The Abstraction Ladder

You need to take notes on this presentation in your ISN. Your notes will begin on page 27 and must be in Cornell format. Do not go beyond page 31 with your notes and activities.
What is it and where does it come from?

- The abstraction ladder comes from English professor S.I. Hayakawa
- Book on semantics *Language in Thought and Action*
- Fields of language and rhetoric (Hayakawa, 1940)
- Bret Victor’s interactive essay, “Up and Down the Abstraction Ladder: A Systematic Approach to Interactive Visualization,” describes applications of the abstraction ladder in mathematics and computer science
S.I. Hayakawa thoroughly explained the ladder of abstraction in his book, *Language in Thought and Action*. According to Hayakawa, the ladder should be understood in ascending order. The writer gives an example of Bessie the cow who lives on a farm with other cows and animals. While the concept begins with a specific concept, Bessie, it ends on a broad note with a discussion of wealth and livestock in general. The central goal in the ladder of abstraction as illustrated by Hayakawa is for the first concept to ignite interest that leads to a complete analysis of a general subject.

**Beginnings: Concrete Thinking**

At the bottom of the abstraction ladder is concrete thinking. Upon reaching the age of eight or nine, humans tend to question concrete or factual happenings in the world. A child within these age brackets may ask a parent where their baby brother or sister came from, or why the wind blew the tree over. Such inquiries are evidence of concrete thinking and imply that the individual has begun climbing the ladder of abstraction. As time passes, individuals begin to broaden their horizons when thinking until they finally reach abstraction.

from What Is the Ladder of Abstraction? | eHow.com http://www.ehow.com/info_8409166_ladder-abstraction.html#ixzz2DxTVpKrN
At the Top: The Abstract Thinker
Abstract thinkers are at the top of the ladder. Such individuals do not specify matters when thinking on them, but rather express themselves in complex terms. An abstract thinker may question the reasoning behind violence in the world. While such a concept is broad and should be answerable, it becomes rhetorical when an individual considers differences in cultures throughout the world. Abstract thinkers are more focused on broad subjects such as life and love, and less on specific concepts like Aunt Mabre's pie.

In Writing: Storytelling
While good storytellers are those who can effectively fluctuate on the ladder of abstraction, average storytellers make abrupt shifts between the different levels of reasoning. A good storyteller will begin at a specific concept like Joe's new car in one paragraph or sentence, and move to a broad subject like wealth in the next. Although an average writer may also make similar moves in his story, the transition will not be as smooth. Instead of connecting the new car with lavish living in the same paragraph, an average writer will make Joe's car and lavish lifestyles into two separate paragraphs. It will then be the reader's responsibility to make the connection.

Read more: What Is the Ladder of Abstraction? | eHow.com http://www.ehow.com/info_8409166_ladder-abstraction.html#ixzz2DxTfXJP4
The abstraction ladder

Abstract  Vague
Mode of Transport
  Vehicle
    Car
     Convertible
        Ford Convertible
          Ford Mustang Convertible
             Red Ford Mustang Convertible
                1965 Red Ford Mustang Convertible

Concrete  Definite

Examples and Resources
Moving Along Hayakawa’s Ladder of Abstraction

Abstract: Existing in thought or as an idea but not having a physical or concrete existence (Oxford English Dictionary).

Levels of Abstractions:

Level Four: abstract nouns
Examples: life, beauty, love, time, success, power, happiness, faith, hope, charity, evil, good

Level Three: broad group names
Examples: People, men, women, young people, everybody, nobody, industry, we, goals, things, television

Level Two: more definite groups
Examples: teenagers, middle-class, clothing industry, parents, college campus, newborn child, TV comedies, house plants

Level One: specific, identifiable nouns
Examples: Levi 501 jeans, my blue, three bedroom house on Hollis Street, *In Living Color*, Bud commercials, African violets, Tina’s newborn sister, Mina
Moving Along Hayakawa’s Ladder of Abstraction

<table>
<thead>
<tr>
<th>Abstraction Ladder</th>
<th>(This exercises come from Hayakawa's Language in Thought and Action)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract: Wealth</td>
<td></td>
</tr>
</tbody>
</table>

Concrete/Specific:
## Moving Along Hayakawa’s Ladder of Abstraction

Abstraction Ladder  
(This exercises come from Hayakawa's Language in Thought and Action)

<table>
<thead>
<tr>
<th>Wealth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset</td>
</tr>
<tr>
<td>Farm Asset</td>
</tr>
<tr>
<td>Livestock</td>
</tr>
<tr>
<td>Cow</td>
</tr>
</tbody>
</table>

Bessie, the cow itself, in all its bovine glory
Moving Along Hayakawa’s Ladder of Abstraction

<table>
<thead>
<tr>
<th>Level 4</th>
<th>Society</th>
<th>Human Endeavors</th>
<th>Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 3</td>
<td>Most People</td>
<td>Industry</td>
<td>Farm Assets</td>
</tr>
<tr>
<td>Level 2</td>
<td>Spoiled Child</td>
<td>Cosmetic Company</td>
<td>Cattle</td>
</tr>
<tr>
<td>Level 1</td>
<td>My sister, Tracy</td>
<td>Max Factor, Inc.</td>
<td>Bessie, the cow</td>
</tr>
</tbody>
</table>

Notice how the abstraction ladder relates to Costa’s Levels of Questioning.
Show and Tell

- Open up and read the article “Show and Tell” by Roy Peter Clark.
- Once you have finished, continue with the presentation and your notes.
Instructions

1. Speak using specific examples. Regardless of what it is that you may be discussing, concrete examples will always help ground a listener's understanding of what you are trying to convey. This is especially true of concepts that may require some form of demonstration, such as laws of physics or properties of matter.

2. Explain how the things you are discussing relate to the people you are speaking with. Speakers who tend toward the top end of the ladder are frustrating, because it isn't quite clear what they are talking about or why it is relevant. To be a more effective speaker, you want to show your listeners how your opinions or beliefs impact their lives.

Read more: How to Descend the Ladder of Abstraction | eHow.com http://www.ehow.com/how_7824220_descend-ladder-abstraction.html#ixzz2DxT43B8u
Instructions

3. Teach your listener, rather than assuming he knows something. This is a common issue speakers face when working with a large amount of technical jargon. Making any assumptions about your listener will hurt your ability to speak clearly and effectively. Help listeners understand what you have to say by instructing them in the fundamental concepts of anything you are talking about. Pay attention for cues in your listener that indicate he may not be following you, and ask questions about how you can be clearer.

4. Substantiate your claims using evidence and proof. If you are trying to convince your listeners that something is true, offer them proof that you are correct. This could be in the form of a peer-reviewed study, a newspaper article, anecdotal evidence from a professional, or physical evidence from an object or location. Use evidence and proof to ground your statements in reality, and to offer credence to the reliability of your viewpoint.

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http://www.ehow.com/how_7824220_descend-ladder-abstraction.html#ixzz2DxT43B8u
Climbing the abstraction ladder

- Language can be concrete/specific or abstract
- Concrete language is clear, specific, and precise.
- The more abstract the word is the less specific it is.

The "abstraction ladder" is a device to illustrate the different levels of abstraction on which different terms exist. Notice that as you go from "animal" to "pampered white toy poodle" you’re going down in terms of abstraction, you’re getting more and more specific. As you get more specific, you more clearly communicate your own meanings and more easily direct the listener's attention to what you wish. For each of the terms listed below, indicate at least four possible terms that indicate increasing specificity. The first example is done for you.

Pearson Abstraction Exercise
http://wps.ablongman.com/ab_devito_intrprsnl_11/43/11048/2828401.cw/content/index.html
Hayakawa added a preface to the 1949 edition of the book which contained the following warning:

The original version of this book, *Language in Action*, published in 1941, was in many respects a response to the dangers of propaganda, especially as exemplified in Adolf Hitler’s success in persuading millions to share his maniacal and destructive views. It was the writer’s conviction then, as it remains now, that everyone needs to have a habitually critical attitude towards language — his own as well as that of others — both for the sake of his personal well-being and for his adequate functioning as a citizen.
Reduce Your Notes

- You will now review your record column and add questions, headings, and subheadings to your recall (left hand) column.
- Once you have completed your recall column, write your summary.
Climbing the abstraction ladder

Answer the following questions after your summary.

1. The general suggestion for effective communication is to use abstractions sparingly and to express your meanings specifically with words that are low in abstraction. However, are there situations when terms high in abstraction would be more effective than specific terms? What are those situations?

2. How would you describe advertisements for cosmetics in terms of high and low abstraction? Advertisements for cereals? Advertisements for cat and dog food?

3. How would you describe political campaign speaking in terms of abstraction?

http://wps.ablongman.com/ab_devito_intrprsnl_11/43/11048/2828401.cw/content/index.html
Climbing the abstraction ladder

Your turn:
Create your own abstraction ladder. What is your Bessie? Start at the bottom rung and work your way up to wealth.