

# Providing an Interpretative Guide for Geology Displays: Everhart Natural History Museum, Scranton, PA

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## Background:

This project focuses on creating a new fossil guidebook for docents at the Everhart Natural History Museum in Scranton, PA. This project incorporates the fields of museum studies and informal science education in order to adapt to the docent learning styles. This will aid in docent information retention. Individual interviews were conducted with museum docents to learn more about their experiences. Other interviews were conducted with museum directors from other local institutions to learn more about their docent pool. The information from these interviews has been used to improve the content of the guidebook, so that it reflects the docent’s needs. The guidebook has been written so docents can broadly cover some aspects of the national and state academic standards for educators.

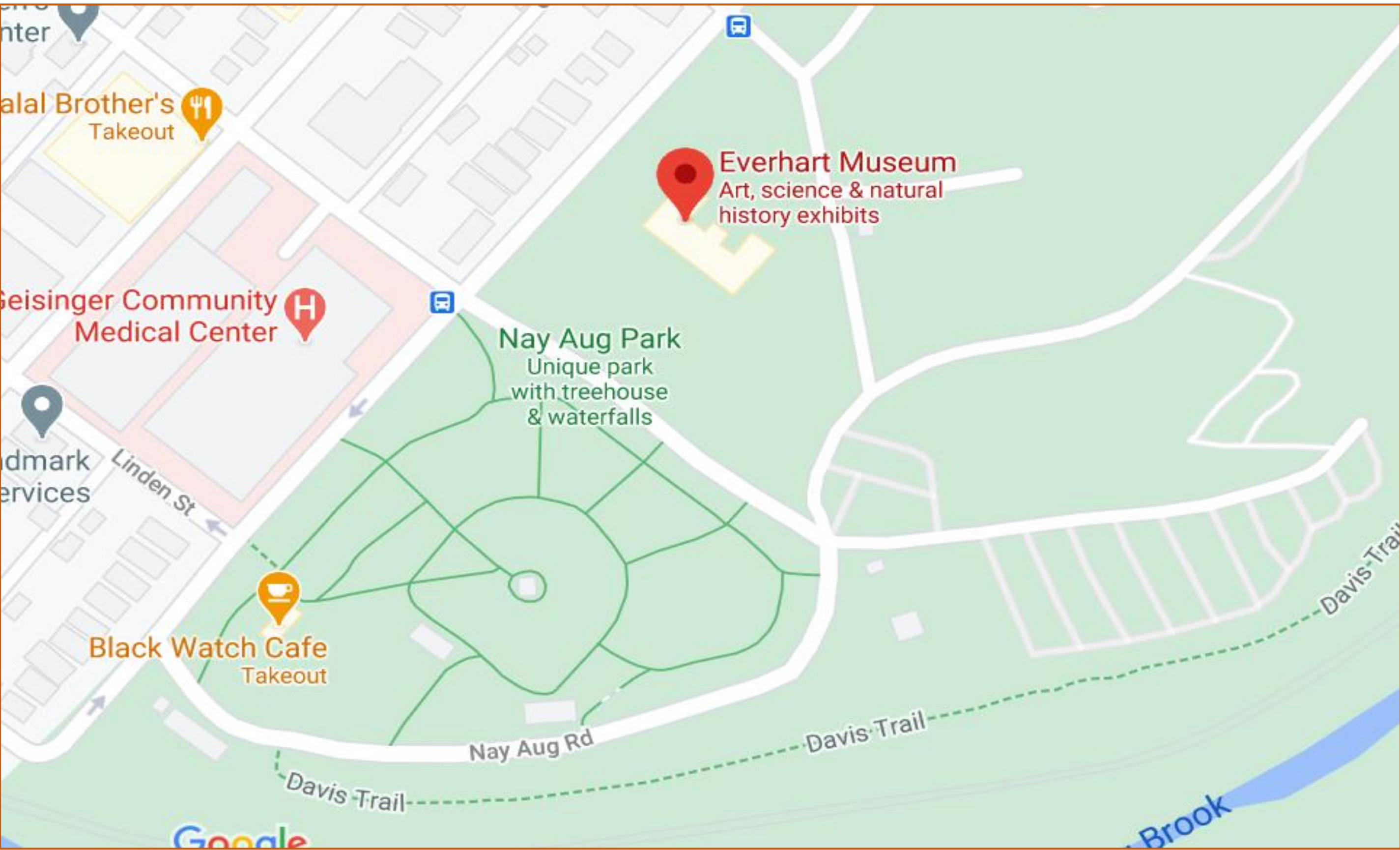


Figure 1: The Everhart Natural History, Science, and Art Museum is located in Scranton, PA. (Location via Google Maps)

## State Academic Standards

- Know basic landforms and earth history.
- Ecosystems and their interactions
- Understanding cycles
- Eaten, Endangered
- Extinct Species

## National Academic Standards

- Properties of Earth Materials
  - Understanding rocks, soils, gases, and water and the different properties they occupy
- Changes in the Earth and Sky
  - Understanding slow changes like erosion and weather and fast processes like volcanos and landslides

## Examples of Museum Content



Figure 2: Examples of paleo-environmental reconstructions from the Paleozoic by Charles Knight, including paintings and lithographs.



Figures 3 (left) & 4 (right): Examples of Paleozoic age fossils on display at museum. Figure 3 represents some marine invertebrates. Figure 4 represents a vertebrate fossil and features related to vertebrates.



Figure 5: Example of Stegosaurus reproduction representing Mesozoic Era.

## Docent Interviews:

Interviews were conducted with six museum docents from the Everhart and three directors of other institutions in the Scranton area. The interviews with the docents were organized so that their responses could be quantified through a process used by ethnographers called coding (Figure 6). All docents interviewed were volunteers at the museum for two or more years. Four out of six docents have worked as educators during their lives. All docents identified their preferred learning style as visual learning, but most agreed that other forms of interactive and hands-on learning enhanced their comprehension of a new topic.

Coding, the method that was used to quantify this qualitative data, is used to extract specific data in the form of themes and similarities out of larger qualitative texts. ,

Table 1: Simple coding method used to interpret data

Themes	Information
Docent Backgrounds	current/previous occupations (educators), life experiences, time spent at museum
Interactions with audience	how they teach, parents talking over docent, including fun facts and attention grabbers
Learning Styles	all need visual learning - most want visual learning with other components like hands-on/interactive learning experiences
Geologic Time	more information about time scale, not understanding fossils in general
Understandable Language	making the information accessible to docents and relevant to collections

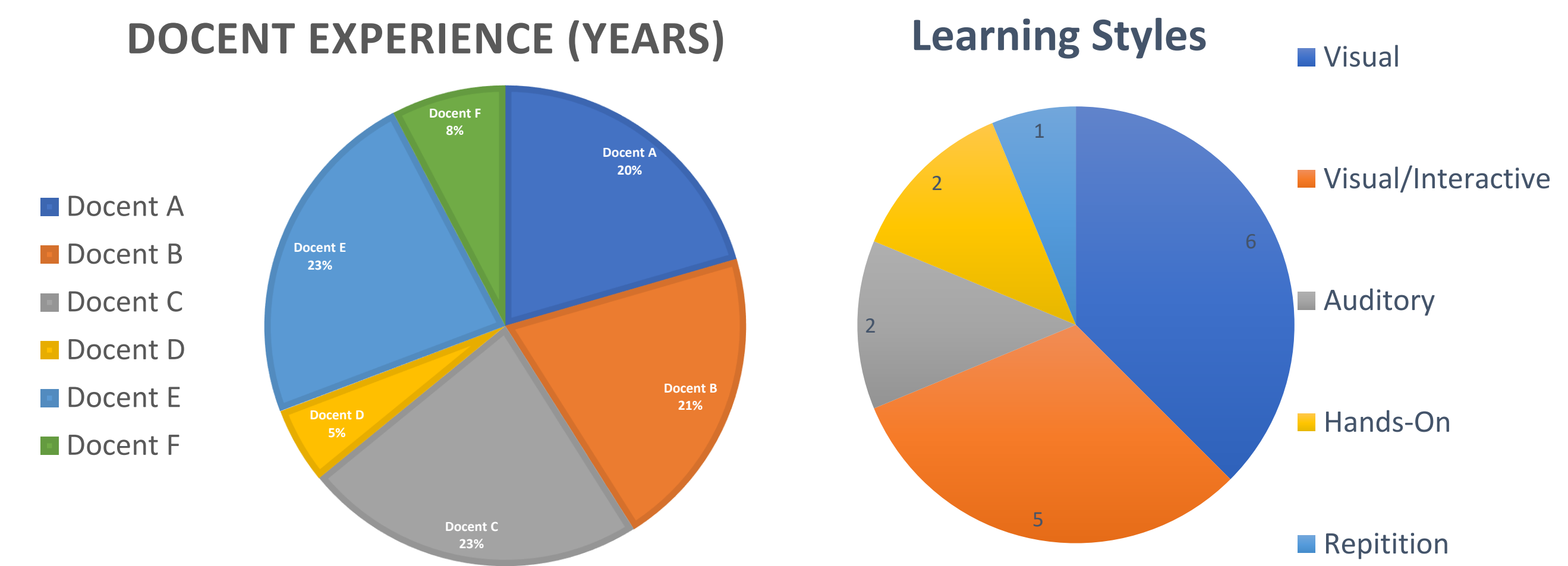


Figure 6: Coded data collected from docents revealing their experience and learning styles.

## Guidebook:

The museum guidebook produced for this study will hopefully provide docents with greater visual example and interactive content to better meet their needs. Some of the information this guidebook will provide meets some current national and state academic standards. It will cover content such as geologic time periods, represented by the current fossil displays, how the rock and carbon, and more in-depth information about fossilization.