

# SMILE Guidelines

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## Introduction to Guidelines

Posted on July 2, 2009, 2:10 pm, by jrosenberg

### Tips on how to use the Guidelines

- All metadata fields in the NCS (the SMILE cataloging tool) have a link to the Guidelines, which gives the cataloger more information about what to enter in that field.
  - Some fields also have brief instructions or clarifications on the data entry page itself, i.e., for the *url* field, you'll see "Enter the URL for the page that will be most useful to an educator for this resource." For further information on the *url* field, you would click on [Guidelines](#), in blue and just under the field name.
  - Let us know if you have questions about any of the Guidelines, and please share good examples we should include here. Email [questions@howtosmile.org](mailto:questions@howtosmile.org)
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## Activity Basics

### recordID

Posted on May 28, 2009, 9:00 am, by evanrheenen

#### Definition

The metadata record number of the resource, which is automatically generated when a submitter enters a resource.

#### Guidelines

- You don't need to enter anything into the *recordID* field.
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### URL

Posted on May 28, 2009, 8:55 am, by rvang

#### Definition

A web-based address (*URL*) that points to the most useful page of a single learning activity or resource. *URL* stands for Uniform Resource Locator.

#### Guidelines

- The URL should point to the most useful page for a particular activity, even if it is part of a bigger learning

resource

- Another field, *relatedUrls*, allows both higher-level URLs for a larger collection the resource might come from (“Is part of”), as well as any lower-level URLs for component pieces that are related to this particular activity (“Has part”).
- Note: It is possible for multiple SMILE records to have the same **URL**, for example a document with many activities cataloged separately to make them easier to find.
- Enter the full web address, including <http://>

## **Examples**

1. For the ‘Dinosaur’ Bone Experiments, the most useful **URL** is the PDF version of the instructions. It would be challenging to give instructions on how to navigate through the larger Big Dinos Return site to the experiments. This can be noted in the *description* if it’s important:

- *title* — ‘Dinosaur’ Bone Experiments
- **URL** — [http://www.lhs.berkeley.edu/bigdinos/dino\\_ex1.pdf](http://www.lhs.berkeley.edu/bigdinos/dino_ex1.pdf) [downloadable instructions most useful]
- *relatedUrls* –
  - Is part of — Big Dinos Return, <http://www.lhs.berkeley.edu/bigdinos> [larger resource]
- *description* — “These instructions are also available by navigating through the Big Dinos Return site.”

2. For the activity Size Wheel, where students build a paper wheel from three separate printouts, from the Nanozone collection:

- *title* — Size Wheel
- **URL** — <http://nanozone.org/sizewheel.htm> [overall instruction page most useful]
- *relatedUrls* –
  - Is part of — Nanozone <http://nanozone.org> [larger resource]
  - Has part — Size Wheel printout <http://nanozone.org/sizewheel.pdf>
  - Has part — Size Wheel printout [http://nanozone.org/sizewheel\\_cover.pdf](http://nanozone.org/sizewheel_cover.pdf)
  - part — Stickers printout <http://nanozone.org/stickers.pdf>

3. The activity Pom-Pom Toss is in both English and Spanish. Therefore the most useful **URL** is the Math At Home PDF, which includes both versions on pages 7 and 8. This can be included in the *description*:

- *title* — Pom-Pom Toss / Lazando las pom-pom
- **URL** — <http://www.cmhouston.org/attachments/contentmanagers/787/MathatHome06.pdf>
- *relatedUrls*
  - Is part of — Math at Home <http://www.cmhouston.org/en/cms/?787> [larger resource]
- *description* — “This activity appears in English on page 7 and in Spanish on page 8 of the PDF.”

### **3 Comments**

1. *jrose* says:

[December 12, 2008 at 12:19](#)

[pm](#)

The Exploratorium afterschool activities site is not an “exact learning resource” but a collection of activities. This is THE granularity issue. The LHS “Size Wheel” is a web page linked to three pdf printouts — makes sense to link to the page, not the three pdfs. Maybe a good example for granularity?

2. *jrose* says:

[December 12, 2008 at 3:54](#)

pm

For Dinosaur Bone Experiments, there's a .pdf version (no pictures), and a flash step-by-step that doesn't have its own URL — you have to navigate there from the main Big Dinos page, (and actually, that screen offers Flash download before the “main” page, ). What should I catalog?

3. *jrosenberg* says:

June 24, 2009 at 2:35 pm

What's the guideline for multiple activities in a single PDF at one URL? Should it go in the description? (In this activity (found on pages 7-9 of the PDF), students...)

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## title

Posted on May 28, 2009, 8:50 am, by jrosenberg

### Definition

The name of the resource, or (if it doesn't have an explicit title) a phrase that describes the resource (like a caption).

### Guidelines and Examples

#### General

- A **title** is required for each record. If no **title** is specified for the resource, create one that is descriptive and unique, keeping resource discovery in mind.
- If there is a **subtitle** specified you can enter it separately.
  - **title** — Salt Volcano
  - **subtitle** — Make a “Lava Lite”
- **Keep it short—aim for a total word count of fewer than ten words** (or fewer than 55 characters, including spaces) for the title and subtitle together. Example of an excessively long title/subtitle mix: “Around the Town: Use maps to compare the distance to different places around town.” That title/subtitle could be effectively edited down to: “Around the Town: Use Maps to Compare Distances”
- If you enter a title and a subtitle, a colon is automatically inserted after the title when the entire title displays: Salt Volcano: Make a “Lava Light”
- If the original title (for example, “Hit the Spot”) does not give much of an idea of what the activity is about, you might want to compose a concise subtitle that is more descriptive (in this case, “Physics and Your Tennis Racquet”)
- It is not necessary to add the origin of the activity to the title since that information can be included in the *sourceInstitution* and/or *resourceAuthors* fields.
  - **title** — ~~Exploratorium AfterSchool Jitterbug~~
  - *sourceInstitution* — The Exploratorium
  - *resourceAuthors* – organization
    - *insitutionName* — Exploratorium
    - *institutionDepartment* — AfterSchool Resources
- To prevent inadvertently copying bad characters into a cataloging tool, paste text that has been copied from a web

site or other document into a text only document in an application such as Notepad. Be aware of bad characters in the title statement (ampersand &, asterisk \*, quotation mark “, etc.).

## Resources in more than one language

There are two options:

1. Create a single metadata record, mostly in English, with the multiple languages chosen in the *resourceLanguages* and English in the *metadataLanguage* fields. In this case, write the **title** in both languages separated by a forward slash, and do the same for any **subtitle**.

- **title** — Caterpillar Measure / Medida de Oruga
- *resourceLanguages* — English, Spanish
- *metadataLanguage* — English

2. Create multiple metadata records, each in a completely different language as chosen in the *metadataLanguage* field.

- **title** — Caterpillar Measure
- *resourceLanguages* — English
- *metadataLanguage* — English
  
- **title** — Medida de Oruga
- *resourceLanguages* — Spanish
- *metadataLanguage* — Spanish

## Capitals and Punctuation

- Capitalize all words in the title except articles (e.g. “a,” “an,” “the”) and prepositions (e.g. “above,” “before,” “for,” “in”), unless those parts of speech come at the beginning of the sentence.
  - **title** — Salt Volcano
  - **title** — Eat Like a Bird
  - **title** — Canine House of Cards
- Do **not** use all capital letters, i.e. SALT VOLCANO
- Keep ending punctuation in the title statement (BUT no periods).
  - **title** — Riddle Me This!
  - **title** — Fold It and Fly It!
  - **title** — What Is Static Electricity?
- Apostrophes are allowed in the title and subtitle.
  - **title** — ‘Dinosaur’ Bone Experiments

## Too Generic

- If the resource title is too generic (e.g. Lesson plans, Teacher resources, Career pathway) construct a title using words that are descriptive yet concise, and that accurately describe the content of the resource. Choose descriptive words from captions, headings, and the introductory paragraph when helpful.

## Acronyms

- Use acronyms sparingly in the title. Spell out abbreviations in the title if the meaning is unclear or the title does not make sense without further clarification.
  - Science Education Gateway (SEGway)
- Common acronyms are okay

- NASA [instead of National Aeronautics and Space Administration]

## Extraneous words

- Omit the use of extraneous words at the beginning of the title.
  - **title** — ~~Welcome to the...~~
  - **title** — ~~NASA presents...~~
  - **title** — ~~Unit...~~
  - **title** — ~~Chapter...~~
  - **title** — ~~Section...~~

### 3 Comments

1. *jrose* says:

December 12, 2008 at 3:56

pm

If it's part of a larger resource, should the title reflect that? Like, "Exploratorium AfterSchool: Jitterbug" and "Big Dinos Return: 'Dinsoaur' Bone Experiments"?

2. *jrose* says:

December 12, 2008 at 4:57

pm

The title here is "MARE's Build a Fish", or "Marine Activities, Resources & Education". Should the title just be "Build a Fish" and MARE spelled out in the description? (That's what I'm gonna do.)

3. *tlang* says:

December 15, 2008 at 10:12

am

What happens if I have a resource with two titles: one in English and one in Spanish? Each resource is on a separate page in one pdf file.

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## subtitle

Posted on May 28, 2009, 8:45 am, by evanrheenen

### Definition

Optional field that can provide more information about the activity. The subtitle may already be part of the activity or the cataloger may choose to compose one.

### Examples and Best Practices

- If the activity title is "Fold it and Fly it!" the cataloger may want to add a subtitle that will give educators a better sense of the activity, such as "Paper Airplanes on the Assembly Line."

- In the case of an activity titled “Bighorn Adventure,” the cataloger created a subtitle that gave more information: “Field Trip in Canyonlands National Park, Utah
  - Try to keep the subtitle under 50 characters, including spaces and punctuation.
  - Capitalization is the same for the subtitle as for the title. Capitalize all words in the subtitle except articles (e.g. “a,” “an,” “the”) and prepositions (e.g. “above,” “before,” “for,” “in”), unless those parts of speech come at the beginning of the subtitle.
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## relatedURLs

Posted on May 28, 2009, 8:41 am, by jrosenberg

### Definition

The *relatedUrls* field allows you to identify the components of the resource (“Has part”), and a larger resource this one might come from (“Is part of”). These are important fields to catalog.

### Guidelines

- The idea is that when a SMILE record is called up in a search, that record will also contain two additional types of links:
  - “Has part”: The various components that make up the resource (PDFs, lesson plans, etc.).
  - “Is part of”: The larger collection this resource comes from.
- A **title** is not required for a *relatedUrl*, but if a title is omitted, the link will appear as the full **url**, which gives the searcher considerably less information than a **title** would.
- You can also add additional notes in the *description* field to clarify what these links represent.

To choose *relatedUrls*:

1. Click “addRelatedUrl”
2. Choose a **kind** from the drop-down menu, either “Has part” for components of the resource, or “Is part of” for a larger collection.
3. Enter a **title** and a **url**. If there is no title specified for a given *url*, consider making one up based on what is at that link (optional).
4. Choose an option from the **fileType** drop-down menu. If the *url* entered in the *url* field is a web page, for instance (ending in ‘html’) then choose ‘web page’ from the drop-down menu. **Note that if the url extension (doc, html, etc.) doesn’t match the fileType, the page will not display in SMILE.**

### *Components (“Has part”)*

- *These are the resources that are “one level down” from the main URL you chose.* These items are what educators will use in preparing for and carrying out the activity itself.
- *Do NOT link to pages that align the resource to standards, or to assessments included. Instead, enter those URLs directly in other separate fields, standardsUrl and assessmentUrl.*
- *You can include links to “Going Further” type pages, but don’t include direct links to these supplemental materials or related references that aren’t used directly by the resource.*

### *Larger Resource (“Is part of”)*

- *These are the resources that are “one level up” from the main URL.* These might be collections of activities a

museum has for a particular topic, or resources that all come from the same book that has been put online.

- *In general, don't link to an entire museum or organization. This is NOT the place to express the top-level collection that a resource may be a part of, such as the Exploratorium, or Lawrence Hall of Science. Those can be expressed in the sourceInstitution field (under the **Authorship, Rights** tab).*

## Example

1. *The Exploratorium's Jitterbug activity is part of their AfterSchool activities collection, and also has several component parts such as videos, PDFs, and other Web pages. It might be cataloged like this:*

- *title* — Jitterbug
- *URL* — <http://www.exploratorium.edu/afterschool/activities/index.php> [most useful page shows the educator, at a glance, all the various components of the activity]
- *relatedURLs* — Is part of
  - *title* — AfterSchool activities [larger collection]
  - *url* — <http://www.exploratorium.edu/afterschool/>
- *relatedURLs* — Has part
  - *title* — Introduction
  - *url* — <http://www.exploratorium.edu/afterschool/activities/index.php?activity=136&program=577>
- *relatedURLs* — Has part
  - *title* — Step-by-Step Demonstration
  - *url* — <http://www.exploratorium.edu/afterschool/activities/index.php?activity=136&program=578>
- *relatedURLs* — Has part
  - *title* — What's Going On
  - *url* — <http://www.exploratorium.edu/afterschool/activities/index.php?activity=136&program=579>
- *relatedURLs* — Has part
  - *title* — Going Further
  - *url* — <http://www.exploratorium.edu/afterschool/activities/index.php?activity=136&display=further>
- *relatedURLs* — is part of
  - *title* — Concept Map
  - *url* — [http://www.exploratorium.edu/afterschool/activities/docs/jitterbug\\_map.pdf](http://www.exploratorium.edu/afterschool/activities/docs/jitterbug_map.pdf)

## More Condensed Examples

1. *title* — 'Dinosaur' Bone Experiments

- *URL* — [http://www.lhs.berkeley.edu/bigdinos/dino\\_ex1.pdf](http://www.lhs.berkeley.edu/bigdinos/dino_ex1.pdf) [most useful downloadable instructions]
- *relatedUrls*
  - *Is part of* — *Big Dinos Return*, <http://www.lhs.berkeley.edu/bigdinos>

2. *title* — Size Wheel

- *URL* — <http://nanozone.org/sizewheel.htm> [most useful instruction page]
- *relatedUrls* —
  - *Is part of* — *Nanozone*, <http://nanozone.org>
  - *Has part* — *Size Wheel printout*, [http://nanozone.org/sizewheel\\_cover.pdf](http://nanozone.org/sizewheel_cover.pdf)
  - *Has part* — *Stickers printout*, <http://nanozone.org/stickers.pdf>

3. *title* — Pom-Pom Toss / Lazando las pom-pom

- *URL* — <http://www.cmhouston.org/attachments/contentmanagers/787/MathatHome06.pdf> [since it's in both English and Spanish, the most useful URL is the Math At Home PDF which includes both versions on pages 7 and 8]
- *relatedUrls*
  - *isPartOf* — *Math at Home*, <http://www.cmhouston.org/en/cms/?787>

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## description

Posted on May 28, 2009, 8:35 am, by evanrheenen

### Definition

A brief (50-125 words) but comprehensive explanation of the resource. The *description* aims to help users determine if the resource is something to investigate further.

### Guidelines

- Here is a general format to consider using:
  - This is an (experiment, lesson plan for a game, activity...) about (concept, topic, event...). Learners will... (do stuff).
  - Something cool is... (something you think is worth pointing out). Ideas for use include...
  - Other important, useful, worthwhile information is...
- Pay particular attention to the first line, as this is what will show up in many search results pages. That first line should have the most pertinent and basic information, with more details coming later in the description.
- Think like a user who finds this description while searching — what do you really need to know?
- Avoid using technical words that are beyond the level of what the resource itself uses. Save those words to use as *keywords*.
- Keep it brief.

State what the resource offers. Describe what's unique, interesting, and useful about the resource but avoid overblown "marketing" language — be non-judgmental.

Use complete sentences.

Spell out all acronyms when they are initially used. Either write the acronym and then its meaning in parentheses, or write out all the words and then the acronym in parentheses.

FOSS (Full Option Science System) Coalition  
for Science After School (CSAS)

Because the description is searchable, incorporate key terms and concepts that can facilitate resource discovery.

Avoid over-summarizing the activity instructions or the phenomenon represented. Instead, provide an introduction or "blurb" about the activities use.

### Examples

1. For The Exploratorium's [Salt Volcano: Make your own miniature "Lava Lite"](#):

- *description* — This activity is to build a model of a Lava Lite (or Lava Lamp) using materials you might find on a restaurant table. It demonstrates first how oil floats on water, sinks when you add salt to it, then floats again as the salt dissolves into the water. This can be a model for the sinking and floating of "lava" in a Lava Lite. Both are based on changes in density, but in the Lava Lite it's a light bulb's heat, not salt, that is causing the "lava" to rise and fall.



- *keywords* — lava lamp, chemistry, density, sinking, floating, immiscible, dissolving, lava lite, toy

2. For the “Build-A-Fish” activity, <<http://sv.berkeley.edu/showcase/flash/fish.html>>:

- *description* — In this interactive Flash simulation learners choose an ocean environment, and then “build a fish” with body features that will help it survive there. It is easy to make changes and check the “survive-o-meter.” Each environment also includes an example of “Who Lives Here?” showing a well-adapted fish. This interactive is based on an activity in “Kelp Forest,” a curriculum by MARE (Marine Activities, Resources & Education).
- *keywords* — fish, environment, survival, evolution, adaptation, ocean, environment

## 1 Comment

1. *jrose* says:

December 12, 2008 at 1:29

pm

We probably want the examples above to be from SMILE, with links to the activity for people to compare description with resource (for training). Also, we might want a more specific list for the description (1. summary in first sentence; 2. what’s there — pdf, video, flash, etc; 3. ideas for use; 4. etc.). And maybe the 125 word limit is too low, based on an NSDL usability study that says people want more info before they click through to a resource. Finally, there’s search, where the ratio of key words to # of words is what matters — suggests a min/max word range, but not sure what is ideal...

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## subjects

Posted on May 28, 2009, 8:30 am, by evanrheenen

### Definition

The terms, phrases, or categories that best describe the topics or content of the resource.

### Guidelines

- You may choose as many terms as you like, but make sure the connection between resource and subject category is evident and will help educators find appropriate activities.

Note: Look first for the most specific subject category; when you choose that category, the categories one and two levels up will automatically be associated with the resource.

### Examples

1. From [Salt Volcano: Make your own miniature “Lava Lite”](#)

*description* — This activity is to build a model of a Lava Lite (or Lava Lamp) using materials you might find on a restaurant table. It demonstrates first how oil floats on water, sinks when you add salt to it, then floats again as the salt dissolves into the water. This can be a model for the sinking and floating of “lava” in a Lava Lite. Both

are based on changes in density, but in the Lava Lite it's a light bulb's heat, not salt, that is causing the "lava" to rise and fall.

**subjects** — Physical Sciences : Heat and Thermodynamics : Heat Transfer [for how the Lava Lite works]

**subjects** — Physical Sciences : Interactions of Matter [automatically included with selection of the sub-category Solutions]

- **subjects** — Physical Sciences : Interactions of Matter : Solutions [salt dissolves]
- **subjects** — Physical Sciences : Motion and Forces : Gravity [for sinking]
- **subjects** — Physical Sciences : States of Matter : Liquids [oil and water]
- **subjects** — Physical Sciences : Structure and Properties of Matter : Volume and Density [for sinking and floating]

## 5 Comments

1. *jrose* says:

[December 12, 2008 at 1:32 pm](#)

How many subject fields are too many for one resource? What are examples where it's a good fit, and where it's a stretch? Also we could have a link to a .pdf that has all the subject fields displayed, for quick reference.

2. *jrose* says:

[December 12, 2008 at 4:27 pm](#)

For the Dinosaur Bone Experiment, could I also catalog it for "skeleton" since it's related to the strength of bones? How do we think about it in terms of discoverability? An experiment that can also support another topic?

3. *jrose* says:

[December 12, 2008 at 4:38 pm](#)

There's no "materials science and engineering" choice.

4. *keithb* says:

[December 16, 2008 at 11:44 am](#)

where is archaeology?

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## informalCategories

Posted on May 28, 2009, 8:25 am, by evanrheenen

### Definition

These designations are more akin to hobby types than to the more academic disciplines represented in the *subjects* field.

### Guidelines

- Choose as many *informalCategories* as is appropriate.
- Try not to stretch much beyond the *informalCategories* suggested by the resource, even if you have ideas for how it could be used in seemingly unrelated ways. Save such ideas for comments on the resource.

## Choices

Here are the choices for *informalCategories*:

- *Animals*: includes pets
- *Arts and Crafts*: simple materials, but also includes trade crafts like glasswork and blacksmithing
- *Outdoor Activity*: activity that is specifically designed for the outdoors
- *Collecting*
- *Computers*: about computers, not used for activities that are simply performed on a computer
- *Crime Science*: has to do with forensics
- *Electronics*
- *Financial Literacy*: teaches something about finance or accounting
- *Food and Cooking*
- *Games*
- *Gardening*: only for activities that refer specifically to gardening
- *Historical Reenactment*
- *Literature*
- *Model Building*: vehicles, buildings
- *Music*
- *Nature and Environment*: nature activities, done inside or outside
- *Performing Arts*
- *Photography and Film/Video*
- *Physical Activity* – requires learners to move their bodies in some physical capacity including walking, running, jumping, etc.
- *Sports and Exercise*
- *Toys*
- *Transportation*

## Examples

1. From [Salt Volcano: Make your own miniature “Lava Lite”](#)

- *informalCategories* — Toys [the Lava Lite]

2. From [Breaking the Mayan Code: Mayan Math](#)

- *informalCategories* — Historical Reenactment [as students learn ancient math]

3. From Habitats of the Pond

- *informalCategories* — Outdoor Activity [designed to be done outdoors], Animals [includes identifying pond animals], Nature and Environment [nature education activity]

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## keywords

Posted on May 28, 2009, 8:20 am, by evanrheenen

## Definition

Single terms or short phrases that best define the main points of your topic. Try to include at least five (5) *keywords* or phrases for each resource.

## Guidelines

- Enter all words and phrases into a single window, separating them with commas. Click the “done” button. Each word or phrase will then be shown in its own window, for ease of editing or deletion.
- Think of the terms you yourself might use to search for the resource; these will most likely be excellent **keywords** for SMILE metadata.
- It’s ok to repeat **keywords** from the title and description fields, since our search engine will treat the fields separately.
- Try you can also include words related to the **subjects** you choose for the resource.
- Include technical terms that might be too advanced to include in the *description*, since the *description* should reflect the content of the resource.

You don’t have to repeat words that have the same basic root, like “immiscible” and “immiscibility,” since our search engine will take care of making it “immisc” to include all such cases.

Capitalize **keywords** that are proper nouns, such as Fahrenheit, Celsius, or Einstein.

## Examples

### 1. Lawrence Hall of Science’s [Build a Fish](#):

**keywords** –fish, environment, survival, evolution, adaptation, ocean environment

*description* — In this interactive Flash simulation you choose an ocean environment, and then “build a fish” with body features that will help it survive there. There are six environments, and the mouth, body, tail, and shading options are the same in each environment. It is easy to make changes and check the “survive-o-meter,” and the more suitable the feature is the more fins appear for that feature. Each environment also includes an example of “Who Lives Here?” showing a well-adapted fish.

### 2. The Exploratorium’s [Salt Volcano: Make your own miniature “Lava Lite”](#):

- **keywords** — lava lamp, chemistry, density, sinking, floating, immiscible, dissolving, lava lite, toy
- *description* — This activity is to build a model of a Lava Lite (or Lava Lamp) using materials you might find on a restaurant table. It demonstrates first how oil floats on water, sinks when you add salt to it, then floats again as the salt dissolves into the water. This can be a model for the sinking and floating of “lava” in a Lava Lite. Both are based on changes in density, but in the Lava Lite it’s a light bulb’s heat, not salt, that is causing the “lava” to rise and fall.

## 5 Comments

### 1. *jrose* says:

[December 12, 2008 at 1:59 pm](#)

How many keywords do we want? Are phrases okay (there are several in the examples above)? And it might be worth repeating keywords from title/description, since Lucene will treat it separately (we’ll know more when we start playing around). (Also, it’s “the title and description fields” not “definition” in the last bullet above.)

### 2. *jrose* says:

[December 12, 2008 at 5:35 pm](#)

I’m having trouble coming up with keywords, and I imagine it’s gonna be difficult for other people too...

3. *tlang* says:  
December 15, 2008 at 9:49 am

I think it would be helpful to know how many to enter (something to shoot for perhaps).

4. *tlang* says:  
December 15, 2008 at 9:54 am

Should we include subject areas as keywords also? Or will that be searched separately?

5. *keithb* says:  
December 16, 2008 at 9:35 am

and since we're familiar with tagging, do we use keywords as phrases – I'm submitting something that is a "sound game" so is it both words as a key word or do I have to do each separately – which does not seem correct to me – on delicious i can post multiple word phrases...

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## ageRanges

Posted on May 28, 2009, 8:15 am, by evanrheenen

### Definition

The age ranges for which the resource is appropriate. You may choose as many ranges as needed. Note that the corresponding grade levels are also supplied.

### Guidelines

- If ages or grades are specified, choose all related ranges.
- If the specified ranges don't match the choices perfectly, you can make a note in the *description*.
- If no age range is specified within the resource itself, make your best estimate — it's better to give the user a rough idea of appropriate ages than no idea at all.
- Give the age range for the primary audience of the activity. If an activity says, for instance, that it's great for "kindergartners and their parents," you can assume that the parents are, in this case, playing the role of educator or facilitator, and that the activity is aimed at children of kindergarten age (the closest category would be "4 – 6 years old"). Do not also check "18 years and older."

### Choices

Here are the choices for *ageRanges*:

- 4-6 years old (PreK-K)
- 6-8 years old (grades 1-2)
- 8-11 years old (grades 3-5)
- 11-14 years old (grades 6-8)
- 14-18 years old (grades 9-12)
- 18 years and older (adult)

### Examples

1. [Breaking the Code: Mayan Math](#) is specified "For Grade 5 and up," but grade 5 is at the end of one range, so include that range and make a note in the *description*:

- *description* — “Recommended for grade 5 and up.”
- *ageRanges* –
  - 8-11 years old (grades 3-5)
  - 11-14 years old (grades 6-8)
  - 14-18 years old (grades 9-12)
  - 18 years and older (adult)
  -

*Solids and Liquids* comes from the K-2 collection. It is optional to make this distinction in the *description*:

- *ageRanges* –
  - 4-6 years old (PreK-K)
  - 6-8 years old (grades 1-2)
- *description* — “For grades K-2.”

## 1 Comment

1. *jrose* says:

December 12, 2008 at 1:33 pm

I don't feel qualified to choose this. For Size Wheel I picked upper elementary and middle school, but that's not explicit on the resource.

## resourceTypes

Posted on May 28, 2009, 8:00 am, by evanrheenen

### Definition

The nature, function or typical use of the activity.

### Guidelines

- Always check *Activity*. If the resource does not qualify as an activity, it is not appropriate for SMILE.
- Some activities may qualify as another type of resource as well. Choose as many *resourceTypes* as are well represented in the resource. If an resource has instructions for an activity, and also has a lesson plan and related demonstrations, check all three.
- Do not stretch *resourceType* designations. If the activity is not an obvious demonstration, but rather a lab experiment that could be adapted into a demonstration, check *Activity* and *Experiment/Lab Activity* only. You are encouraged, however, to add a note about the demonstration possibility in the comments field after the cataloged resource is moved onto the live SMILE site.

### Choices

Here are the choices for *resourceTypes*:

- *Activity*: non-laboratory material designed to stimulate learning and help students develop particular skills, specific knowledge, or reflexive habits of mind. All SMILE resources are activities.
- *Demonstration*: a resource that exposes the nature and requirements of a procedure, process, or principle by manipulating real objects (term is distinct from Simulation in that demonstrations have real objects in them as

opposed to representations)

- *Experiment/Lab Activity*: a scientific procedure undertaken to make a discovery, test a hypothesis, or demonstrate a known fact
- *Field Trip*: excursion to a place to gain firsthand information, knowledge, or experience (use for: descriptions or plans for field trips and for virtual field trips)
- *Game*: an interactive environment in which participants compete, strategize, play, role-play, troubleshoot, or make decisions in order to learn a subject or skill
- *Lesson/Lesson Plan*: resource to support students' learning of specific concepts, skills, or content; often includes teaching instructions, educational goals, learning objectives, and procedures
- *Model*: a mathematical or physical construct intended to study or represent a real-world system or phenomenon  
*Simulation*: imitative representation of a system, process, photo, setting, or principle (note that the imitative nature of Simulation distinguishes it from a Demonstration, which employs real objects)

## Examples

1. From: *Building with Wonderful Junk*

- **resourceTypes** — activity, lesson plan
- **description** — “In this activity, students work in groups to plan and build large structures using recyclable materials they have brought from home. The lesson plan includes questions to ask students about the stability, symmetry, strength, and shape of their structure and its components. There is a “family letter” to send home, in both English and Spanish, asking for recycled materials. Also included is a section on “Careers and Role Models,” with biographies of an environmental scientist and astronaut from diverse backgrounds.”

## 3 Comments

1. *jrose* says:

[December 12, 2008 at 1:35 pm](#)

We should have examples for each (chosen from SMILE).

2. *jrose* says:

[December 12, 2008 at 5:03 pm](#)

The Build a Fish is a Flash-based interactive simulation (kinda), but not an applet or mathlet as the best practice suggests.

3. *tlang* says:

[December 15, 2008 at 9:34 am](#)

If I have a lesson plan/guide explaining a game, is it just a lesson plan or both a lesson plan and a game?

---

## images

Posted on May 28, 2009, 7:55 am, by evanrheenen

## Definition

An image that will represent the resource throughout SMILE. The image will show up next to the title and description on the search results and resource record pages.

## **Guidelines**

- Try to find an image that will indicate to educators how learners will interact with the resource. You might choose an image from a lab procedure, an entire browser window, etc.
- If there are no good pictures, try to find an appropriate photo or icon that is not under copyright. Search for images in the public domain. A great place to start is by looking for .gov images, which are all public domain.
- The image may be a screenshot or an image from within the resource.
- Maximum file size 2MB.
- Try to keep the maximum width or height to 800 pixels or less.
- Must be an image file saved in JPG, GIF, or PNG format.

## **How to create a screenshot**

There are several different ways to create an image for a screenshot:

1. **Directly saving an image file from a web browser:** Try to isolate the image by selecting “View image” from the list that appears when right-clicking (PC), or holding down the “Control” key and clicking (Mac) on the image. To save on the image you see, select “Save image” from that same right-click/control-click menu. Choose a name and location you can easily find.
2. **Grabbing an image from a PDF:** If the image is in a PDF file, you can use Preview on a Mac, or XXX on a PC.
3. **Taking an actual screenshot:** This method will capture an area of your screen or an entire window.

*Mac:*

- To select an area: Command-Shift-4, then select an area.
- To select an entire window: Command-Shift-4, then space, then click a window.
- Automatically saves it as a file on the desktop as “Picture\_X.png” where X is a number that increases with each screenshot.

*Windows,* it is a two step process to capture and save the file (there is an excellent tutorial [here](#)):

1. *Capture:* Click the “Alt” and “Print Screen” buttons at the same time to capture the current active window. In most versions of Windows, captured screenshots do not include the mouse pointer.
2. *Save:* Paste the image into a separate imaging program (such as Microsoft Paint, which is built-in), and save the image with a name and location you can easily find. You will have to crop the image.

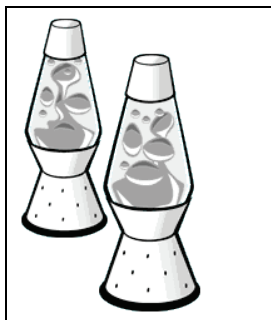
## **How to upload an image**

- Click the “upload primary image” button to pop up a window to submit a new image or a replacement for an existing image.
- Within the pop up window, click the “Browse...” button to find the image file on your computer, then “submit” to upload the image. Once the image has loaded, you must still click “submit” to accept it or “cancel” to reject it.
- Click the “delete image” button to remove an existing image.
  - Note: if you delete an image and replace it with another image, you may have to refresh your browser for the changes to appear on the NCS screen.



## Examples

1. These two images are downloaded directly from [Salt Volcano: Make your own “Lava Lite”](#). The one on the left helps clarify the title, while the one on the right shows the materials and activity of making the Salt Volcano. The one on the right is more useful to an educator trying to evaluate an activity.



Less useful to educator



More useful to educator

2. This image was saved from the PDF [Reaction: Yes or No?](#) It is one of the few images included in this resource, and it doesn't come until the end of the PDF, so remember to look through the entire resource when looking for an appropriate image.



3. Here is a screenshot from [Solids and Liquids](#) that shows the activity that students interact with. Combined with the text description, this should give educators a good sense of what this activity involves.



---

## resourceLanguages

Posted on May 28, 2009, 7:50 am, by evanrheenen

### Definition

The primary languages of the content in the resource.

## Guidelines

- Select a language only if it is used in a significant portion of the resource; generally resources will be English.
- Choose as many languages as is appropriate.

### 3 Comments

1. *jrose* says:

December 12, 2008 at 2:27 pm

What does “use a version statement” mean? And “offered on the resource as its own URL” is ambiguous. If it’s a separate URL, do we catalog that? What if there’s another language WITHIN the resource itself?

2. *jrose* says:

December 12, 2008 at 6:17 pm

What about something like where there’s a Spanish supplement that isn’t really the main activity, as in the vocabulary list from Solids and Liquids?

3. *tlang* says:

December 15, 2008 at 10:19 am

I have a resource with both English and Spanish versions of the same activity. How do I categorize the language?

---

## standardsUrl

Posted on May 28, 2009, 7:45 am, by evanrheenen

### Definition

If the resource includes information on how it relates to local, state, or national standards, the *standardsUrl* field is where you’ll provide the web address (URL) where that information can be found.

### Guidelines

This is not a required field, and should only be used if the activity specifically includes information about standards that it has been designed to meet.

### Example

For [Build a Fish](#), information about how the resource relates to standards is located at <http://sv.berkeley.edu/showcase/pages/fishstandards.html>—and that’s what you’d paste into the Standards Url field.

### 1 Comment

1. *jrose* says:

December 12, 2008 at 2:28 pm

Might be worth adding that this info might be somewhere else on the site. For Size Wheel, there’s an alignment document for the exhibit this activity comes from, though it doesn’t align this particular activity. I imagine other resources will have it though.

---

## assessmentsUrl

Posted on May 28, 2009, 7:40 am, by evanrheenen

### Definition

If the resource includes a method for assessing its results or effectiveness, this field is where you'd include the web address (URL) for where those assessments can be found.

---

## metadataSubmitter

Posted on May 28, 2009, 7:35 am, by evanrheenen

### Definition

The individual who first catalogs the resource. Later editors may edit or enhance the metadata, but the name of the original cataloger will remain the same.

### Guidelines

- If you are the originator of this record, enter your information:
  - **nameFirst**: Your first name
  - **nameLast**: Your last name
  - **institutionName**: Institution you come from (optional)
  - **emailPrimary**: Email you use for SMILE-type communications

## 2 Comments

1. *jrose* says:

[December 12, 2008 at 1:41 pm](#)

Should probably differentiate submitter from author explicitly here. Could use a best practice regarding format for “organizationalAffiliation” — no abbreviations? What if there is no organizational affiliation, like a recommendation that comes off the web? Also email should probably be required so we can contact the submitter, but with a note about privacy/use of info.

2. *keithb* says:

[December 16, 2008 at 9:27 am](#)

does this include the position/role at the organization as well

---

## metadataLanguage

Posted on May 28, 2009, 7:30 am, by evanrheenen

### Definition

The primary human language or languages of the metadata associated with the resource.

### Guidelines

- This is not the same as the *resourceLanguages* field that allows multiple languages to be selected if the resource is available in more than one language.
- Choose the primary *metadataLanguage* you are entering metadata in:
  - Arabic
  - Chinese
  - English
  - French
  - German
  - Italian
  - Portuguese
  - Russian
  - Spanish

---

## moreInfo

Posted on May 28, 2009, 7:25 am, by dbluestein

### Definition

This is an advanced field that allows programmers to add fields to the SMILE metadata record by creating XML tags. If you feel your organization or collection might benefit from adapting this field to your use, please see the instructions below, and contact Dan Bluestein at Lawrence Hall of Science ([dblue@berkeley.edu](mailto:dblue@berkeley.edu)).

### Guidelines

- **Important:** Only put **well formed XML** into this field.
- Don't worry that the text-field on the NCS is labelled "xsd:any", that won't be part of the final record.
- Free-text is not allowed in this field, only XML markup.
- You can add as many of these input fields as you need.

### Examples

1. The Exploratorium will input their "educationalDescription" field by pasting the following into the *moreInfo* window, replacing "this is some content" with the actual educationalDescription.

- *moreInfo* — `<EXPLORATORIUM:educationalDescription>this is some content.  
</EXPLORATORIUM:educationalDescription>`

2. A longer example that includes attributes::

- *moreInfo* –

```
<myImportantData>
```

```
<myDataSubnode myEssentialAttribute="attribute value">Some text content</myDataSubnode>
```

```
</myImportantData>
```

---

## Authorship, Rights

### accessRights

Posted on May 27, 2009, 12:40 pm, by jrosenberg

#### **Definition**

Everything in SMILE can be accessed freely, but some things might require registration, or might be limited in some other way

#### **Guidelines**

- Most resources will be marked “free access” – only chose the others if there is a registration hurdle, or if access is limited in some way. If access to the resource costs money, it is not a suitable for the SMILE pathway.

Choose one of the three options in the drop-down menu:

- *Free access:*
  - *Free access with registration:*
  - *Limited free access:*
- 

## resourceAuthors

Posted on May 27, 2009, 12:35 pm, by evanrheenen

#### **Definition**

The person(s) and/or organization(s) responsible for creating or developing the intellectual content of the resource.

#### **Guidelines**

- To find pertinent information regarding authorship check places on the site such as Credits, About, Contact, or a

copyright statement.

- Note that we're looking here for the author of the intellectual content of the resource, not the author of its presentation (i.e. not the designer or Web developer).
- If no other information can be found, and the resource is part of an organizational site, use the name of the organization as the author.
- For practical purposes, the author may be the producing company or organization, as with videos, CD-ROMs, or Internet sites.
- You can choose a person, an organization, or any combination as the **resourceAuthors**. If the people's names are explicit, enter each author as a separate person. If the author is an organization, or a group/department within an organization, enter it as a single organization and specify the department. If it is multiple organizations, enter each one as a separate organization.
- Here are the fields after choosing to add a person or organization:
  - person
    - **nameFirst**: person's first name
    - **nameLast**: person's last name
    - **institutionName**: institution person represents
    - **institutionDepartment**: department for internal person that authored resource
  - organization
    - **institutionName**: organization's name
    - **institutionDepartment**: department for internal group that authored resource
    - **institutionUrl**: URL of either the department or organization

## Examples

1. For the resource [Change It](#):

- **resourceAuthors** — organization
  - **institutionName** — Lawrence Hall of Science
  - **institutionDept** — FOSS (Full Option Science System)
  - **institutionUrl** — <http://www.fossweb.com/>

2. For the resource [Build a Fish](#):

- **resourceAuthors** — organization
  - **institutionName** — Lawrence Hall of Science
  - **institutionDepartment** — MARE (Marine Activities, Resources & Education)
  - **institutionUrl** — <http://www.lhs.berkeley.edu/mare/>

3. For the resource [Breaking the Mayan Code](#):

- **resourceAuthors** — person
  - **nameFirst/Last** — Maurice Bazin
- **resourceAuthors** — person
  - **nameFirst/Last** — Modesto Tamez
- **resourceAuthors** — organization **institutionName**
  - — The Exploratorium
  - **institutionDepartment** — Teacher Institute
  - **institutionUrl** — <http://www.exploratorium.edu/ti/>

### 3 Comments

1. *jrose* says:

December 12, 2008 at 1:51 pm

Some examples could be useful to help with author vs. institutional creations. Maybe the Inca example where it's from a book with authors, though could be seen as "Exploratorium" authored.

2. *jrose* says:

December 12, 2008 at 5:07 pm

What if it's a group like MARE, FOSS, etc at LHS? Should we also include the institution name? And what if it's multiple authors — Build a Fish is derivative from a written curriculum, so how do we indicate that? From a search perspective, it's unlikely anyone will look for MARE (though some might look for FOSS). On the other hand, maybe someone who likes this resource will want to search that way.

3. *tlang* says:

December 15, 2008 at 9:47 am

I'm wondering the same thing. Many of our resources come from a collection of resources with one title like Para Los Ninos or EMM3. Is there a place for this information?

---

## printedMaterials

Posted on May 27, 2009, 12:30 pm, by evanrheenen

### Definition

This field provides information about a book (or other type of printed material) that is associated with the resource. Some resources are online versions of print materials – this field provides an opportunity to link the online to the print.

### Guidelines

- **book:** You can just enter the ISBN instead of a full citation. Provide a URL if the book is available through a specialized source.
- **journal:** Enter the full citation.
- **magazineNewspaper:** Enter the full citation.

### Subfields

Here are the subfields for *printedMaterials*:

- **title:** The title (and subtitle if present) of the printed material
- **ISBN:** The ISBN can be found by searching [amazon.com](http://amazon.com) or [worldcat.org](http://worldcat.org) for the printed material, then
- **otherUrl:** If the ISBN is not known but the book is available through a web site, include that URL

### Examples

1. [Breaking the Code: Mayan Math](#) comes from a book called *Math and Science Across Cultures*:



- **printedMaterialsTitle** – Math and Science Across Cultures
- **ISBN** — 978-1565845411

2. **Reaction: Yes or No?** comes from a book called *No Hassle Messy Science with a Wow*, sold through OMSI:

- **printedMaterialsTitle** –No Hassle Messy Science with a Wow
- **otherUrl** — <https://www.omsi.edu/index.php/Chemistry/No-Hassle-Messy-Science-With-A-Wow/flypage.tpl>

### One Comment

1. *jrose* says:

[December 12, 2008 at 2:01 pm](#)

Do we want this as a separate field, or is it going to be automatic from the NCS log?

---

## copyright

Posted on May 27, 2009, 12:25 pm, by evanrheenen

### Definition

The *copyright* field asks for information about who owns the resource and what the terms of that ownership are.

### Guidelines

#### Where to look for copyright information

- At the bottom of the page. (Note that sometimes the simple ‘copyright 2005’ is linked to a more complete copyright statement.)
- Under ‘about’ or ‘contact us.’
- Under disclaimer or privacy statement. (Note that you don’t want the disclaimer or the privacy statement; you only want the copyright statement.)
- On the organization home page.

#### Subfields

**license:** asks you to choose from among many different kinds of copyright:

- *All rights reserved:* This is the most restrictive license. If it says “copyright” and nothing else, that implies all rights reserved. If there is a (c) symbol, that also implies all rights reserved.
- *Public domain:* This means there is no copyright on the resource. It will probably not say “public domain,” though it might come from a public domain collection. If a work was published before 1923, it is automatically in the public domain.
- *Creative Commons License:* This is a modern license that leaves “some rights reserved,” and in the case of the CC0 license, “no rights reserved.”

- Creative Commons licenses might be denoted with a button, such as this: There might also be text with a link like this: “This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 United States License](#).”
- A copyright holder can choose to allow people to copy and distribute a work while requiring:
  - credit (by)
  - non-commercial use only (nc)
  - no derivatives (nd)
  - derivatives that are shared-alike under the same license (sa)
- Here are combinations that should cover the Creative Commons licenses:
  - Non-commercial No Derivatives (by-nc-nd)
  - Non-commercial Share Alike (by-nc-sa)
  - Non-commercial (by-nc)
  - No Derivatives (by-nd)
  - Share Alike (by-sa)
  - Attribution (by)
  - CC0 (“No rights reserved”)
- *Open Source Licenses*: These are licenses for free open-source software. If one of the following is specified by a computer program, note it in this field:
  - GNU GPL: GNU General Public License
  - GNU LGPL: GNU Lesser General Public License BSD:
  - Berkeley Software License

**licenseUrl**: the web address (URL) where copyright/license information can be found.

**copyrightHolder**: the name of the person or organization to which the resource is licensed. For example, if you find “All rights reserved, The Regents of the University of California” on the resource, “The Regents of the University of California” would be the **copyrightHolder**.

**copyrightYear**: If a year is specified, such as “Copyright 1998,” enter 1998 here.

## Examples

1. The Exploratorium has a “Use Policy” page that explains the copyright for most of their online resources, though the dates change depending on the resource.

- **license** — All rights reserved
- **licenseUrl** – [http://exploratorium.edu/about/use\\_policy.html](http://exploratorium.edu/about/use_policy.html)
- **copyrightHolder** — The Exploratorium
- **copyrightYear** — [depends on the resource]

2. Lawrence Hall of Science

- **license** — All rights reserved
- **licenseUrl** –
- **copyrightHolder** — The Regents of the University of California
- **copyrightYear** –

3. Need a Creative Commons example to show what it looks like.

- **license** — Creative Commons: Non-commercial No Derivatives (by-nc-nd)
- **licenseUrl** — <http://creativecommons.org/licenses/by-nc-nd/3.0/us/> [this link might be taken from the button or the text for the Creative Commons license]
- **copyrightHolder** — The Regents of the University of California
- **copyrightYear** – 1998

# fundingSource

Posted on May 27, 2009, 12:20 pm, by jrosenberg

## Definition

The *fundingSource* field lets catalogers credit the organization that funded the development of the resource. A grant number can also be included.

## Examples

1. The Exploratorium's Jitterbug activity was funded by the National Science Foundation grant:

- *institution* — National Science Foundation
- *grantNumber* — DUE-0452567

---

# sourceInstitution

Posted on May 27, 2009, 12:15 pm, by evanrheenen

## Definition

Lists the institution where the resource originates.

## Guidelines

- A drop-down menu allows catalogers from SMILE partner organizations to select their organization as the *sourceInstitution* where the resource originates.
- If the organization is not on the list, choose “– type in another value –” and enter the organization's name. If you misspell it, try again.
- There is no place to put a specific group within the organization that helped create the resource. You can put a link to that group's page in the [resourceAuthors](#) field.

## 2 Comments

1. *jrose* says:

[December 12, 2008 at 2:05 pm](#)

Note to us: the dropdown menu for partner institutions is missing. Also, will there be multiple collections from a single institution (Explo? SMM?)

2. *tlang* says:

[December 15, 2008 at 10:45 am](#)

## Cost, Time, Materials

### preparationTime

Posted on May 26, 2009, 11:55 am, by evanrheenen, under [Cost, Time, Materials](#).

#### Definition

This field is meant to provide guidance to teachers about how long it will take to prepare for the activity.

#### Guidelines

- This is *not* where you note how long the activity itself will take — that information goes in the *learningTime* field.
- Do not include research time, shopping time, or cleanup time in this figure. Assume you have the materials and need to set up the activity for the learners. How long would it take?
- If preparation time is not explicitly mentioned in the activity, the cataloger has the option of leaving the field at “unspecified,” or estimating the time they think it would take to prepare for the activity.
- Choose the *preparationTime* from the drop-down menu that comes closest to the prep time specified in the resource (or estimated by the cataloger after reviewing the resource):
  - –unspecified–
  - Under 5 minutes
  - 5 to 10 minutes
  - 10 to 30 minutes
  - 30 to 60 minutes
  - 1 to 2 hours
  - 2 to 4 hours
  - 4 to 24 hours
  - 1 to 7 days
  - 1 to 4 weeks
  - 1 to 12 months
  - Over 1 year

#### Examples

1. In cataloging the [Bubble Bomb](#), a cataloger scanned the materials list and step-by-step instructions, then estimated *preparationTime* would fall within the 5 -10 minutes option.

#### **2 Comments**

1. *cbyrd* says

[December 12, 2008 at 1:57 pm](#)

The resource is a hands-on activity with videos to support it. should running time of embedded videos be included?

2. *jrose* says:

December 12, 2008 at 3:36 pm

Maybe we should move `runningTime` up so it's beneath `learningTime`. or maybe not. which is less confusing? Or maybe we should rename it to "`mediaRunningTime`" or something like that.

---

## learningTime

Posted on May 26, 2009, 11:50 am, by *evanrheenen*

### Definition

The typical amount of time a student within the specified age range would need to interact with the resource. This is not the place to list how long it takes a teacher to prepare for the activity; that information goes in the *preparationTime* field.

### Guidelines

- Use the learning time specified on the resource if provided, even if your experience with the resource is different. You can later add your experience as a comment through the SMILE site.
- If no learning time is specified, estimate the time based on your experience.
- You can add notes in the *description* field to clarify the amount of time needed.
- Choose the *learningTime* from the drop-down menu that is closest to the amount of time it will take to reasonably complete the task:
  - –unspecified–
  - Under 5 minutes
  - 5 to 10 minutes
  - 10 to 30 minutes
  - 30 to 60 minutes
  - 1 to 2 hours
  - 2 to 4 hours
  - 4 to 24 hours
  - 1 to 7 days
  - 1 to 4 weeks
  - 1 to 12 months
  - Over 1 year

### Example

1. One of the [‘Dinosaur’ Bone Experiments](#) requires observation every day for a week:

- *learningTime* — 1 to 7 days

**5 Comments**

1. *jrose* says:

[December 12, 2008 at 2:41 pm](#)

What if it's not specified on the resource? How do we estimate this? We had also discussed a drop-down menu of choices — maybe similar to cost in terms of ranges? This field might also be less useful for search if it's not a controlled vocabulary. Think of displaying them in a hierarchy (a list, or visually) — “3 45-minute periods” is very unclear to the computer.

2. *jrose* says:

[December 12, 2008 at 3:39 pm](#)

For Dinosaur Bone Experiments, the setup for the activity is not long, but then learners are supposed to check the bone every day for a week. So is “week” misleading? what's the granularity we want on time — 10 minutes a day for a week? all day every day for a week? And how might that fit with a controlled vocab?

3. *tlang* says:

[December 15, 2008 at 10:04 am](#)

Note: I estimated the learning time based on my experience with the activity, but it was defined on the resource.

4. *tlang* says:

[December 15, 2008 at 10:37 am](#)

Also, what if it's a quick game that is typically played multiple times? For instance, I have a game that takes approximately 3 minutes, but kids usually play it 4-5 times in one sitting.

5. *keithb* says:

[December 16, 2008 at 10:11 am](#)

Where is the activity design and production ( in this case a teacher needs about 2-3 hours making the cards – getting resources; images, materials, glue and then putting them together) then the time for the youth is similar to the games above -

---

## materialsList

Posted on May 26, 2009, 11:45 am, by evanrheenen

### Definition

A list of materials required for an activity, with quantities included.

### Guidelines

- Enter the items in the text box, one item per line then click “done”. To add URLs, first enter the items in the text box, then add the URL in the space provided once the item has been added.
- Enter each item on the list with the quantity required
- If the item is a specialty item, or it is information found online, you can include a *materialsListItemUrl*. See examples below.

- If materials are explicitly listed in the resource, copy and paste those items. If there is no materials list in the resource, try to describe what is needed for learning.
- Include both consumable and non-consumable resources. Include larger tools as well, such as power tools and appliances.
- List computers if they are required for the activity itself, but not if they're only for finding and/or printing the activity.

## Examples

### 1. Copied from [Sound Sandwich](#):

- ***materialsListItemName*** –
  - 2 jumbo craft sticks
  - a straw
  - a wide rubber band (#64 size)
  - 2 smaller, narrower rubber bands
  - scissors
- ***individualOrGroupMaterials*** — per student [though scissors can be shared]

### 2. Adapted from [Breaking the Code: Mayan Math](#):

- ***materialsListItemName*** –
  - The portion of the Mayan codex shown on page 2 of PDF [was "The portion of the Mayan codex shown on page 63"]
    - ***materialsListItemUrl*** — [http://www.exploratorium.edu/ancientobs/chichen/docs/Mayan\\_Math.pdf](http://www.exploratorium.edu/ancientobs/chichen/docs/Mayan_Math.pdf) [the name references the PDF]
  - Calculator (optional, but recommended)
- ***individualOrGroupMaterials*** — per group of students [can be shared]

### 3. Copied from [Make a Mummy](#):

- ***materialsListItemName*** –
  - a fresh “dressed” fish (scaled and gutted)
  - a plastic container several inches longer, wider, and deeper than the fish
  - a large box or two of baking soda (sodium bicarbonate)
  - a small scale, like a postage scale (optional)
- ***individualOrGroupMaterials*** — per group of students [these materials would serve many students]

### 4. Adapted from [Bighorn Adventure: Field Trip in Canyonlands National Park, Utah](#)

- ***materialsListItemName*** –
  - Binoculars (ideally each student will have a pair, but they could also share)
  - Track Pattern Cards and laminated construction paper “tracks” (one per student; templates included in lesson plan)
  - ‘Who Am I?’ plant riddles (one per student; template included in lesson plan)
  - at least two copies of ‘Animal Tracks of the Southwest’ (Stall 1990) or other tracking field guide
  - small poster with the anatomy of a bird on one side and the names of seven birds to be discussed on the other
  - pictures of seven commonly-seen birds bird field guide
  - bright clothing for human bird dress-up
  - maps of area

This is a tricky case—some items here are listed on a per-student basis, while other items listed are per group. But lots of cases will be equally tricky and will require the cataloger to make judgment calls. Here, we see that the majority of the items listed are for the group, and those that are per student are specified as such. The item, “bright clothing for human bird dress-up” probably means that each student should have such clothing, but we have to assume that most students will have such

clothing already and will be more than happy to wear it, so no expense would be involved in that item.

- This cataloger chose the “per group” option in the individualOrGroupMaterials field (because the majority of items are listed on a per-group basis), and estimated a per-group cost of \$20 or more (the highest amount one may chose), because the trip leader may need to buy field guides and binoculars, obtain materials for the poster, and pay for laminating the construction paper animal tracks.

## 2 Comments

1. *jrose* says:

[December 12, 2008 at 2:50 pm](#)

I'm excited about this field for finding activities. We might want a partially controlled vocabulary with common items like scissors, glue stick, printer, etc., and an open text for specialty items (like a fresh dressed fish). Does Explo or SMM have some kind of “master materials list” we could draw on? We should also consider required/optional, substitutions (this OR that and synonyms like glue/paste, types of tape, etc.), and how we will infer what's needed even if it's not written (do we say paper as well as printer? what if you can make due without something?)

2. *jrose* says:

[December 12, 2008 at 3:30 pm](#)

How should we specify quantity required? Cassie did (2), and I did for Dinosaur Bone Experiments as well. Dan said we might be able to specify quantity in drop down list — but what about 1/4 cup and other such measures? Also, what about the stove/oven that are required? Should I list them, to be explicit?

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## individualOrGroupMaterials

Posted on May 26, 2009, 11:40 am, by evanrheenen

### Definition

Describes whether the quantities and costs listed in the *materialsList* and *estimatedMaterialsCost* fields are figured based on per-student or per-group of students.

### Guidelines

- If the materials specified whether the materials are per student or per group, include what is there. Otherwise estimate whether the materials would better serve a single student.
- A group can range from pairs of students to an entire class.
- This is just a guide to help educators make rough estimates of the materials they will need while searching for resources.

### Examples

1. For sanitary reasons, each student must make a [Sound Sandwich](#), so the materials are per student:



- *materialsList* –
  - 2 jumbo craft sticks
  - a straw
  - a wide rubber band (#64 size)
  - 2 smaller, narrower rubber bands
  - scissors
- *individualOrGroupMaterials* — per student [even though scissors can be shared]

2. The materials for [Breaking the Code: Mayan Math](#) can be shared by a group:

- *materialsList* –
  - The portion of the Mayan codex shown on page 2 of PDF [was "The portion of the Mayan codex shown on page 63"]
    - *materialsListItemUrl* — [http://www.exploratorium.edu/ancientobs/chichen/docs/Mayan\\_Math.pdf](http://www.exploratorium.edu/ancientobs/chichen/docs/Mayan_Math.pdf) [the name references the PDF]
  - Calculator (optional, but recommended)
- *individualOrGroupMaterials* — per group of students (a printout and calculator can be shared)

3. The [Make a Mummy](#) activity can be done as a group:

- *materialsList* –
  - a fresh “dressed” fish (scaled and gutted)
  - a plastic container several inches longer, wider, and deeper than the fish
  - a large box or two of baking soda (sodium bicarbonate)
  - a small scale, like a postage scale (optional)
- *individualOrGroupMaterials* — per group of student

## estimatedMaterialsCost

Posted on May 26, 2009, 11:35 am, by evanrheenen

### Definition

The *estimatedMaterialsCost* field asks you to estimate the cost of an activity. The option chosen on the previous field, *individualOrGroupMaterials*, will determine for whether the estimated cost in this field is per participant or per group.

### Guidelines

- Choose an option from the drop-down menu that comes closest to your estimated cost — the number will be a rough estimate, not an exact amount.
- If you’re having trouble figuring the per-student cost, add up all the materials costs for the group and divide that figure by the number of students you think the activity would comfortably accommodate
- Some activities will specify materials per pair of students. In this case you could halve the amount of materials listed per student pair, then chose the “per student” option in the *individualOrGroupMaterials* field.
- We’re looking for the estimated cost of *consumable* materials. The working assumption for this field is that most people or organizations already have access to basic supplies such as scissors, a stapler, and a printer.
- Few activities have materials lists that fit neatly into the categories we’ve created—a little creative cataloging is often required (see examples below).

### Examples

### Example 1:

The activity [Bighorn Adventure: Field Trip in Canyonlands National Park, Utah](#) has a materials list in which some items are listed on a per-student basis, while other items listed are per group:

- Binoculars (ideally each student will have a pair, but they could also share)
- Track Pattern Cards and laminated construction paper “tracks” (one per student; templates included in lesson plan)
- ‘Who Am I?’ plant riddles (one per student; template included in lesson plan)
- at least two copies of ‘Animal Tracks of the Southwest’ (Stall 1990) or other tracking field guide
- small poster with the anatomy of a bird on one side and the names of seven birds to be discussed on the other
- pictures of seven commonly-seen birds
- bird field guide
- bright clothing for human bird dress-up
- maps of area

This is a tricky case, but lots of cases will be equally tricky and will require the cataloger to make judgment calls. Here, we see that the majority of the items listed are for the group, and those that are per student are specified as such. The item, “bright clothing for human bird dress-up” probably means that each student should have such clothing, but we have to assume that most students will have such clothing already and will be more than happy to wear it, so no expense would be involved in that item.

This cataloger chose the “per group” option in the individualOrGroupMaterials field (because the majority of items are listed on a per-group basis), and estimated a per-group cost of \$20 or more (the highest amount one may chose), because the trip leader may need to buy field guides and binoculars, obtain materials for the poster, and pay for laminating the construction paper animal tracks.

### 3 Comments

1. *jrose* says:

[December 12, 2008 at 2:52 pm](#)

Need examples. Also, what are the assumptions? That they have a printer, scissors, glue, other basics? What does the assumed SMILE toolbox look like?

2. *jrose* says:

[December 12, 2008 at 3:35 pm](#)

Is this consumable cost? What about discounts for a group? (That is, some materials won't be available in single-person quantities, like vinegar, wire, etc.)

3. *jrose* says:

[December 12, 2008 at 3:43 pm](#)

Specific to the Dinosaur Bone Experiment, should we differentiate between free/junk (like chicken bones) and stuff to purchase?

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## Diversity

### accessibility

## **Definition**

Notes particular physical functions that the activity requires of learners.

## **Guidelines**

Check all functions that are needed to participate in the activity. Included are:

- see
- see color
- read
- hear
- use keyboard
- use mouse
- be mobile
- smell
- taste
- touch

## **Examples**

1. To participate in the online activity called [Zoom: Travel to a Star and Back to Earth](#), a learner would need to be able to see, to read, and to use a mouse, and so a cataloger would check those boxes. The activity requires none of the other physical functions listed in this field, so those boxes would not be checked.
2. The field trip activity, [Community Garden Inventory: Garden Hike](#) requires that learners be mobile (they walk around the garden), read (they need to read and fill in worksheets), and see (they need to notice and report on what they see in the garden). Of course, this activity *could* be adapted to the needs of non-mobile learners who can't see very well, but the activity as it stands requires mobility and decent vision, so we fill out the accessibility field with that in mind.

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## **targetedStudentPopulations**

Posted on May 25, 2009, 9:55 am, by evanrheenen

### **Definition**

Notes if the resource was explicitly developed for any of the listed student populations.

### **Guidelines**

- You may mark as many of the categories as needed, but only use this field if the resource was explicitly designed for a particular population. If it is not, but you feel it would be useful, note that in the description field.

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## **learningStyles**

Posted on May 25, 2009, 9:50 am, by evanrheenen

### **Definition**

Notes whether or not the resource supports certain learning styles.

## **Guidelines**

- Check as many boxes as is appropriate.
- 

## **culture****Ethnicity****Gender**

Posted on May 25, 2009, 9:45 am, by evanrheenen

### **Definition**

This field notes how the resource relates to a variety of cultural, ethnic, or gender groups

### **Guidelines**

- Catalogers choose a group from the drop-down menu, then check the applicable boxes—from ” Explicitly developed for this group” to “Uses inclusive images of people from this group.” You may mark as many of the options as are applicable.
- 

## **Place and Time**

### **placeName**

Posted on May 24, 2009, 11:00 am, by evanrheenen

### **Definition**

Information in this field allows users to search for an activity related to (or taking place in) a particular location, or associated with a particular place-based event, like an historic flood or volcanic eruption.

### **Guidelines and Examples**

#### **Single place**

- Modify simple names by their larger political or administrative entity, separate with a comma:
  - *placeName* — Columbus, Ohio

#### **Geographic features**

- For places that are geographic features (rivers, deserts, etc.), enter the name and follow with the larger political or administrative entity. Separate entries with a comma:
  - *placeName* — Lake Erie, Ohio
  - *placeName* – Johnstown Flood, Johnstown, Pennsylvania

- *placeName* — Grand Canyon, Arizona

## Type of geography

- Names should include a word or phrase that indicates the type of geographic name entered to explain the place, feature, or event:
  - *placeName* — Niagara Falls, New York [not just Niagara Falls]
  - *placeName* — Mississippi River [not just Mississippi]

## Too generic

- Do not use undefined geographic entities:
  - *placeName* – ~~Mid Atlantic States~~ [too undefined]
- If a location cannot be pinpointed on the resource, consult the [Getty Thesaurus of Geographic Names](#) to determine if the name or phrase is a recognized political or administrative entity:

## More Examples

The [Mayan Math](#) activity is associated with the Mayan ruin: *placeName* — Chichén Itzá, Mexico.

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## geographicalCoordinates

Posted on May 24, 2009, 10:55 am, by evanrheenen

### Definition

Describes a resource's connection to a specific geographic point or area. The function of this field is to allow users to search by map points or areas for place-based activities. We use decimal degrees (i.e., -124.08° ) rather than the degrees minutes seconds format (i.e., -12448W).

### Example

The [Bighorn Adventure: Field Trip in Canyonlands National Park, Utah](#) is an activity directly associated with Canyonlands, and would benefit from being cataloged so that people looking for activities in that area would find it.

### Guidelines

#### *Bounding Box tool*

The easiest way to populate the four coordinates windows is to use the “bounding box” tool:

1. Click on the “bounding box” button to pop up a window.
2. Type in a place name, as complete as possible, such as “Canyonlands National Park, Utah,” or Tulum, Yucatan Peninsula, Mexico.”
3. Hit the “geocode” button
4. The map should now be centered on the desired area, though because it stays at a very distant view, it may look like nothing has happened.
5. Use the zoom slider to zoom in on targeted area
6. When you find the general area you want to designate, click “Add bounding box.”
7. A box will appear on the map, which you can alter in size and shape according to your needs.
8. Manipulate the box to encompass your targeted area
9. When you've created the box you want, click the “Send values” button. The four coordinates (longitude and latitude)

at the corners of that box will automatically populate the four “coordinates” windows in the NCS tool.

- Note 1: Because most areas you’ll want to designate are not box-shaped, you’ll need to approximate the location of the area.
- Note 2: When the cursor is in the shape of a hand with a pointing index finger, you can change the size of the bounding box. When cursor is a hand with all fingers showing, you can move the box around the map.

### ***Entering coordinates by hand: point or box***

If the bounding box tool doesn’t work for your purposes, you can enter coordinated “by hand.” Whether you want to enter a point or a box, all four coordinates must be filled in: west, east, north, and south.

- **Point:** Useful for something with very little area, such as a monument.
  - To enter a point: Repeat the latitude and longitude values by making the east and west coordinates be equal and the north and south coordinates be equal. This can be done by hand, or by modifying what the Bounding Box tool returns.
- **Box:** Useful for larger land areas.
  - To enter a box: Use the Bounding Box tool or enter 4 different coordinates by hand.
- If you have ***geographicCoordinates*** from another source, you can populate the four coordinates windows by hand as a box or point.
- Careful! Make sure your coordinates are in decimal degrees, and limit the number of digits you enter! Read **About latitude and longitude** below for more info.
- You can change a box created using the Bounding Box tool into a point by copying by hand two coordinates (like North and East) into the other two (South and West, respectively).

### **About latitude and longitude**

- **Latitudes** run parallel to the equator and range from  $-90^\circ$  to  $90^\circ$ 
  - Enter latitude values in decimal degrees.
  - Enter values in the following format **##.##**, that is, to a maximum of two decimal places.
  - For those values less than 1 degree, use a leading zero, e.g. 0.93.
  - Use positive values for latitudes north of the equator (Northern hemisphere).
  - Use negative values for latitudes south of the equator (Southern hemisphere).
- **Longitudes** run from pole to pole and range in value from  $-180^\circ$  to  $180^\circ$ ; the prime meridian ( $0^\circ$ ) runs through Greenwich, England.
  - Enter longitude values in decimal degrees.
  - Enter values in the following format **###.##**, that is, to a maximum of two decimal places.
  - For those values less than 1 degree, use a leading zero, e.g. 0.93.
  - Use positive values for longitudes east of the prime meridian (Eastern hemisphere).
  - Use negative values for longitudes west of the prime meridian (Western hemisphere).

### **Examples**

1. [Breaking the Code: Mayan Math](#) is set in Chichén Itzá, Mexico, and The Exploratorium even [has a map](#) showing where this is.

### **More Examples**

1. *placeName* — Mt. Hood, Oregon, United States

- ***geographicCoordinates*** — [these form a point]
  - West:  $-124.08^\circ$
  - East:  $-124.08^\circ$

- North: 42.92°
- South: 42.92°

2. *placeName* — Alaska, United States:

- ***geographicCoordinates*** — [these form a box]
  - West: 173.5°
  - East: -130.0°
  - North: 71.5°
  - South: 51.25°

3. *placeName* — ArcticGrand Canyon National Park, Arizona, United States (approximately)

- ***geographicCoordinates*** –
  - West: -114°
  - East: -111°
  - North: 37°
  - South: 35°

4. *placeName* — Contiguous United States

- ***geographicCoordinates*** –
  - West: -125°
  - East: -67°
  - North: 50°
  - South: 24°

5. *placeName* — Arctic region

- ***geographicCoordinates*** — [approximately]
  - West: -180°
  - East: 180°
  - North: 90°
  - South: 70°

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## time

Posted on May 24, 2009, 10:50 am, by evanrheenen

### **Definition**

Describes a resource's connection to specific holidays, seasons, and dates.

### **Guidelines and Examples**

- ***timeDescription***: the name of the day or event (if there is one)
  - ***timeDescription*** — Day of the Dead
  - ***timeDescription*** — Independence Day, USA
- ***season***: If it is a seasonal resource, choose one or more seasons by checking the appropriate boxes. You can also enter a specific date separately.
- **date**:

- Recurring holiday or day of the year, select a day and a month and leave the year blank.
  - **date** — 2 November (for Day of the Dead)
  - **date** — 4 July (for Independence Day, USA)
- Specific date in history, make sure to also specify the year (WHAT ABOUT BC?)
  - **date** — 4 July 1776 (for historical date of American Independence)

**Example of an activity related to an historical event:**

**Drag: Parachute from the Stratosphere** is an online game that teaches about drag and friction. It's also a commemoration and reenactment of the longest ever (at that point in time) freefall jump by Air Force Captain Joe Kittinger, which happened on August 16, 1960. Educators looking for "it happened today" activities could search by date and find this record. Or educators interested in the history of aviation and space travel, looking for activities that might teach about a particular year or decade, could find this activity.

Here's how it worked, field-wise.

**timeDescription:** Activity commemorates and reenacts longest ever (at that point in time) freefall jump by Air Force Captain Joe Kittinger.

**day:** 16

**month:** August

**year:** 1960