suspicious text: "photo"</i>	Image	communications	05/11/17	Edit ▾
<input type="checkbox"/>		<b>Acton_photo-9a_162.jpg</b> <i>Acton</i>	Image	communications	05/11/17	Edit ▾

PLACE

And the view flags suspicious words (photo of, image of) and missing alt elements.



This is easy to do because the entity browsers are just views:



The screenshot shows the Drupal administration interface. At the top, there is a navigation bar with 'Back to site', 'Manage', 'Shortcuts', 'jjameson', 'Local', and 'Subscription active (expires 2019/9/29)'. Below this is a secondary navigation bar with icons for 'Content', 'Structure', 'Appearance', 'Extend', 'Configuration', 'People', 'Reports', and 'Help'. The main content area displays two entity browser views:

Entity Name	Entity Type	Description	Views	Actions
<b>Files</b>	files	Find and manage files.	Page ( <a href="/admin/content/files/usage/%">/admin/content/files/usage/%</a> ) Page ( <a href="/admin/content/files">/admin/content/files</a> )	Edit
<b>Media</b>	media		Entity browser Entity browser Entity browser Page ( <a href="/admin/content/media">/admin/content/media</a> )	Edit

A pink arrow points from the text 'entity browsers are just views:' to the 'Entity browser' entries in the Media section.

And in our view this is the rewrite code for that field (inline Twig...):

```
<br><em>{{ image__alt }}</em>
{% if ( 'photo' in image__alt|lower )%}
    <br><span class='alert'>Suspicious text: "photo"</span>
{% elseif ( 'image' in image__alt|lower )%}
    <br><span class='alert'>Suspicious text: "image"</span>
{% endif%}

{% if image__alt|length < 1%}
    <em class="alert">Alternative text missing</em>
{% endif %}
```

# Some Magick: Responsive Images



# Quick Refresher on HTML5 Responsive Images

Responsive images let browsers pick the best fit image for both their pixel depth and window width.

A desktop browser hitting our homepage pulls **1.3MB** of images.

...a mobile browser pulls **.3MB**.

That *reeeeally* helps for perceived performance on mobile.

The code looks like this:

```

```

Rather than a simple src, the browser gets a **set** of image urls to choose from, with the **image file's pixel width** declared inline.

```

```

...and a list of breakpoints (min-widths), and **how wide the image will be** at each breakpoint, defined in vw units (1vw is 1% of viewport width).

```

```



...and a fallback...the **old image src** syntax for legacy browsers.

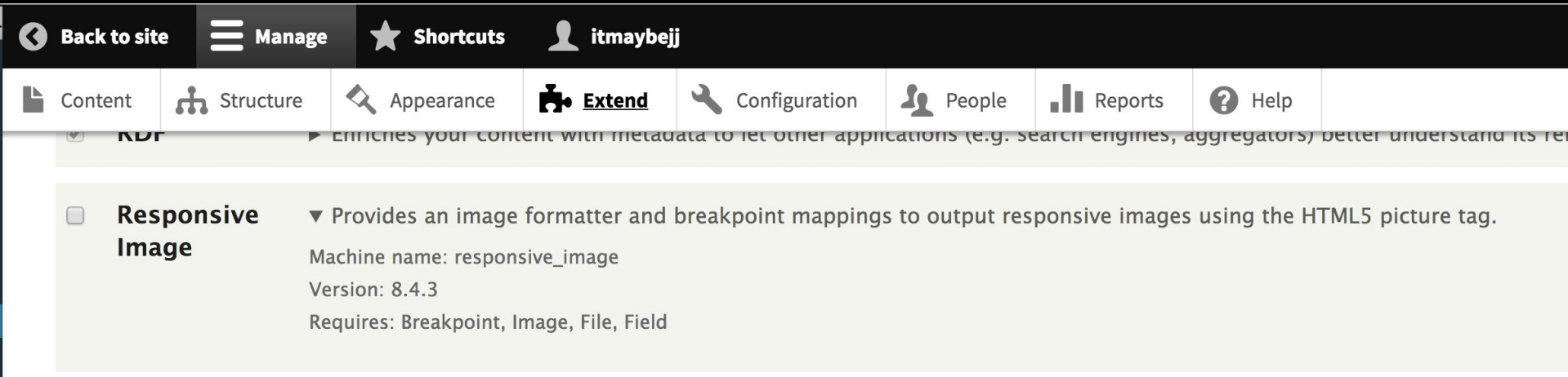
```

```

Generating all this means any given bundle needs...

- **Multiple image styles** to generate different sized images
- At least one “**Responsive image style**” that knows...
  - Our theme’s breakpoints
  - What width the embedded image will be at each breakpoint
  - Which image styles should be included

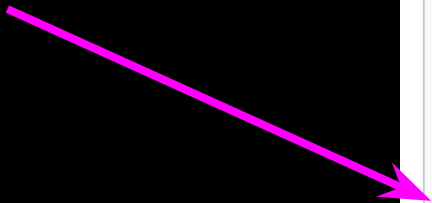
The Responsive Image module does this and is in core, but isn't enabled by default:



The screenshot shows the Drupal 8 administration interface. At the top, there is a navigation bar with the following items: 'Back to site', 'Manage', 'Shortcuts', and the user profile 'itmaybejj'. Below this is a secondary navigation bar with icons and labels for 'Content', 'Structure', 'Appearance', 'Extend', 'Configuration', 'People', 'Reports', and 'Help'. The 'Extend' section is expanded, showing a list of modules. The 'Responsive Image' module is highlighted, with a dropdown arrow next to its name. The details for this module are as follows:

- Responsive Image**
- ▼ Provides an image formatter and breakpoint mappings to output responsive images using the HTML5 picture tag.
- Machine name: responsive\_image
- Version: 8.4.3
- Requires: Breakpoint, Image, File, Field

Once it's enabled you'll find its settings on the configuration tab.



## MEDIA

---

### ➤ **File system**

Configure the location of uploaded files and how they are accessed.

---

### ➤ **Image styles**

Configure styles that can be used for resizing or adjusting images on display.

---

### ➤ **Responsive image styles**

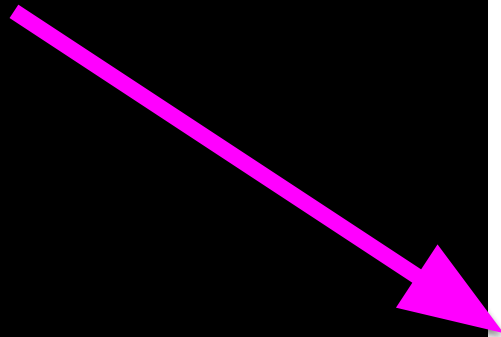
Manage responsive image styles.

---

### ➤ **Image toolkit**

Choose which image toolkit to use if you have installed optional toolkits.

Open up the settings and you'll see it comes with two starter styles:



## Responsive image styles

[Home](#) » [Administration](#) » [Configuration](#) » [Media](#)

A responsive image style associates an image style with each break

[+ Add responsive image style](#)

LABEL	MACHINE NAME
Narrow	narrow
Wide	wide

- Leave “Type” as the default.
- Fill out the sizes field with the pattern:  
(breakpoints) widths, default width
- Select which image styles the browser can pick from

#### ▼ 1X VIEWPORT SIZING []

##### Type

- Select multiple image styles and use the sizes attribute.
- Select a single image style.
- Do not use this breakpoint.

See the [Responsive Image help page](#) for information on the sizes attribute.

##### Sizes \*

(min-width: 1290px) 325px, (min-width: 851px) 25vw, (min-width: 560px) 50vw

Enter the value for the sizes attribute, for example: *(min-width:700px) 700px, 100vw.*

##### Image styles

- Large (480×480)
- Max 1300×1300
- Max 2600×2600
- Max 325×325
- Max 650×650
- Medium (220×220)
- Thumbnail (100×100)
- None (original image) -
- empty image -

Select image styles with widths that range from the smallest amount of space this image will take up to the largest. Resolution screens will need images 1.5x to 2x larger.

##### Fallback image style \*

Max 325×325 ▼

Select the smallest image style you expect to appear in this space. The fallback image style should be the same as the sizes attribute.

Save

Delete

To use the Responsive style, “Manage display” on your bundle, switch the image format to “Responsive” and pick the style from the gear:

[Home](#) » [Administration](#) » [Structure](#) » [Media types](#) » [Edit Image](#) » Image

Edit






Manage fields

Manage form display

Manage display

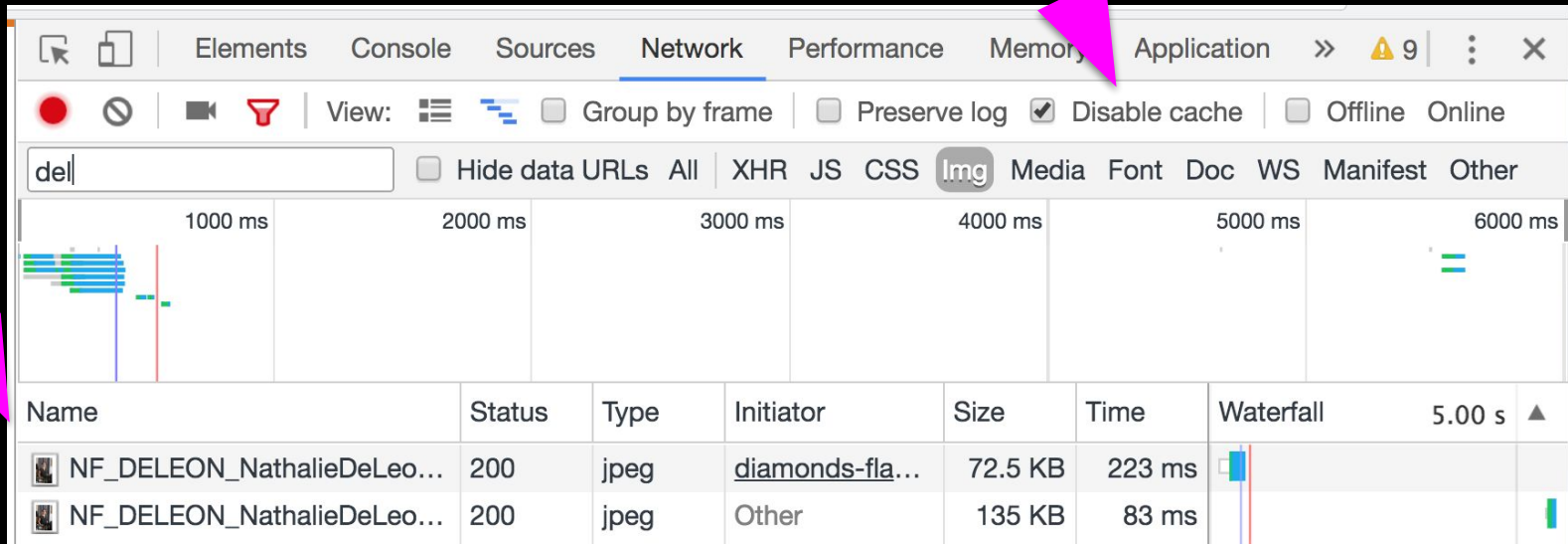
Manage moderation

[Show row weights](#)

FIELD	LABEL	FORMAT	
 Image	<input type="text" value="- Hidden -"/>	<ul style="list-style-type: none"><li>Blazy</li><li><input checked="" type="checkbox"/> Responsive image</li><li>Image (Exclude GIF Processing)</li><li>Image</li><li>URL to image</li></ul>	Responsive image style: 1/3 content column (full at small) 
 Caption	<input type="text" value="- Hidden -"/>		
 Credit prefix	<input type="text" value="- Hidden -"/>	<input type="text" value="Plain text"/>	

Clear cache, and then TEST. Use your browser's inspector's Network tab. Disable cache, make your browser window narrow, and reload.

You should see your smallest image appear. Expand your window past each breakpoint and you should see the other sizes fill in at the appropriate time. If not, check your "sizes" again.



The screenshot shows the Network tab of a browser's developer tools. The 'Disable cache' checkbox is checked. The network tab is filtered to show 'img' requests. The waterfall chart shows two requests: a 72.5 KB jpeg image and a 135 KB jpeg image. The table below the chart provides details for these requests.

Name	Status	Type	Initiator	Size	Time	Waterfall	
NF_DELEON_NathalieDeLeo...	200	jpeg	diamonds-fla...	72.5 KB	223 ms		5.00 s ▲
NF_DELEON_NathalieDeLeo...	200	jpeg	Other	135 KB	83 ms		



NOTE: THIS CAN GET VERY COMPLICATED.

Our

**4** common crops at

**6** common sizes led to

**32** Image Styles and

**21** Responsive Image Styles

*Yeah i know that doesn't quite add up because of thumbnails and oddballs*

1/2	small_6	Edit	▼
1/2 (full at small)	small_12_medium_6	Edit	▼
1/2 content column (full small)	content_column_1_2	Edit	▼
1/3	small_4	Edit	▼
1/3 content column (full at small)	content_column_1_3	Edit	▼
2/3 (full at small)	small_12_medium_8	Edit	▼
16/9 1/2	small_6_crop	Edit	▼
16/9 1/2 (full at small)	small_12_medium_6_crop	Edit	▼
16/9 1/2 content column	content_column_1_2_16_9	Edit	▼
16/9 1/3	small_4_crop	Edit	▼
16/9 1/3 (full very small, quarter very large)	small_12_large_4	Edit	▼
16/9 1/3 content column	content_column_1_3_16_9	Edit	▼

E.g., “half width” for us could be:

- half **window** width
- half **column** width
- half **column** width on desktop, and full-width on mobile
- 16/9 crop, half window width
- 16/9 crop, half column width
- 16/9 crop, half column width on desktop and full-width on mobile

1/2	small_6	Edit	▼
1/2 (full at small)	small_12_medium_6	Edit	▼
1/2 content column (full small)	content_column_1_2	Edit	▼
1/3	small_4	Edit	▼
1/3 content column (full at small)	content_column_1_3	Edit	▼
2/3 (full at small)	small_12_medium_8	Edit	▼
16/9 1/2	small_6_crop	Edit	▼
16/9 1/2 (full at small)	small_12_medium_6_crop	Edit	▼
16/9 1/2 content column	content_column_1_2_16_9	Edit	▼
16/9 1/3	small_4_crop	Edit	▼
16/9 1/3 (full very small, quarter very large)	small_12_large_4	Edit	▼
16/9 1/3 content column	content_column_1_3_16_9	Edit	▼

For each we have to select relevant images from our pool of **32** possible sizes.

We'll pick 2-6 depending on the range of possible widths.

$\frac{1}{3}$  column width might only need 640px and 960px.

Full window width might need 640, 960, 1440, 1920, 2048, 2880

- scale 2880
- 16/9 2880
- 16/9 1440
- scale 960
- 16/9 960
- scale 1920
- Large thumbnail
- Linkit result thumbnail
- Masonry rectangle (1440x720)
- Masonry rectangle (1920x960)
- Masonry rectangle (720x360)
- Masonry rectangle (960x480)
- Masonry square (1440)
- Masonry square (1920)
- Masonry square (360)
- Masonry square (480)
- Masonry square (720)
- Masonry square (960)
- Medium thumbnail
- Null image (1x1)
- RSS Enclosure Image (1280x560)
- Scale 1440

Plan ahead with a nice naming convention. I DON'T recommend “big” and “small” unless you have a very simple site.

- Our image styles are named by CROPPING / WIDTH. E.g.:  
Scale 1920  
16/9 1024
- Our responsive image styles are named similarly, with notes for adjustments:  
1/3 content column (full at small)  
16/9 1/3 (full very small, quarter very large)
- Our machine names parallel our Foundation column classes:  
small\_12\_medium\_6  
small\_12\_medium\_8

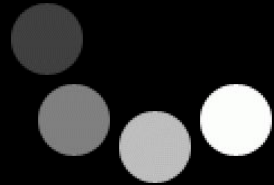
Deep breath

# Responsiveness

Two final notes:

- **4k (3840px)** image styles exceeded our server's available RAM, resulting in randomly missing images. We found 3k (2880px) to be a good compromise of performance and hi-DPI awesomesauce.
- **Older iPads** get janky when they try to downscale images > 2048px. We found a precisely 2048px-wide image style helped when we had *anything* larger than 2048px available.

# Some Magick: Lazy Loading



Lazyloaders load a placeholder -- either the smallest version of your image or a simple spinner -- and then wait for the browser to scroll close before swapping the placeholder with the actual image.



# Sounds Great Because:

Faster initial render time & less bandwidth on “bounces.”

# But:

The very users most likely to NOTICE are on slow connections.

Waiting to trigger download can mean they have to wait MANY TIMES:  
once for the initial page, and again after each scroll trigger.

## *Maybe use it for:*

- Big images at the bottom of a very long page.
- Dynamically loaded content.

## Don't use it for:

- Images only one or two flicks down. They won't finish in time.
- Lots of small images. HTML > JS when it comes to bulk processing.

We use bLazy:

[drupal.org/project/blazy](https://drupal.org/project/blazy) which is a helper for [dinbror.dk/blazy](https://dinbror.dk/blazy)

# be Lazy.js

» A lazy loading and multi-serving image script «

Download bLazy v 1.8.2  
2016.10.25 - LESS THAN 1.6KB

 Tweet 

```
var bLazy = new Blazy({  
  // options  
});
```

Here's its config page.

This needs to be ON.

Load invisible? (We don't  
because we manually trigger  
load in JS)

How close to on-screen  
should it place triggers?

Admin CSS

Uncheck to disable blazy related admin compact form styling, only if not compatible with your admin theme.

Support Responsive image

Check to support lazyloading for the core Responsive image module. Be sure to use Blazy formatter to handle responsive images.

One pixel placeholder

By default a one pixel image is the placeholder for lazyloaded Responsive image. Useful to perform a lot of operations accordingly to avoid layout reflow since Aspect ratio is not supported with Responsive image yet. Disabling this option will use the native browser behavior.

Load invisible

Set to true if you want to load invisible (hidden) elements.

**Offset**

px

The offset controls how early you want the elements to be loaded before they're visible. Default is **100**, so 100px before the element is visible.

**Save viewport offset delay**

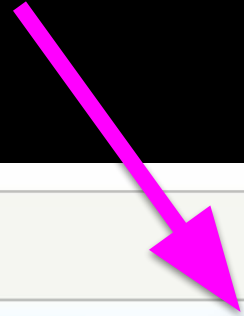
ms



Delay for how often it should call the saveViewportOffset function on resize. Default is **50ms**.

[SAVE CONFIGURATION](#)


Let's edit an image's view mode.


Blazy creates a new formatter. Switch to it:



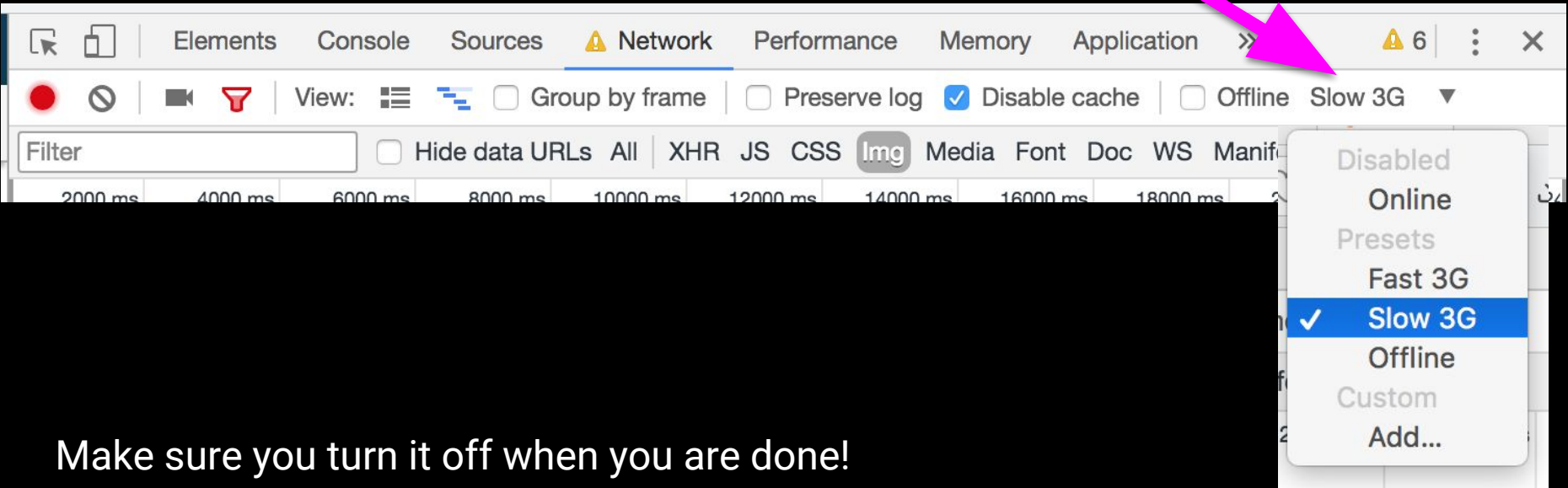
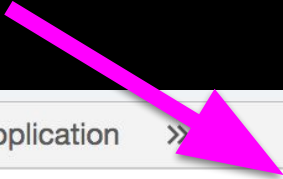
FIELD	LABEL	FORMAT
 Image	<input type="text" value="- Hidden -"/>	<ul style="list-style-type: none"><li>✓ Blazy</li><li>Responsive image</li><li>Image (Exclude GIF Processing)</li><li>Image</li><li>URL to image</li><li>Plain text</li></ul>
<b>Disabled</b>		
 Label/Name	<input type="text" value="Above"/>	<input type="text" value="Plain text"/>

In the image's settings, pick your image or responsive image style. Rebuild cache.

FIELD	LABEL	FORMAT
 Image	<input type="text" value="- Hidden -"/>	Format settings: <b>Blazy</b>
Image style <input type="text" value="- None -"/>		Thumbnail style <input type="text" value="- None -"/>
Responsive image <input type="text" value="16/9 1/3 (full very smal"/>		
MEDIA SWITCHER		
Media switcher <input type="text" value="- None -"/>		
CAPTION FIELDS		
Title <input type="text"/>		Alt <input type="text"/>

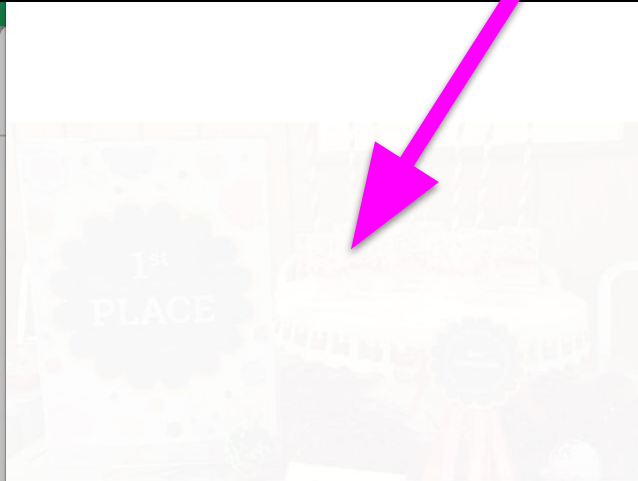


To test, play with the throttling speed in your browser's inspector Network tab. You may want to create a custom super-throttled setting.



Make sure you turn it off when you are done!

You should see it images fill in now.



Campus-wide bake-off delivers sweet treats and goodwill



Entrepreneurship in the life sciences is topic of TigerTalks in the City



Muldoon to receive Her Majesty's Gold Medal for Poetry from Queen





# Laziness

And you can trigger LazyLoads manually (say, on asynchronously loaded content or slideshow slides) by initiating a Blazy() object and pointing it at a JS object. This JS is triggered for us when someone changes a filter on our homepage:

```
jQuery(homepageActive).removeClass('hidden').toggleClass('active').each(function(){  
    var bLazy = new Blazy();  
    bLazy.load(jQuery(this));  
    setTimeout(function(){  
        jQuery(homepageActive).find('.media--loading').removeClass('media--loading');  
    }, 51);  
});
```

...documentation is at [dinbror.dk/blazy/](http://dinbror.dk/blazy/) but `bLazy.load()` is all I've ever needed.

# The last slide

- Official D8 Media Guide: [gitbook.com/book/drupal-media/drupal8-guide](https://gitbook.com/book/drupal-media/drupal8-guide)
- Roadmap for Media in Core: [drupal.org/project/ideas/issues/2786785](https://drupal.org/project/ideas/issues/2786785)
- Type Provider Modules: [drupal.org/project/media\\_entity](https://drupal.org/project/media_entity)

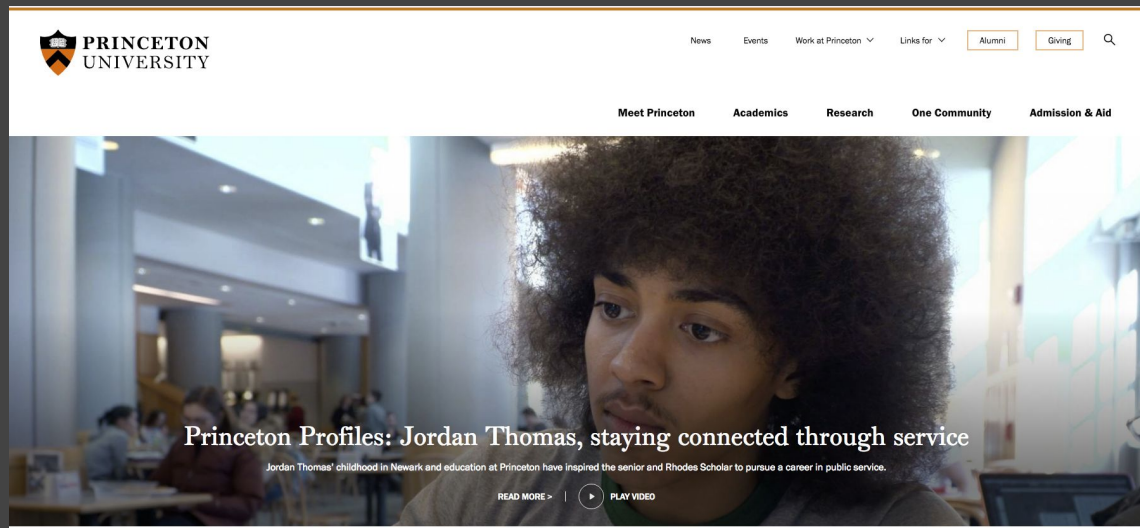
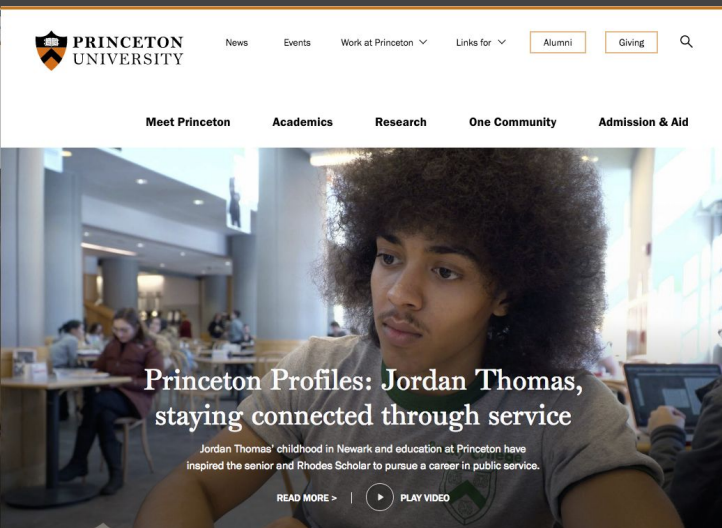


I'm @itmaybejj on Drupal Slack.

See you at the afterparty.

# Cut for time: content choreography previews

Our theme crops images differently for different screen aspect ratios; anywhere from 16x9 to 3:1. Our editors found this very hard to plan for.




# Last cool editorial thing: crop previews

Now our editors can choreograph which zone to crop towards (top, middle, bottom).

As they play with the settings, the preview window shows both extremes in a pale letterbox:

▼ CURRENT SELECTION



REMOVE EDIT

Cover crop  ▼

Cover display  ▼

Should be "Default" except for placeholder images.

JS in our admin theme applies the name of the crop target as a class to the container:

```
jQuery(document).ready(function() {  
    var tonyaSimulateLastCrop = "  
    function tonyaSimulateCrop() {  
        jQuery('.thefield').removeClass(tonyaSimulateLastCrop).addClass(jQuery('.field--name-field-news-cover-crop select').val());  
        tonyaSimulateLastCrop = jQuery('.field--name-field-news-cover-crop select').val();  
    }  
    jQuery('.field--name-field-news-cover-crop select').change( function() {  
        window.setTimeout( tonyaSimulateCrop(), 100 )  
    });  
    tonyaSimulateCrop();  
});
```

CSS in our admin theme nicely animates a generated `::before` and `::after` accordingly:

```
.thefield .media {
  width: 100%; height: 0; padding-top: 56.25%; overflow: hidden; position: relative;
  margin-bottom: 1rem;}
.thefield details .media img {
  position: absolute; top: 0; width: 100%;}
.thefield details .rendered-entity input {display: inline-block;}
.thefield details .media::before, .thefield details .media::after {
  content: " "; z-index: 10; top: 0; position: absolute; display: block;
  width: 100%;
  height: 21.5%;
  background: rgba(255,255,255,.3);
  border-bottom: 1px solid rgba(255,255,255,.75);
  transition:height .6s ease;
}
.thefield.bottom details .media::after {
  top:auto; bottom:0; border-top: 1px solid rgba(255,255,255,.75); border-bottom:0;
}
.thefield.bottom details .media::after, .thefield.top details .media::before { height:0;}
.thefield.bottom details .media::before, .thefield.top details .media::after { height: 43%;}
```

# Bonus: Entity Browser Configuration

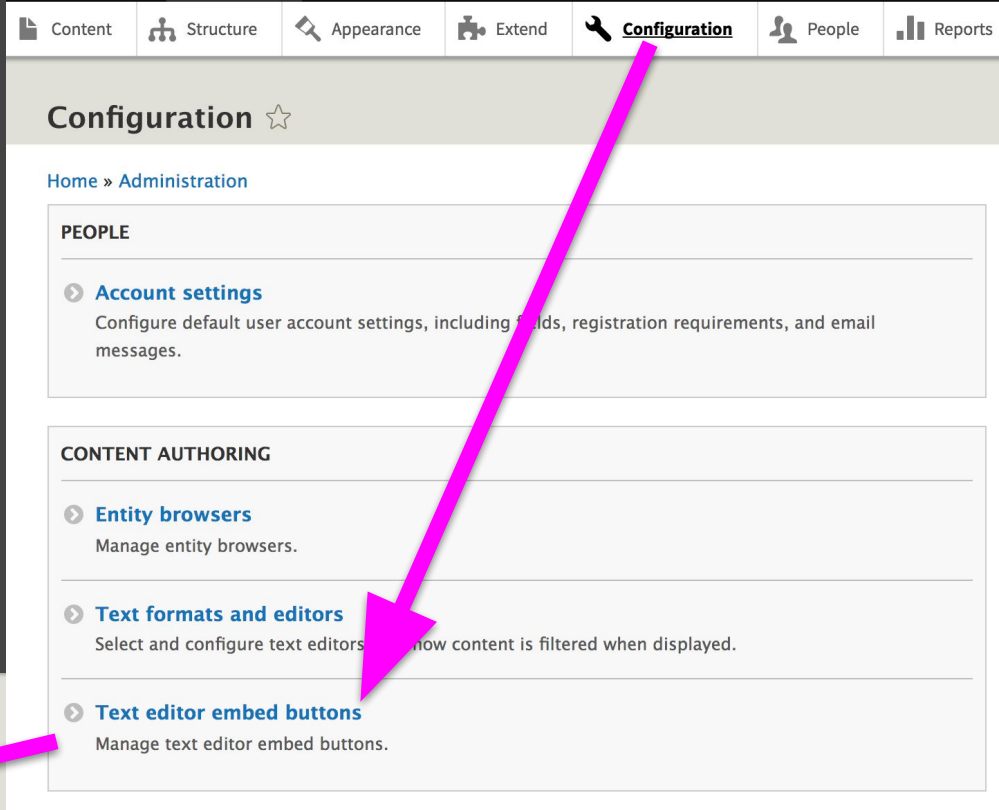




# Editing

What? You want to be able to embed a bundle?

The actual embed buttons are added under Configuration. Add one.



## Embed buttons

List

Settings

Home » Administration » Configuration » Content authoring

[+ Add embed button](#)

EMBED BUTTON

EMBED TYPE

ICON

OPERATIONS

Node

Entity

E

Edit



# Editing...

Select which media bundles and view modes should be available.

## Edit embed button ☆

[Home](#) » [Administration](#) » [Configuration](#) » [Content authoring](#) » [Embed buttons](#)

### Label \*

Machine name: media

The human-readable name of this embed button. This text will be displayed when the user hovers over the CKEditor button.

### Embed type \*

### Entity type \*

Entity type for which this button is to enabled.

### Media bundle

 Image Video

If none are selected, all are allowed.

### Allowed Entity Embed Display plugins

 Entity ID Label Thumbnail

If none are selected, all are allowed. Note that these are the plugins which are allowed for this entity type, all of these might not be available

### Button icon

Icon for the button to be shown in CKEditor toolbar. Leave empty to use the default Entity icon.

[Delete](#)

# Editing

- Go to “Text formats and editors”
- Add the embed button to the toolbar
- Enable “Display embedded entities.”

Full HTML ☆

[Home](#) » [Administration](#) » [Configuration](#) » [Content authoring](#) » [Text formats and editors](#)

At text format creation, filters that change the display of user input, for example, stripping out malicious HTML or making URLs clickable. Filters are converted into links before disallowed HTML tags are removed, all links may be removed. When this happens, the order of filters may need to be changed.

**Name \***  
Full HTML Machine name: full\_html

**Roles**

- Anonymous user
- Authenticated user
- Administrator

**Text editor**  
CKEditor

**TOOLBAR CONFIGURATION**  
Move a button into the *Active toolbar* to enable it, or into the list of *Available buttons* to disable it. Buttons may be moved with the mouse or by clicking the **E** button.

**Available buttons**

**Active toolbar**

CKEditor plugin settings

**Enabled filters**

- Limit allowed HTML tags and correct faulty HTML
- Display any HTML as plain text
- Display embedded entities  
Embeds entities using data attributes: data-entity-type, data-entity-uuid, and data-entity-references.
- Convert line breaks into HTML (<br> tags) (disabled)

# Editing

## Clear Cache...

If all is well you'll now have a basic Embed button on your node edit form that pops up a simple search for any media items.

The screenshot displays a web editor interface for creating a basic page. The top navigation bar includes 'Manage', 'Shortcuts', and 'itmaybejj'. The main toolbar contains 'Content', 'Structure', 'Appearance', 'Extend', 'Configuration', 'People', 'Reports', and 'Help'. The page title is 'Create Basic page'. The form includes a 'Title' field with the value 'Test page' and a 'Body' field with a rich text editor toolbar. The toolbar contains buttons for Bold (B), Italic (I), Strikethrough (S), Text color (x²), Background color (xₑ), Link (Iₓ), Unlink, Bulleted list, Numbered list, Indent, Outdent, and Embed (E). A pink arrow points to the Embed button. A modal window titled 'Select media to embed' is open, showing a search for 'test' and a result 'Test video'. The modal also includes a 'Next' button, a 'Published' checkbox, and 'Save' and 'Preview' buttons.

“But I wanted a nice thumbnail browser,” you say. You need a view.

You can make your own, or base yours on the **Media** page view.

Add an **Entity Browser** display to the view (or duplicate it and make your own) and add an “**Entity browser bulk select form**” to the view.

<b>Media</b>	media		Page (/admin/content/media)	<div style="border: 2px solid magenta; padding: 5px;">Edit Duplicate Disable Delete</div>
<b>People</b>	user_admin_people	Find and manage people interacting with your site.	Page (/admin/people)	

**Displays**

Media\* Entity browser\*

+ Add

- Attachment
- Block
- Embed
- Entity Reference
- Entity browser**
- Feed
- Page

Display name: Entity browser\*

**TITLE**  
Title: Media

**FORMAT**  
Format: Table | Settings

**Add field** [X]

Search: brows Category: - All -

	TITLE	CATEGORY	DESCRIPTION
<input checked="" type="checkbox"/>	Entity browser bulk select form	Media	Add a form element that lets you use a view as a base to select entities in entity browser.

Selected: Entity browser bulk select form

Add and configure fields Cancel

# Editing

Now we need to assign this view to an entity browser.

Go to config → Content Authoring → Entity Browsers and **add a browser**.

*Play with the display plugin options if your modal never appears.*

## General information ☆

[Home](#) » [Administration](#) » [Configuration](#) » [Content authoring](#) » [Entity Browsers](#)

[General information](#) » [Display](#) » [Widget selector](#) » [Selection display](#) » [Widgets](#)

### ENTITY BROWSER

**Label \***

Media Browser

Machine name: media\_browser [\[Edit\]](#)

### Entity Browser creation instructions

This is a multi-step form. In this first step you need to define the main characteristics of the Entity Browser (in other words, in the following steps of this wizard, each individual plugin can be configured, when necessary).

You can find more detailed information about creating and configuring Entity Browsers at the [official documentation](#).

**Display plugin \***

Modal ▼

Choose here how the browser(s) should be presented to the end user. The available plugins are:

- **iFrame:** Displays the entity browser in an iFrame container embedded into the main page.
- **Modal:** Displays the entity browser in a modal window.
- **Standalone form:** Displays the entity browser as a standalone form. Only intended for testing or very specific use cases.

**Widget selector plugin \***

Tabs ▼

In the last step of the entity browser configuration you can decide how the widgets will be available to the editor. The available

- **Drop down widget:** Displays the widgets in a drop down.
- **Single widget:** Displays only the first configured widget. Use this if you plan to have only one widget available.
- **Tabs:** Creates horizontal tabs on the top of the entity browser, each tab representing one available widget.

# Editing

Add a “View” widget and select your view.

## Widgets ☆

[Home](#) » [Administration](#) » [Configuration](#) » [Content authoring](#) » [Entity Browsers](#) » [Edit Entity browser](#)

[General information](#) » [Display](#) » [Widget selector](#) » [Selection display](#) » **Widgets**

### Add widget plugin

View ▼

The available plugins are:

- **Upload:** Adds an upload field browser's widget.
- **View:** Uses a view to provide entity listing in a browser's widget.
- **Upload images:** Upload widget that creates media entity images.

### FORM

⊕ Label (*View*)

view

### OPERATIONS

#### Submit button text

Select entities

Automatically submit selection

**View : View display \***

✓ - Select a view -

Media Browser : Entity browser

Previous

Finish

# Editing

Save that.

Now we need to go BACK to our Embed button and tell it to use this new Entity Browser:

*(Config → Authoring → Embed buttons)*

**Media bundle**

Image

Video

If none are selected, all are allowed.

**Allowed Entity Embed Display plugins**

Entity ID

Label

Thumbnail

Column Width

If none are selected, all are allowed. Note that these are the plugins which are allowed for this entity type, all of these

**Entity browser**

None (autocomplete)

Media Browser

select entities to be embedded.

**Button icon**

No file chosen

Icon for the button to be shown in CKEditor toolbar. Leave empty to use the default Entity icon.

[Delete](#)



# Editing

Huzzah! Our modal!

Now when you click embed in WYSIWYG you have a nice browser with some default filters.

Play with the view as needed to make this nice.


Select media to embed

Select

Publishing status Provider Media name Language

- Any - - Any - [input type="text"] - Any -

Apply

THUMBNAIL	MEDIA NAME	PROVIDER	AUTHOR	STATUS	UPDATED	OPERATIONS
<input checked="" type="checkbox"/> 	Test video	Video	itmaybejj	Published	01/08/2018 - 20:39	Edit

Select entities