

## Unit 6: Teaching and Interpretation - How to Deliver the Message

### Defining Teaching and Interpretation

Adapted by Angela Yau from the Minnesota & Texas Master Naturalist Interpretation Curricula

#### Objective:

Participants will gain a basic understanding of interpretation and interpretive techniques.

*Interpretation is a broad, rapidly changing field. The information presented here is meant only to introduce Master Naturalists to interpretation, and provide starting points for developing interpretive experiences and materials.*

#### What is interpretation?

In general, interpretation is understood as clarifying meaning, or explaining something. You've heard of sign language interpretation and foreign language interpretation, and in these cases, the interpretation process translates meaning from one language into another. In this Master Naturalist course, we focus on "environmental interpretation," which is another form of translation, though on a different level. The National Association for Interpretation defines interpretation as "a mission-based communication process that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource." In other words, environmental interpretation is a translation of the natural world for human understanding and emotional connection.

#### History of Interpretation

Two people were instrumental in building a foundation for natural history interpretation: Enos Mills, born in 1870, was a guide who led trips in the Rocky Mountains; and Freeman Tilden, born in 1883, a newspaper reporter, author, and commentator interested in effective techniques for reaching the public.

Enos Mills once said, "A nature guide (interpreter) is a naturalist who can guide others to the secrets of nature. It is not necessary for a guide to be a walking encyclopedia. He arouses interest by dealing in big principles – not with detached and colorless information." In 1957, Freeman Tilden wrote *Interpreting Our Heritage*, the first book dedicated solely to defining the profession of interpretation. He wrote, "Thousands of naturalists, historians, archeologists, and other specialists are engaged in the work of revealing, to such visitors as desire the service, something of the beauty and wonder, the inspiration and spiritual meaning that lie behind what the visitor can, with his senses, perceive."

In his book, *Environmental Interpretation: A Practical Guide for People with Big Ideas and Small Budgets* (1992), Sam Ham defines environmental interpretation as "translating the technical language of nature science or related fields into terms and ideas that people who aren't scientists can readily understand. And it involves doing it in a way that's entertaining and interesting to these people." He stresses that this approach must begin with strongly relevant themes that provoke visitors to think.

What do these definitions have in common? Each emphasizes that interpretation is a method of revealing, or stimulating interest in and appreciation of nature. Interpretation aims to do more than simply convey facts; the facts themselves are less important than the interest and inspiration conveyed. An environmental interpreter needs to be an entertainer, a translator, and a revealer of secrets!

### Goals of Environmental Interpretation

*The Interpreter's Guidebook* by Kathleen Regnier, Michael Gross, and Ron Zimmerman outlines several goals for effective interpretation. When conducting interpretation, it is important to consider how the following goals can be met.

#### For the Visitor and Audience

- Provide recreation. Create an enjoyable experience for the audience.
- Heighten awareness and understanding of the natural and cultural environment.
- Inspire and add perspective. Answer the 'so what' question – point out why your comments are relevant to your audience and their everyday lives.

#### For the site

- Foster proper use. Help create a respect for the surroundings, and encourage stewardship.
- Develop advocates for the site. Again, answer the 'so what' question and also add a 'why should I care' question.

#### For the Agency or Organization that manages the site:

- Enhance the image of the agency/organization.
- Encourage public participation in management.

### Components of Interpretation

While there are as many variations on interpretation as there are interpreter and audience combinations, there are some simple things to keep in mind for any interpretive situation. Tilden developed several principles as the foundation for interpretive activity and his advice is as good now as it was in the middle of the 20th century. Because some of these ideas may be new to you, we'll interpret Tilden's principles listed below. As you read and think about them, realize that although they may not suit all occasions, they are still useful guides. Despite what his fourth and fifth principles recommend, sometimes you'll want to convey the incredible minutiae that make the world so wonderful, and sometimes you will have a range of ages in the same audience. If you find yourself straying from Tilden's principles, as we hope you will have occasion to do, be sure you know why you're straying. Your most important goal is to ensure an effective interpretive experience for your audience.

#### Freeman Tilden's Principles of Interpretation

1. Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile.

In other words, interpretation draws a connection between the concepts or ideas you're trying to convey with your audience's own, real-life experiences. This means you need to understand your audience; more on that later.

2. Information, as such, is not interpretation. Interpretation is revelation based upon information. But they are entirely different things. However, all interpretation includes information.

Telling a string of facts is not interpretation. We're not only conveying information when we interpret, we are revealing nature's secrets in a dramatic way. Think of it as those "aha" moments that occur when you "get it" or "see it." Effective interpretation gives just enough information for your audience to realize or deduce meaning relevant to their lives.

3. The chief aim of interpretation is not instruction, but provocation.

This is important. Just as Tilden's predecessor Enos Mills said, we don't need to be walking encyclopedias. Our goal is to provoke and inspire our audience. We want them to leave with an appreciation of nature, and a desire to learn more.

4. Interpretation should aim to present a whole rather than a part.

We usually want to convey the big picture and put our setting into a broader context. We also need to appeal to all aspects of our audience, their aesthetic, emotional, and intellectual levels.

5. Interpretation addressed to children should not be a dilution of the presentation to adults, but should follow a fundamentally different approach. To be at its best, it will require a separate program.

Children are not miniature adults. Interpreting for them requires a different mindset than interpreting for adults. If you know you will be working with children, be sure to prepare activities appropriate to their level of development. Since parents love sharing interpretive experiences with their children, interpretation for a combined audience of adults and children together can be tricky if you aren't well prepared.

## **Interpretive Programs**

Two important goals of interpretive programs are to interpret the site and involve the visitor. When you interpret your site, you should focus on what makes it special. Is it the plants, animals, history or geology? It's usually not advisable to try to interpret something that isn't found at your site. For example, there are few occasions when it would be appropriate to talk about African lions in Minnesota, unless there is a relevant connection to your location. To involve the visitor, don't just talk at them. Engage them through questions, hands-on activities, and action. Not only will this make their experience more interesting and fun, but they'll learn more. Remember the old Chinese proverb, "I hear, I forget. I see and hear, I remember. I see, hear, and do, and I understand." There are many ways to provide an interpretive experience, ranging from a causal conversation to costumed characterization. There is no single approach or method, nor are there secrets about interpretation. Your best bet is to observe how a variety of professionals interpret nature and then experiment with different approaches that work for you. Give yourself time, and

be patient as you build on your successes and learn from your mistakes. Most importantly, have fun, be enthusiastic, and involve the audience. Your enjoyment will rub off on your audience, and they'll learn more if they're engaged and having a good time.

### **Planning your interpretive presentation**

Now that you know some of the background on natural history interpretation, you should learn a bit about how to develop top-notch programs. Though good interpretation may seem casual and effortless, it requires a huge amount of planning, implementation, and practice before it becomes so. One approach to developing a program is the ADDIE model, which is an instructional systems design that works for almost any type of educational programming, but it works particularly well for interpretation.

### **The ADDIE Model**

The ADDIE model consists of five steps.

ADDIE is an acronym for:

Analyze: theme, audience, and site

Design: instructional strategies, media

Develop: materials

Implement: give presentation, implement product

Evaluate: how to improve

#### **Step 1: Analyze**

The first part of the design process involves considering what interests you intend to provoke, using what information, for what audience, in what setting. You need to determine your theme, and establish your goals and objectives.

What is your theme?

To have a successful interpretive presentation you must have a theme – consider this to be your instructional problem, or the framework for the story you will be telling. Once you determine the theme, it will be easy to articulate the message you want to convey, and identify clear goals and objectives for your interpretive activity. There are three main steps to identifying your theme.

1. Select your topic. This should fit your setting or learning environment. For example, you may choose pond life as a topic if you're at a nature center with a pond and you'll be interpreting on a warm summer day.
2. Narrow your topic selection. You won't be able to cover everything about the pond in one day, so you may choose to focus on aquatic invertebrates.
3. Write your theme statement. This clarifies the key message you want to communicate about the topic and can be considered the take-home message of your presentation. By being a full sentence, the theme statement answers the "so what?" question. For example: Aquatic invertebrates are important to the survival of many animals.

In selecting and developing your theme, you should ask:

- Is the theme important to this site and will it enrich the visitor's experience? Scooping for aquatic invertebrates or walking through a marsh will enrich most people's experience. They will see things they may not have noticed before, understand the value of the pond in a new way, and have fun in the process.
- Will the audience be able to relate to this theme, and will they recognize the take-home message? If the visitor enjoys fishing or duck hunting they will understand the importance of aquatic invertebrates to their sport. If they like watching the great blue heron feed along a lakeshore they will understand the interdependence of aquatic invertebrates and predatory birds in the pond's food web.
- Is this a theme you care about? (You need enthusiasm!)
- Do you have the information you need to develop the program? If not, what resources do you need?

Only after you have sketched out your theme can you assemble the information you'll use to explain your theme. Plan to include only the information that supports your theme. As we mentioned before, you don't need to shower your audience with a multitude of facts. A well developed theme will give the audience a clear, useful insight that they can continue pondering long after your program.

Who is the audience?

It is important to know your audience when developing interpretive programs such as guided walks, presentations, or events. Will your audience include families, children, people with disabilities, school groups, senior citizens, people who speak English as a second language? Or will it be a mixture of all of the above? Knowing your audience is critical to developing a successful interpretive program or product.

One way to engage a variety of audience types is to consider the eight multiple intelligences, otherwise known as the ways people learn. These intelligences include linguistic, logical, visual/spatial, musical, bodily/kinesthetic, interpersonal, intrapersonal, and naturalist. This means that some people find language naturally helps them understand new ideas; others rely on music or math. Most people find they draw on a variety of intelligences to make sense of a new situation or concept. If you design your programs to appeal to multiple intelligences, using a variety of methods to get your message across, you will satisfy more visitors because you will have addressed multiple styles of learning. For example, consider using props, sounds, touching, movement, pictures, or writing in your interpretive presentations.

If you will be working with children, remember that they learn differently than adults. There are great resources available to clarify some of these differences. For ideas see *Natural Wonders – A Guide to Early Childhood for Environmental Educators*, which is available through SEEK, Minnesota's environmental education Web site.

Remember, if you aren't sure how to work with a particular audience, get advice from someone who does. Also, keep in mind that often when participants arrive, they are different than you anticipated. If that happens, don't despair! Be flexible and enjoy yourself. Remember, your audience wants you to succeed.

When thinking about your theme and audience, keep in mind the physical setting where the instruction is taking place, the "learning environment." Does the location contain any unusual

features or hidden mysteries you should mention? What larger concepts, stories, or issues should you connect to your interpretation? Are there any dangers or major changes to alert your audience to?

The analysis phase of interpretive planning is often overlooked, but it is the most important way to ensure your interpretive program or product will be successful. If you skip ahead to the other steps, your end result may not be suitable for your audience, or it may not follow a coordinated theme. In fact, if you skip ahead to the design and development stages, you will often find yourself wondering if something will work or whether your activity will make sense. Starting your interpretive planning with a theme, audience, and site analysis is like eating breakfast – it starts you off right.

### Step Two: Design

After you have analyzed your theme, audience, and site, you are ready to pull together your presentation. Remember that visitors like sensory involvement, humor, understanding new information, and an enthusiastic interpreter. Most people do not enjoy dry monologues, or long, technical programs (although there are always exceptions; you'll learn to read your audience). People like to interact, ask questions, and share their own experiences. Do your best to relate to the experience of your audience by linking your theme with their lives. For example, if your theme is how nature has influenced product development, tell them that the idea for Velcro came from someone looking at sticky burdock seeds.

### Four main components of a presentation

When developing a presentation, whether it's a talk to a group or a guided tour, Sam Ham suggests four main structural components that should be in place:

1. Pow! Capture the group's attention with a powerful introduction. For example: "Wild turkeys were once extinct in Minnesota, but today over 30,000 turkeys can be found throughout the state."
2. Bridge. The bridge explains more about the Pow! statement: what it means and why the audience should care. For example, "Wild turkeys are an important species, helping to keep our forest ecosystem in balance."
3. Body. The body contains the main message of the program. When you plan the body, look over your goals and objectives, and make sure you cover them all. For example, you could have a visual presentation showing changes to the forest ecosystem in the absence of wild turkeys and how these changes affect other animals or plants. This presentation could take place on a walk, in a slide-illustrated talk, or both.
4. Conclusion. You should summarize what you have just said and perhaps give a call to action. For example, you might explain why continued management of these birds by the Minnesota Department of Natural Resources, the Minnesota Chapter of the National Wild Turkey Federation, and private landowners is important, and how individuals can help.

### Step Three: Develop

Developing your program depends so much on the first two steps that it's difficult to write one-size-fits-all directions here. If you've done a good job analyzing and designing, this step will be very clear. You might collect images or posters, build a PowerPoint presentation, or walk a trail to check it out. Be sure to think through the entire interpretive activity carefully: will your visuals be visible? Will people be able to hear you? How will you transition from one activity to

the next? What props will make your presentation more interesting and clear? The better you prepare at this step, the more smoothly your presentation will proceed.

#### Step Four: Implement

Finally, you're ready for an audience! At this stage your work is ready for full production. In some cases, you may go out and give a single presentation and be done with it. However, we hope you'll be able to do it again, and again, and again. Consequently, this step can be thought of as testing prototypes with an audience; you may even be preparing to train learners and instructors on using your interpretive product.

Because interpretive presentations can take a variety of forms, you need to make sure yours is appropriate for the audience. You may be giving a slide presentation to a local birding club, a campfire program to families, or an outdoor presentation in a prairie to a school group. However, no matter what type of presentation you are doing, there are common elements to include. Below is a list of things you should do to prepare for almost any interpretive activity.

#### Preparation Checklist

All programs have some common elements in preparation. Follow these tips so you don't forget something before you start!

1. Check equipment and props. Check before the program to make sure everything is working properly. This includes items such as a projector, computer, props with moving parts, or any other device you may be using. Even with this step, you may still have problems, but a last minute check saves frustration, stress, and embarrassment.
2. Arrive early. You need time to have everything set up before your audience arrives. This gives you time to relax and take a few deep breaths, and also gives you time to greet participants, to answer questions, and to socialize. This sets the stage for a friendly and comfortable program.
3. Start on time. It is unfair to make those who arrive on time for your presentation to wait an extra 15 minutes for the laggards. Be respectful of those who show up on time, and try not to interrupt the flow of the presentation if people arrive late.
4. Dress appropriately. Dress neatly, but comfortably for the weather and location. Remember that you are trying to build respect for your message, site, and agency or organization. Also, think of your audience. You don't want to be dressed much more casually or more formally than they are.
5. Use notes appropriately. It's perfectly fine to refer to notes during your presentation, but avoid reading from them. Use them as a backup to help keep you on track, or to remind you of facts and figures. As you become more organized and familiar with your material, you may not need your notes, but it's good to have them handy for the first few times through a presentation.
6. Speak clearly. Enunciate well and use inflection in your voice. Make sure you face your audience and use a microphone if you need to. Avoid repetitive and distracting words such as ah, um, cool, ok, like, and you know.
7. Whenever possible, use pictures instead of words to make a point. When using projected images always make sure they are high quality and large enough to see. Again, face the audience while you speak and don't say "This is a..." as you move through each image. To maintain attention, project images for no longer than 10 to 15 seconds.

8. Use props. Props help to engage the audience. What you use will depend on your theme, but could include natural items, field equipment, books, and even demonstrations. Allow your participants to touch the props if they're not too fragile. You may want to pass objects around to your audience. If you do this, wait until the end of your presentation, or be aware that their attention will be drawn away from you when they look at the object.

### Tours

All of the above elements are part of successful interpretive walks or guided tours. However, there are a few additional things to keep in mind in these less structured settings.

1. Safety First! Safety is very important to consider when taking participants outside. If possible, inform participants before going on a walk about appropriate attire such as hats, sunglasses, sturdy shoes, raincoats, snow boots, or mittens. During tick season, or when encounters with poison ivy or stinging nettle may occur, advise your audience to wear long pants tucked into socks, and real shoes or boots (not sandals). This will help keep them safe from the elements and comfortable on the trail.
2. Be seen and heard. When talking to a group, try to move to the middle or to a high point so everyone can see and hear you. If someone needs to face into the sun, it should be you and not your audience. Do not wear sunglasses; people want to see your eyes.
3. Provide an overview. Before the tour starts, tell your audience what to expect, how long the tour will be, if there are any special guidelines to follow, or if will you run into potential hazards along the way. Map out the time for them, but be flexible to allow for unexpected "teachable moments." Discuss where and if bathrooms are available. Your audience will be more comfortable if they know what to expect.
4. Be a leader. Remain in front of the group to help maintain control and to prevent losing people.
5. Plan specific stops. Guided tours should have planned stops along the way that have a clear purpose and connect with the main theme. Most stops should be fairly brief and give you time to gather your audience. For a guided tour that lasts about an hour, a good rule of thumb is five stops. The remainder of your time should be spent on self-discovery, giving the audience time to observe what interests them in addition to what interests you; answering questions, and providing spontaneous interpretation (for example, if a hawk flies over the trail; stop, watch, and then interpret).
6. Plan to be spontaneous. That may sound like a contradiction, but keep your interpretation flexible enough so you can respond to "teachable moments" as they arise. If you are teaching about pond invertebrates and an eagle flies overhead, you can't ignore the eagle, and your participants certainly won't. Do your best to address the spontaneous thing, tie it to your theme if you can (eagles eat fish which depend on invertebrates for survival!) and return to your regularly scheduled program.

### Station and Roving Interpretation

Two common ways to interpret a site are by doing roving interpretation or by having one or more information stations. "Roving interpreters" move throughout a site or facility answering questions and interpreting a variety of features as visitor interest warrants. While it's more difficult to plan for these situations, there are things you can do to increase the value of the

experience for the visitor. Roving interpreters should also know where and how to find interesting things in the area to share with others, such as an active eagle nest. In other words, you need to be familiar with the site and its stories. It's also important to make yourself accessible. Position yourself strategically so visitors can find you.

At an information station, your main goals as an interpreter are to make the visitor feel welcome and comfortable, and to encourage questions. It's a good idea to have touchable artifacts that relate to your site and can be used to link the visitor with the location. You need to be familiar with the notable features, plants, and wildlife of the site so you can direct people to these items or answer questions about them.

As a final note, it's impossible to anticipate every question or situation that will arise at information stations, as a roving interpreter, or during any interpretive program. Don't be afraid to say, "That's a great question. I don't know." Ask for help and information from other participants. Offer to help find answers at the end of your program, or give ideas on where the questioner could go for more information. Experience will tell you what questions are likely to be asked. Learn from this experience, and be prepared for those questions that can be anticipated.

#### Step Five: Evaluate

In some cases, the agency or organization for which you're interpreting may have specific evaluation requirements. However, even if they don't, program evaluations can be an important part of any interpretive process. You'll find out how people perceived your presentation, you'll probably receive kudos to inspire you to keep doing this kind of thing, and you'll also get feedback that will help you do an even better job the next time around. In fact, a very important role of evaluation is to provide information to help improve a program. Additionally, an evaluation can offer information on new, unanticipated insights the audience gained. These unanticipated consequences are sometimes the most exciting outcomes of a program, and may not be captured without an evaluation.

There are many ways to evaluate your interpretive activities. You may simply decide to ask your audience a few questions verbally about what they learned or enjoyed during your presentation. In some cases, it may be appropriate to give them a few written questions. Commonly asked questions include: What did you most enjoy about this presentation? What was the most important (or interesting) thing you learned during this presentation? What do you wish had been covered today that wasn't? Do you have any suggestions for improving future presentations? Answers to these simple questions will tell you some of the unanticipated consequences of your presentation, and will help with future program design. Another easy way to evaluate a presentation is to ask a friend or colleague, who isn't afraid of giving you constructive feedback, to join your audience. Sit down with this friendly evaluator right after the presentation, and get their feedback on what went well and what didn't.

#### Developing Interpretive Products

Our focus thus far has been on interpretation as direct communication – you're at a particular site and you have an audience with you. However, you can provide interpretation through products such as signs, brochures, and displays even if you're miles away. All of the steps of ADDIE also apply here, so think about ADDIE as you are creating products. The products can take many forms, but here we'll focus on signs and brochures. Others include Web sites, booklets, exhibits, games, stories or songs – let your imagination run wild!

#### Signs

Signs are connected to a particular location. They can range from a single large sign at a beautiful vista, to a series of smaller signs along a trail. They should be visually appealing, sturdy, and appropriate to the setting. While you'll probably have some direction in developing an interpretive sign, there are a few important components to keep in mind.

Signs seldom provide detailed or in-depth information. As with verbal interpretation, the best message on a sign is short and concise. A good graphic and short title may be all that is needed. Sometimes more text detracts from the experience. Interpret what is important to your site, and what the visitor can actually see while standing in front of the sign. If there will be many signs located along a trail, connect them by using a common content theme as well as the same visual design.

If you do create a sign with more information than just a label, be sure to use pictures or diagrams to illustrate your point. Also, include a theme-based title or large heading that ties the entire sign together. Visual artists will tell you that odd numbers of things are more pleasing to the eye, so you should think about having three columns rather than two, or five pictures rather than four. Also note that many of the tips given for brochures in the next section also apply to designing signs.

### Brochures

Brochures are inexpensive and effective tools for providing information. Tri-fold brochures are constructed by folding an 8 1/2 x 11 sheet of paper twice to create three panels on each side. Each panel can be used to highlight different messages. Tri-fold brochures also can fit in a standard business envelope.

### Tips for Designing Brochures

A brochure should have a target audience and an educational objective or theme just like other interpretive activities. Ask yourself "who will be getting this brochure, where, and why?" A few key tips can make your brochure more attractive, readable, and effective at getting your message across. In particular, it is important to use the different panels of the tri-fold brochure in the most effective manner. Professional brochure designers recommend using each panel to provide different parts of your educational message.

- Front panel: The front cover should be visually appealing and provide enough content to invite the reader to pick up the piece, open it, and read more. This may simply include an image and title that describes the theme of the brochure.
- Back panel: In most cases, the back panel should be limited to credits and additional contact information. It is also a good spot for a testimonial. This is the panel people are least likely to read, so avoid putting important messages here.
- Inside front panel: This is the most important panel in the brochure because it is the information that will be seen immediately when the brochure is opened. This panel should provide a statement or testimonial that summarizes your message. Brochure designers recommend that you design this panel last. By writing the rest of the inside spread first, you'll have a better idea of what you want to summarize on the inside front panel.
- Inside three-panel spread: This is the body of the brochure. When you open the tri-fold brochure fully, you have three panels available to develop your theme and accomplish your educational objective.

You should be sure that the brochure is visually appealing and inviting to read. Avoid a cluttered appearance. Use space to create an open look and develop your message so it is clear and concise. Use only high quality photographs or images (at least 300 dots per inch), and include permissions and credits for borrowed material and logos. For example, Minnesota Master Naturalist volunteers developing final projects should use the official Minnesota Master Naturalist Program logo provided at the program Web site, and give proper credit to any source of information or images.

Regardless of how attractive your brochure or sign is, it will only be as good as the information it provides. Ensure that information is factual and understandable. Avoid technical jargon and other forms of communication that alienate readers or obscure your message. Finally, avoid being longwinded. Short, sweet, and to the point is a good rule to follow.

### Learning by Doing

Combining interpretation with community service projects that benefit the environment can help participants learn, build skills, and have positive hands-on experiences. These projects can give groups and individuals the satisfaction of making a difference, thereby fostering stewardship of the environment. Some service project examples might include collecting native seeds, planting a rain garden, picking up litter, or developing a buckthorn educational campaign. Service projects can be done with all ages as long as the task is developmentally appropriate. Examples include school groups, scout groups, co-workers, garden clubs, neighbors, or your two best friends. The service projects must be well researched and chosen so that real environmental needs are being met within the community. Interpretation about the project and the principles behind it is a huge part of this process and should not be overlooked. Use the ADDIE model. After the interpretive portion and service project, be sure to evaluate yourself. Reflect on the experience with the group – record observations, how the project could be improved next time, what worked well, what are the next steps – and discuss further applications of the service projects. Lastly, put on your party hats! Celebrate your accomplishments; after all, you made a difference for the environment.

### Go Forth and Interpret!

You now have a basic understanding of a variety of ways to do successful interpretation.

Like anything, it takes practice. Remember to have fun with, learn from, and enjoy the people you come in contact with through your Master Naturalist experiences.