ART and SCIENCE of INTERPRETATION naturally yours
THE ART AND SCIENCE OF INTERPRETATION

Through interpretation: understanding.
Through understanding: appreciation.
Through appreciation: protection.

Freemen Tilden, Interpreting Our Heritage
NAI Definition of Interpretation

Interpretation is a communication process that forges emotional and intellectual connections between the interests of the audience and the inherent meanings in the resource.
Tilden’s Definition of Interpretation

... an educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information.
Ham’s Definition of Interpretation

... is an approach to communication. It involves translation of the technical language of natural or cultural science into terms and ideas that people who are not scientists can readily understand.
Sue’s Definition of Interpretation

... is the art of awakening appreciation of and stewardship for our cultural and natural heritages, through factual, hands-on experiences, stories, anecdotes, examples, and demonstrations, in people who have not had the opportunity to be acquainted with these resources.
VALUE BASED PROGRAM

- Economic
- Recreational
- Educational
- Scientific
- Historic
- Natural
- Conservation
- Aesthetic
CITY OF FORT COLLINS
NATURAL AREAS PROGRAM
EDUCATION MISSION AND GOALS

• Increase awareness
• Promote understanding
• Importance and meanings
• Welcoming presence
• Sense of stewardship
• Meaningful experiences
• Natural area values
• Citizen involvement
• Diverse programming for diverse audiences
• Interpretive approach
• Accurate information
• Experiential and participatory learning
WHAT IS INTERPRETATION?

communication process

inherent meanings

translates of ideas

promotes understanding

reveals meanings and relationships

awakens appreciation

emotional and intellectual connections
The theme is key.

Theme = Message
Focus
Goal
Story
Take-home message
Purpose
Interpretive programs always have a theme.

The message should answer:
“Why should I care?”

“So what?” “What’s in it for me?”

“What about it?”
FACTS = SCIENCE

MEANINGS = ART
KNOW YOUR AUDIENCE!
Two Types of Audiences
<table>
<thead>
<tr>
<th>Captive Audience</th>
<th>Non-Captive Audiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>involuntary</td>
<td>voluntary</td>
</tr>
<tr>
<td>external rewards important</td>
<td>external rewards not important</td>
</tr>
<tr>
<td>formal academic approach is ok</td>
<td>informal and non-academic approach is best</td>
</tr>
<tr>
<td>must pay attention</td>
<td>don’t have to pay attention</td>
</tr>
<tr>
<td>will make an effort to pay attention even if bored</td>
<td>will switch attention if bored</td>
</tr>
<tr>
<td>Captive Audience</td>
<td>Non-Captive Audiences</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td><strong>Motivation:</strong></td>
<td><strong>Motivation:</strong></td>
</tr>
<tr>
<td>&lt; grades</td>
<td>&lt; interest</td>
</tr>
<tr>
<td>&lt; diploma</td>
<td>&lt; fun</td>
</tr>
<tr>
<td>&lt; money</td>
<td>&lt; entertainment</td>
</tr>
<tr>
<td>&lt; success</td>
<td>&lt; self-improvement</td>
</tr>
<tr>
<td>&lt; Certificates/licenses</td>
<td>&lt; self-enrichment</td>
</tr>
<tr>
<td>&lt; job/promotion</td>
<td>&lt; nothing else to do</td>
</tr>
<tr>
<td>Captive Audience</td>
<td>Non-Captive Audiences</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td><strong>Settings:</strong></td>
<td><strong>Settings:</strong></td>
</tr>
<tr>
<td>&lt; classroom</td>
<td>&lt; parks</td>
</tr>
<tr>
<td>&lt; required courses</td>
<td>&lt; natural areas</td>
</tr>
<tr>
<td>&lt; job training</td>
<td>&lt; home – tv, radio</td>
</tr>
<tr>
<td>&lt; prof. seminars</td>
<td>&lt; museums</td>
</tr>
<tr>
<td>&lt;</td>
<td>&lt; zoos</td>
</tr>
</tbody>
</table>
LEARNING STYLES

1. AUDITORY – hear and read words

2. VISUAL – see graphics and pictures; write words and draw pictures

3. KINESTHETIC – touch and movement
Learning Styles

• **Concrete Learners** – “What’s the purpose of this presentation?” Need to know why. What’s the purpose? Address this first (reveal your theme which tells them why this is important).

• **Reflective Learners** – “What are the facts?” Need the facts. Give them lots of accurate information. Do your homework and make sure you know your subject matter.

• **Abstract Learners** – “How does it work?” Try it out - do something active. Plan a hands-on activity. Let them discover something.

• **Active Learners** – “What if …?” Allow them to express themselves. This can be part of the above activity or something new.
The Right Stuff at the Right Time:
Age-Appropriate Activities

Pre-Kindergarten/ Kindergarten (3-5 yrs)

- Exploration
- Pretend, fantasy
- Short attention span
- Simple directions
The Right Stuff at the Right Time: Age-Appropriate Activities

First/Second Grade (6-7 years old)

- Matching
- Counting
- Classify according to common characteristics
- Imagination still important
The Right Stuff at the Right Time: Age-Appropriate Activities

Third/ Fourth Grade (8-9 years old)

• Simple cause and effect
• Structured investigations
• Beginning to connect specifics with general principles
• Practicing reading and writing
The Right Stuff at the Right Time:
Age-Appropriate Activities

Fifth/ Sixth Grade (10/11 yrs)
- Fact versus opinion
- Compare sites, collect data
- More content
- Putting thoughts into words
The Right Stuff at the Right Time: Age-Appropriate Activities

Middle School/High School (12-17 years old)

• Inside they are still kids

• Finding themselves, strong social sense- has to be cool!

• Content can be more advanced

• Relate content to real life

• Clear rules and boundaries
Encourage Wonder
Not Ecophobia
Tips About Group Management

• Responsibility
• Choose an age-appropriate technique
  – Expectations
  – Be positive
  – Follow through
• Ask for help
Move From Awareness to Action

- Awareness
- Appreciation
- Knowledge/Skills
- Attitudes
- Action/Environmentally Responsible Behavior/Stewardship
Understands how people impact birds and wants to help. Cuts apart soda rings to help prevent entanglement by birds at landfill.

Learns to identify different kinds, understands function of feathers, adaptations.

Finds birds amazing because they are beautiful, have variety, move in different ways (fly, run and walk), live in nests, lay eggs etc. Birds are great!

Knows birds are there. Sees birds, points to different kinds of birds.

<table>
<thead>
<tr>
<th>Infants and Toddlers 0-3 yrs</th>
<th>Preschool &amp; Kindergarten 3-6 yrs</th>
<th>First/ Second Grade 6-8 yrs</th>
<th>Third/ Fourth Grade 8-10 yrs</th>
<th>Fifth Grade-Middle School 10-14 yrs</th>
<th>High School and Beyond 14 +</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>Appreciation/ Wonder</td>
<td>Knowledge</td>
<td>Stewardship/ Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knows birds are there.</td>
<td>Finds birds amazing because they are beautiful, have variety, move in different ways (fly, run and walk), live in nests, lay eggs etc. Birds are great!</td>
<td>Learns to identify different kinds, understands function of feathers, adaptations.</td>
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</table>
A Word About Seniors or Limited-Ability Groups

Visuals – make ‘em big!

Tell them the expectations of the outing in some detail.

They always arrive early!

Speak loudly, always face your audience.

Standing is often harder than walking or sitting. Build in some sitting stops.
FOUR CHARACTERISTICS OF INTERPRETIVE PRESENTATIONS

1. THEMATIC
2. ENJOYABLE and UNDERSTANDABLE
3. RELEVANT
4. ORGANIZED
ALL INTERPRETIVE PROGRAMS HAVE A THEME!

- **Topic** = subject
- **Theme** = message

*Topic* = *theme*
“When it comes to **TOPIC**, I want my audience to understand **THEME.**”
PEOPLE FORGET FACTS

PEOPLE REMEMBER THEMES
THREE EASY STEPS TO A THEME

1. SELECT TOPIC

2. NARROW IT DOWN

3. WRITE THEME
CHARACTERISTICS OF A THEME

1. It’s a short, simple, complete sentence.

2. It contains only one specific idea.

3. It reveals the purpose of the presentation.
# All Successful Interpretive Programs Have a Theme!

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>THEME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insects</td>
<td>Insects are important in recycling nutrients in the soil.</td>
</tr>
</tbody>
</table>
### All Successful Interpretive Programs Have a Theme!

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>THEME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trees</td>
<td>Trees give off oxygen and take up carbon dioxide.</td>
</tr>
<tr>
<td>TOPIC</td>
<td>THEME</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Meadowlarks</td>
<td>Meadowlark populations are in decline.</td>
</tr>
</tbody>
</table>
THEMES SHOULD:
• be short and simple and contain only one idea.
• reveal the overall purpose of your program.
• be specific.
• be interesting.

Ask yourself:
• does my theme tell an important story?

• can participants relate to my theme?

• after the program, what will the audience say it was about?
Theme Placement Matters

- Thorndyke’s study:

✓ theme in beginning – most memorable
✓ theme at end – next most memorable
✓ theme in middle - forgettable
✓ no mention of theme – huh?
PEOPLE FORGET FACTS

PEOPLE REMEMBER THEMES
“It don’t mean a thing, if you ain’t gotta theme!”
Interpretation is Enjoyable

- Entertainment isn’t the main goal.
- All good communication is entertaining.
- Formal setting media may turn off your audience.
- Humor can make a program more enjoyable.
- Music or illustrative material adds interest.
- The audience should have fun!
Techniques that add enjoyment

- Smile – engage your audience.
- Use active verbs
- Show cause and effect
- Link science to human history
- Use visual metaphors

- “Vehicle”
- Overriding analogy
- Contrived situation
- Personification
- Focus on individual
- Props and visual aids
- Exaggerate size

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ENJOYABLE

- Engage the audience – communication is two-way.
- The audience is your partner!
Interpretation is enjoyable and understandable

Make comparisons:

**Similes:** comparing two things that are not alike.

**Analogy:** comparing two things that are alike.

**Metaphors:** describing something with words that are usually used for something else.
• Use props and visual aids
UNDERSTANDABLE

- Use examples and “what ifs”
- Exaggerate size
ENJOYABLE and UNDERSTANDABLE

link science and humans
ENJOYABLE and UNDERSTANDABLE

Focus on an individual
ENJOYABLE and UNDERSTANDABLE

personification

contrive a situation
FOUR CHARACTERISTICS OF INTERPRETIVE PRESENTATION

1. ENJOYABLE and UNDERSTANDABLE

2. RELEVANT

3. THEMATIC

4. ORGANIZED
Interpretation is RELEVANT

Make it meaningful and personal.
Meaningful

Link the unknown to the known
Make comparisons:

**Similes:** comparing two things that are not alike.

**Analogy:** comparing two things that are alike.

**Metaphors:** describing something with words that are usually used for something else.
**Analogy**

- Whales have baleen that acts like a strainer for harvesting krill in arctic waters.
Metaphors

- “Arctic seas are refrigerators of the north, cold and full of food.”
Comparison

- A humpback’s tail is wider than four men standing side by side with arms spread apart.
Similes

Jellyfish are like a cactus-- beautiful when left alone but prickly to the touch.
Metaphor: describing something with a word or phrase that is usually used for something much different:

“The canoe plowed through the lake.”

WETLAND METAPHORS
✓ a wetland is a nursery
✓ a wetland is a sieve
✓ a wetland is a filter
Analogies and similes: comparing two things.
Use “as” and “like”.

A volcano eruption is like a pressure cooker.

The seed head of blue grama is like an eyelash.

The Denver Basin is like a sliced onion.
Make it Meaningful

Link the unknown to the known

HERBIVORE

EPIPHYTE
2. Interpretation is RELEVANT

Meaningful and Personal
2. Interpretation is RELEVANT

Personal
We care about:
AN OBSERVANT SCOUT CAN LEARN A LOT ON A HIKE...

HE CAN LEARN ABOUT THE "WEB OF NATURE"

SUNLIGHT, AIR, PLANTS, WATER, SOIL, BIRDS, MICROORGANISMS....

ALL WORKING TOGETHER TO MAKE A BETTER LIFE FOR BEAGLES!
RELEVANT

Self-referencing

Sue’s Book

Book About Sue

naturally yours

City of Fort Collins
Natural Areas Program
Interpretation is Personal

Self-referencing
Labeling
FOUR CHARACTERISTICS OF INTERPRETIVE PRESENTATION

1. ENJOYABLE and UNDERSTANDABLE

2. RELEVANT

3. THEMATIC

4. ORGANIZED
ORGANIZATION

- **INTRODUCTION** – tell them what you’re going to tell them.

- **BODY** – tell them

- **CONCLUSION** – tell them what you told them!
ORGANIZING YOUR PRESENTATIONS

- **INTRODUCTION:**
  - Capture your audience’s attention.
  - Reveal the theme.
  - Preview the main ideas.
ORGANIZING YOUR PRESENTATIONS

• **BODY**
  
  ➢ 3-5 main ideas

  ➢ Each idea is distinct (but of course, related to the theme).

  ➢ Balance time and emphasis on each idea.
ORGANIZING YOUR PRESENTATIONS

- **CONCLUSION**
  - ✓ Summarize the main ideas
  - ✓ Reinforce the theme – give the big picture
  - ✓ Make a definite concluding statement.
How to Organize Your Presentation

1. Decide upon a theme.

2. Select five or fewer main points based on this theme. This will be the body of your presentation.

3. Choose the subordinate information to include under each main topic. This will also be in the body of your presentation.

4. Prepare your conclusion. Also gives the bigger picture. Reinforces the theme and tells the audience again why they should care.

5. Prepare the introduction.

6. Work on transitions.
Why is organization important?
TIPS:

Memorize a few things:

Memorize your theme.

Memorize the first and last statements. This gets you talking, and it gets you not talking.

Memorize your transitions.
• Don’t memorize your talk.
• Don’t read your talk.
• Refer back your theme.
• Organize sequentially.
• Practice!
Take Time to Practice!
Practice!
Practice!
Practice!
Practice!
NON-VERBAL COMMUNICATION SAYS A LOT!
Vocal Quality
What is interpretation

Who is our audience?

Characteristics of interpretation

Presentation matters!
MISSION:

- Increase awareness
- Promote understanding
- Instill stewardship
- Natural area values
- Accurate information
- Experiential and participatory learning
The Interpretive Library

- Interpreting Our Heritage by Tilden
- Environmental Interpretation by Ham
- Interpretation of Cultural and Natural History by Knudson, Cable and Beck
- Interpretation for the 21st Century by Beck and Cable
- Sharing Nature with Children by Cornell
- Interpreting to Park Visitors by Lewis
- Personal Interpretation by Brochu and Merrimam
- The Interpreter’s Guidebook by Regnier, Gross, Zimmerman
You can become more confident, skilled and effective as you give powerful presentations as a Master Naturalist.

This 32-hour course includes:
- history, definition and principles of interpretation;
- making your programs useful, enjoyable and relevant;
- incorporating tangible things and intangible ideas into your programs;
- presentation and communication skills;
- all materials;
- optional certification testing (open book exam, program outline, 10-minute presentation);
- lots of fun, new games and activities.

CIG training is specifically for those who may not have a lot of experience in interpretation, so it is well suited for volunteers, as well as professionals who want a refresher course.

The training is free!

This training usually costs more than $300.00. City of Fort Collins Master Naturalists can take it for free!
and of ART and SCIENCE of INTERPRETATION naturally yours
Speaking assignments!