Elasticsearch functionality in Clowder

There are three ways to utilize Elasticsearch via Clowder:

1. Using the /api/search endpoint
2. Using Search box in the upper right of Clowder
3. Going to Explore > Advanced Search

We want to make sure there is consistency in behavior across these methods as much as possible.

/api/search

- documented in Swagger
- automatically handles spaces in phrases via parsing request string
- **?query=**
  - supports some regular expressions e.g. .*
- **?resource_type=**file|dataset|collection
- **?field=**
  - metadata field name, "metadata." prefix not required
- **?datasetid= ?collectionid= ?tag=**
- example parsing:
  - http://localhost:9000/clowder/api/search?field=Alternative Title&query=foo bar
  - Searching Elasticsearch: {"bool":{"must":[{"regexp":{"metadata.Alternative Title":"foo bar"}}]}}

/search (via Search box)

- poorly documented
- by default, searches _all indexed fields
  - id, name, creator, parent_of, child_of, description, tags, comments, metadata
  - _all will not delve into nested objects by default, so useless for metadata unless user specifies a field as shown below
- general idea was to support basic : notation for being more specific
  - for nested objects like metadata, metadata.fieldname notation is required
- example queries:
  - banana
  - "baby carrots"
  - metadata.Favorite Fruit:banana
  - metadata.Favorite Snack:"baby carrots"
  - metadata.Favorite Fruit:banana metadata.Favorite Snack:"baby carrots"
- **should we support this kind of notation? to what extent?**
  - would be nice if the same features were available to both API and search box

/metadata/search (a.k.a. Advanced Search)

- easier to use visually
- limited to metadata fields
- supports space filtering