General Principles of Taxonomies
Taxonomies

- Systems that use meaningful principles to group, arrange, and/or describe items.
- There are many different types of taxonomies, each with their own strengths and weaknesses.
Examples of taxonomies

- Sequences of categories
  - E.g., grocery lists
- Hierarchies
  - E.g., biological taxonomies of species
- Ontologies
  - An organization of specific types of classes and relationships
- Others
  - Anatomical charts
Hierarchy

- **Mammal**
  - Bear
  - Dog

- **Person**
  - Phone Number 1
  - Phone Number 2

- **Wyoming**
  - First Congressional District

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One-to-many Hierarchical

One-to-many Non-hierarchical

One-to-one Hierarchical
A hierarchy with relationships

Transitive continuum

Inferences can be drawn based on the relationships
Relationship: Located in

- Region
  - Countries
    - States
      - Cities
  - Countries
    - States
      - Cities
  - Countries
    - States
      - Cities
  - Countries
    - States
      - Cities
  - Countries
    - States
      - Cities
Inclusion Sets

- Mammal
  - Rat
    - Brown Rat

- Vermin
  - Rat
    - Brown Rat

- Furniture
  - Chair
    - Chair-like Rock

Relationships:
- All
- Some
- Unclear
Animals
- Mammals
  - Canines
    - Wolf
    - Coyote
  - Felines
    - Lion
    - Tiger
- Birds
  - Songbirds
  - Birds of Prey
    - Robin
    - Sparrow
    - Hawk
    - Eagle

Topics
- Animals
- Mammals
- Felines
- Songbirds
- Birds of Prey
- Canines
- Coyote
- Lion
- Tiger
- Robin
- Sparrow
- Hawk
- Eagle
Facets of Education

Discipline: Math, English
Level: Primary, Secondary
Location: Canada, UK
Faceted Classification

Facets of Education

Location: Canada, UK
Discipline: Math, English
Level: Primary, Secondary

Canada
- Canada, Math
  - Canada, Math, Primary
  - Canada, Math, Secondary

Canada, English
- Canada, English, Primary
  - Canada, English, Primary

UK
- UK, Math
  - UK, Math, Primary
  - UK, Math, Secondary

UK, English
- UK, English, Primary
  - UK, English, Secondary