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| http://www.nativescience.org/assets/images/dot_clear.gifhttp://www.nativescience.org/assets/images/dot_clear.gifhttp://www.nativescience.org/assets/images/dot_clear.gif**Table 1 - Comparisons between traditional and scientific knowledge styles** |
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|  |  |
| --- | --- |
| **Indigenous Knowledge** | **Scientific Knowledge** |
| assumed to be the truth | assumed to be a best approximation |
| sacred and secular together | secular only |
| teaching through storytelling | didactic |
| learning by doing and experiencing | learning by formal education |
| oral or visual | written |
| integrated, based on a whole system | analytical, based on subsets of the whole |
| intuitive | model-  or hypothesis-based |
| holistic | reductionist |
| subjective | objective |
| experiential | positivist |

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COMPARISONS BETWEEN TRADITIONAL & SCIENTIFIC KNOWLEDGE |

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| **Table 2 - Comparisons between traditional and scientific knowledge *in use*** |
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|  |  |
| --- | --- |
| **Indigenous Knowledge** | **Scientific Knowledge** |
| lengthy acquisition | rapid acquisition |
| long-term wisdom | short-term prediction |
| powerful prediction in local areas | powerful predictability in natural principles |
| weak in predictive principles in distant areas | weak in local areas of knowledge |
| models based on cycles | linear modeling as first approximation |
| explanations based on examples, anecdotes, parables | explanations bases on hypothesis, theories, laws |
| Classification:* a mix of ecological and use
* non-hierachical differentiation
* includes everything natural and supernatural
 | Classification:* based on phylogenic relationships
* hierarchical differentiation
* excludes the supernatural
 |

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**Comparisons between indigenous and scientific knowledge**

The temptation to compare scientific and traditional knowledge comes from collecting traditional knowledge without the contextual elements.  For example, Native people have a far richer and more subtle understanding of the characteristics of ice and snow than do non-indigenous people.  In fact, some Native classification is available only by virtue of its relationship to human activities and feelings.  These comparisons sometimes incorrectly lead science practitioners to trivialize traditional understanding.

Whereas scientific practice generally excludes the humanistic perspective, traditional understanding assumes a holistic view including language, culture, practice, spirituality, mythology, customs and even the social organization of the local communities.

For many indigenous people today, the communication of traditional knowledge is hampered by competition from other cultures that capture the imagination of the young.  They are bombarded by technology that teaches them non-indigenous ways and limits the capacity of elders to pass on traditional knowledge to the young.  As the elders die, the full richness of tradition is diminished, because some of it has not been passed on and so is lost.  It is important therefore to find ways of preserving this knowledge.  One of the most effective ways to embody it in the decisions about projects that affect the communities.

Too often, traditional knowledge is incorrectly made parallel only to ìscience.  Science is but a small part of non-indigenous knowledge.  Similarly, to suggest that traditional knowledge is only the equivalent of science is to diminish incorrectly the strength and breadth of traditional knowledge.  Thus, the suggestion that traditional knowledge should be characterized as ìtraditional science diminishes its breadth and value.

While it is not appropriate to compare scientific and traditional knowledge as equivalents, the use of traditional knowledge in scientific knowledge in science means that the two knowledge bases will be in contact with each other as practitioners attempt to weave the two together.

**Questions:**

**1.** What are the key differences between scientific and traditional classifications?

2. Are there any similarities? Which ones?

3. Which type of classification do you think is most accurate? Explain with examples. Can either be completely accurate?