How to prepare a poster board presentation?
This presentation offers suggestions on how to create a poster board as well as provides twelve poster examples from past Honors Conferences. Please work closely with your professors as you develop your research/poster projects.

Tri-fold poster boards are supplied by the Honors Program and are available at two locations: Bedford: Commonwealth Honors Office, Building 9-107, or Lowell City Campus: 5th Floor, Admin Assist Area.
The title reflects the purpose (thesis/research question) of your project and should inform the viewer of what will be learned from your poster presentation. Here are some title examples:

- The Influence of Buddhism on Central Asian Art
- The Development of Memory in Individuals with Downs-Syndrome
- The Music and Culture of Byzantium
- The Amazon Rainforest: Nature’s Pharmacy
- The Cultural Legacy of Asoka: a Buddhist Convert
- Applications of the Derivative: The Maximum and Minimum
The Tri-fold Poster
What to put on the poster panels?

Use images and text that support or explain your thesis/question on each panel of the tri-fold poster. The images and text boxes must illustrate your theme as well as capture the attention of viewers. Do not overwhelm the poster with text or image boxes, but strive to create a visually inviting presentation with the objective of explaining your research project as well as attracting people to visit your poster.

When someone arrives at your poster, it is your job to engage the viewer with a lively presentation where you explain the poster and offer information and answer questions in no more than a five minute presentation.
What should you say to the viewer?

In a lively manner, explain/describe the following as part of your five minute oral presentation. It is best to rehearse this aloud before the April Conference.

• What is your thesis or research question?
• Why did you select the topic?
• What did you learn?
• What sources were used to do the research?
• What conclusions did you reach?
• What is the overall significance of your project?
• Ask the viewer(s) if they have any questions?
DOCUMENTATION

List your sources on the lower right hand corner of the poster board so that everyone can see where you collected your information. Please use the proper documentation format relevant to the academic discipline of your research project.
Proof Reading ~ The Look of the Poster Board

All the carefully selected images, important text explanations, quality source materials, and excellent oral presentations will not be impressive if you have misspellings, improper grammar/syntax, or crudely prepared materials on your poster. Any of these errors will make your poster look sloppy, so please be sure to proof read and offer a quality finished product that you and your professors will be proud to display. Thank you!
Criteria – Rubric – for Evaluating Poster Boards

1. Clarity of thesis statement/research question: did it inform the viewer about the purpose of the poster board?

2. Visual presentation of the poster: did the selection and quality of images capture the attention of the viewer and help contextualize - explain the thesis/research question?

3. Documentation and use of sources: was it clear from the poster board that you used a variety of sources to support your research project?

4. Oral presentation: was it well rehearsed and did it include an explanation of the thesis, the key points that support your project’s theme, and a brief review of your conclusion?
What follows are some examples from previous Honors Poster Conferences. For more examples, please review slide shows of previous conferences available at this website.
The Influence of Confucianism on Eastern Asian Families

CONCLUSION

The teachings of Confucius changed the way people in Eastern Asian families, structure and relationships. Confucius taught ancestors, elders. Obedience is a characteristic that was emphasized in the family. The younger siblings were expected to obey any older family members. The three teacher-stated that a daughter should obey her father, a wife should obey her husband, and a widow should obey her son's husband. Children were allowed to impose their views on their husbands and insisted on doing this to them. The male is considered the head of the family, and all family relationships and how people conduct themselves in society are based on the roles they had within a family. The social hierarchy is based on precedence. Confucianism became popular in Eastern Asian cultures and the countries' culture. As a result, many families desired a son to continue their family's lineage. Confucianism focused on the role within a family and society.

REFLECTION

“Even though you sleep intimately in the same bed and eat the same bowl of food together, the son will remain his father’s child.”
Music
A Cultural Human Universal
Samuel B. Utsiv

Music is used throughout the world as a means of understanding, respecting, and bridging cultural differences.

Cross-Cultural Meets Popular
Paul Simon's second-coming in the late 1980s was vital in the development of world music, with the success of albums like "Graceland" and "The Rhythm of the Saints." These albums featured collaborations with artists from around the world, showcasing the universal language of music.

World Music Crosses Borders
Some of the best evidence for musical development in the modern world can be found in world music. Studies have documented the developmental effects that music has on brain and behavior. Non-musicians may also be more likely to develop musical abilities that are not related to language.

Music and the Deaf
Music is a universal language that is not limited to hearing individuals. Many deaf individuals find solace and expression through music, and some have even created their own unique styles.

The meaning conveyed by music is not necessarily culturally dependent.

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Musical Communication
A growing movement suggests that the power and true universality of music lies in its ability to convey complex meanings, and that it transcends the barriers of language. Music is a means of communication that can express emotions, thoughts, and ideas in ways that are not limited by language or culture.

Orchestras Bring People Together
The World Youth Orchestra brings together young musicians from around the world to perform together. This group serves as a platform for cultural exchange and unity.

Non-Musicians Sure Are Musical
Some of the best evidence for musical development in the modern world can be found in world music. Studies have documented the developmental effects that music has on brain and behavior. Non-musicians may also be more likely to develop musical abilities that are not related to language.
New research offers a compelling case for music as an innate biological function.

The Adapted Brain
- Certain physical structures of the brain are used solely for the processing of music, and not for speech or other auditory input.
- Neurological activity, known as the auditory cortex, which processes the interpretation of melody, rhythm, and other aspects of music.

Music is used throughout the world as a means of understanding, respecting, and bridging cultural differences.

Natural Selection
- Scientists believe that music's adaptive value lies in its role in social and cultural discrimination, enhancing the ability to communicate and interact with others.
- The pursuit of mate selection, the cooperation of groups, and the ability to interact with others lead to the development of musical ability and preference.

Cross-Cultural Meets Popular
- The cross-cultural influence of popular music is a testament to its universal appeal and adaptability.
- The blending of traditional music with modern trends creates a unique and inclusive experience.

Orchestras Bring People Together
- The West-Eastern Divan Orchestra brings together musicians from Israel, the Palestinian territories, and several Arab countries to focus on the power of music to bring people together.
- Orchestras are powerful tools for promoting cultural understanding and unity.

Non-Musicians Sure Are Musical
- The ability to make music is a human characteristic that transcends professional musicianship.
- Everyone has the potential to create and appreciate music, making it a universal experience.

World Music Crosses Borders
- Music transcends language barriers, connecting people from diverse backgrounds.
- World music celebrates cultural diversity, fostering a sense of shared humanity.

Music and the Deaf
- Music has a profound impact on the lives of those with hearing impairments.
- Specialized educational programs and inclusive music experiences cater to the needs of the deaf community.
Caring for the elderly in India, China, and the United States of America

China
History and Culture
- China's philosophies have centered around the family and respect for elders.
- In earlier times, the younger generations cared for their parents and grandparents. The elderly were considered to have a connection to the ancestors and were very wise.
- As in India, the practice of using an elder care facility has been rising, but there are still 37% of adult children that want to take care of their parents. (Hong Kong)
- Chinese culture has been heavily influenced by Confucian traditions, which place great emphasis on parent-child relationships.

United States of America
History and Culture
- After the Great Depression, President Franklin D. Roosevelt signed the Social Security Act. Safety net for poor and elderly.
- Questioning if some people deserve benefits or not.
- Some of the younger generation question the responsibility of the elderly, but since the increase of Medicare and Medicaid programs, help the elderly and poor population significantly.
- Elderly health care costs are increasing, and the government is spending a lot of money on health care programs. (1967)
- Nursing homes began to see stricter regulations for more safety.
- 40 million people over the age of 65 in 2012 (US Census Bureau)

Conclusions

Reflections

Socioeconomic factors are fundamental to the care of the elderly in India, China, and the United States of America.
Charlotte Perkins Gilman

Born on July 3, 1860 in Hartford, Connecticut. His father was well-known Unitarian Frederick Beecher Perkins, a nephew to Harriet Beecher Stowe. Gilman attributed her talent for speaking to her Beecher inheritance. When she was an infant, her father abandoned the family, leaving her mother to tend to her older brother and Charlotte on her own. Because of this, they moved around a great deal and lived in poverty. Her father's infrequent visits were a cause for him to encourage her to read. As a young child and teenager her school attendance was sporadic, but in her early 20's she attended the Rhode Island School of Design.

She married Charles Walter Stetson in 1884 and in 1888 she gave birth to a daughter, Katherine Beecher Stetson. She had suffered from mild depression during the first months of her marriage, and after the birth of Katherine it worsened. She was prescribed the rest cure, a popular treatment at the time. It involved being cut off from family and friends, long sleep, and little to no physical activity. The rest cure is one of the main themes in her most famous book, The Yellow Wallpaper, and one wonders if the suffering of the woman in the story was indeed an autobiographical for Gilman, or merely when the idea for the short story was conceived.

Eventually Walter Stetson found for divorce and Charlotte left him and her child and headed to California to find her way in the world. She became an advocate for women's rights, and a powerful speaker and author. Later in life she married her cousin George Gilman.

While received well in her time, her writing fell by the wayside after her death. It came back into popularity with the women's movement of the 60's.

Her death came at her own hands, long suffering from cancer, she chose to die from inhaling chloroform rather than suffer from the disease.

Her work and beliefs have played a tremendous role in women's rights at a time when they were very few, and her legacy continues. One can not imagine a time when women were often were.
APPLICATIONS OF THE DERIVATIVE
MAXIMUM AND MINIMUM

DEFINITION
In mathematics, the maximum and minimum of a function, known collectively as extrema, are the largest and smallest value that the function takes at a point or points within a given neighborhood (local extrema) or on the function domain in its entirety (global extrema).

-Let’s consider the maximum and minimum of a set of real numbers, which are the greatest and least elements, respectively.

-Objectives: Extreme values are the basic objective of optimization.

LEONHARD EULER

- Euler, born in 1707, was one of the greatest mathematicians who laid the foundations for modern mathematics. He made significant contributions to fields such as infinitesimal calculus and graph theory. He introduced much of the modern mathematical terminology and notation, such as the notion of a function.

- The concept of the derivative is central to his work, and he is known for his contributions to the foundations of calculus.

- Euler discovered many important results in pure mathematics, such as Euler's formula and the Euler-Mascheroni constant.

ABSOLUTE EXTREMA
A function f has an absolute maximum or minimum value at a point c in its domain if f(c) is greater than or less than all function values at points in its neighborhood. For a continuous function, if f attains an absolute maximum or minimum at a point c in the domain but c is not an endpoint, then f is differentiable at c.

CRITICAL POINTS OF F
A critical number of a function f is a number c in the domain of f such that:
- f'(c) = 0 (stationary point)
- f'(c) does not exist (corner point)

CANDIDATES FOR RELATIVE EXTREMA
1. Stationary point: any x such that x is in the domain of f and f'(x) = 0
2. Discontinuity: any x such that x is in the domain of f and f'(x) is undefined
3. Removable discontinuity: notice that every critical number corresponds to a local minimum or local maximum.

- Euler's work on the calculus of variations laid the foundations for the modern theory of optimization.

- The absolute extrema of a function on a closed interval can be found by evaluating the function at the critical points and the endpoints of the interval.

FERMAT'S THEOREM
If f has a local maximum or minimum at c, then f'(c) is zero or undefined at c. Notice that the theorem does not say that every critical number is a local maximum or local minimum.

- Euler was instrumental in developing the calculus of variations, which deals with the optimization of functions of functions.

- Fermat's Principle, which states that light travels between two points along the path that takes the least time, was one of his early contributions.

FIRST DERIVATIVE TEST
This test is used to classify the critical points of a function.

- If f'(x) changes sign at x, then f has a relative maximum or minimum at x.
- If f'(x) does not change sign, then f has neither a local maximum nor a local minimum at x.

OPTIMIZATION PROBLEMS
Optimization problems involve finding the maximum or minimum of a function over a given interval or region.

- Optimization is a fundamental tool in many areas of science and engineering, including economics, physics, and biology.

MAXIMIZING PROFIT
Suppose the profit of a company can be represented by the function P(x) = 10x - 2x^2, where x represents the number of units produced. Find the maximum profit if the company can produce up to 10 units.

- Optimization problems often involve finding the maximum or minimum of a function subject to constraints.

- The solutions to these problems can provide valuable insights into decision-making processes.
The Cultural Legacy of Asoka

Missionaries as a Vehicle for the Spread of Buddhism

- "...more living men cherish [Asoka's] memory today than have ever heard the names of Constantine or Charlemagne" - H. G. Wells

Shaper of the World

- "...and even to this day no one knows the date of the end of his life..."
- "...and so it is seen that his fame was so great that he is now the subject of national legends..."
- "...and so it is seen that his name is now revered in local writings throughout South and East Asia..."
- "...and so it is seen that the spread of Buddhism has had a lasting impact on the region..."

Religious Conversion

- "...and so it is seen that the spread of Buddhism has had a lasting impact on the region..."

Empire of the Sword

- "...and so it is seen that the spread of Buddhism has had a lasting impact on the region..."

Empire of the Dharma

- "...and so it is seen that the spread of Buddhism has had a lasting impact on the region..."
The Music and Culture of Byzantium:

AN ANALYSIS OF ITS MUSICAL HISTORY AND INFLUENCE ON WESTERN LITURGICAL MUSIC

Points of Influence on the Western Tradition

The Hagia Sophia

Gregorian Chant

Track Listing

1. De Profundis
2. Dies Irae
3. Kyrie Eleison
4. Sanctus
5. Confiteor
6. Benedictus
7. In Nomine
8. Ave Maria
THE AMAZON RAINFOREST: STILL THE WORLD'S UNTAPPED PHARMACY

Benefits

The Amazon Rainforest has supplied mankind with thousands of species of plants and animals that have had an enormous impact on curing many human diseases and ailments. One current example is the Mexican magic mescaline that is proving to be a long awaited cure for cluster headaches. These headaches are far worse than migraines and can last for weeks. Other pieces of the rainforest have provided cures for malaria, yellow fever, leprosy, and even the compounds that go into the Diuretics. Our current hope of finding a cure for malaria is coming from the rainforest. Researchers are currently looking to the rainforest to extract new compounds that are currently in use for malaria. Some of the animals of the rainforest have been known to Amazonians, Yagua, Tung, and Amazonian plants for thousands of years. Recently, the field of study into endophytes is also creating new sources of medicines.

Untapped Possibilities

- 60% of all medicinal drugs are from native Amazonian plants.
- 20% of all preclinical drugs are from native Amazonian plants.
- Only 10% of all plants in the world have been tested for their potential medicinal properties.
- Amazonian plants are rich in unique compounds with potential medicinal properties.

Conclusion

The Amazon Rainforest is still a rich source of new medicinal compounds. Further research is needed to fully understand the potential of these plants. The Amazon Rainforest is a treasure trove of biodiversity that continues to provide new medicines for the future.
The Influence of Buddhism on Wang Wei's Poetry and Art

Thesis
Wang Wei's painting and poetry reflect his Ch'an Buddhist philosophy, the belief that words alone cannot adequately express the true state of enlightenment. The natural world is the only reality; a person should live a life without deliberate effort or purpose. The influence of Ch'an Buddhism is exhibited in Wang Wei's parsimony of words and the minimalism of his paintings.

Deer Park
Hills empty, no one to be seen
I hear only water sound
Moonlight pouring back into the deep wood
The top of the great mountain is lit again
- translated by G. W. Atkinson, 1997

Deer Fences
Empty hills, moon in sight,
Only the sound of someone talking
She left the moon, thinking of the deep wood
Shining moon once again
- translated by Burton Watson, 1966

The Deer Park
An empty hill and no one in sight
But I hear the echo of voices
The hunting cat of morning prowls in the deep wood
And then reflected on the blue lichen
- translated by Ronald Simon Weiss

Deer Park
In the Wang Wei poem "Deer Park" the landscape tells the story. Wang is just a silent observer of the sounds and sights of nature, in reading the words, one can visualize the shape of the mountain, hear the echo of a voice blowing through the wind, and feel the sun on the hills. His poems are calligraphy of shapes, words, and texture that is simply told in new words.

Western translations of classical Chinese poetry can be attributed to Ezra Pound's landmark anthology Cathay, published in 1915. This was the first time Chinese poems had been translated into English. Since then many others have added their interpretations of Wang Wei's poem "Deer Park".
**Development of Memory in Individuals with Down Syndrome**
Francisca Palacios, Middlesex Community College

**Introduction**
How do we recall situations of our past? How can we grow and learn based on past experiences? How does this ability develop in people with Down syndrome?
Memory is the ability to remember situations as well as the capacity of remembering. Down Syndrome is a genetic disorder that affects directly the part of the brain that is involved with memory. Studies had shown that there is a link between Down syndrome and Alzheimer’s disease, that is a type of dementia causing the degeneration of memory.

**Statistics**
2% of the world’s population has Down Syndrome
6% of the world’s population has Alzheimer
At the age of 65, 96% of the population of Down syndrome people develops Alzheimer diseases

**Conclusion**
Memory develops differently in down syndrome individuals because of the basic impairment in the phonological loop of the brain. The link between Alzheimer disease and Down Syndrome is that both individuals have shown a great amount of beta-amyloid plaquots in the brain which causes the degradation of memory.