

TARGETED QUESTIONS

Develop robust classroom dialogues around what is seen and heard in the [video](#). Students are encouraged to activate their prior knowledge and apply it to the conversation. By prompting the use of higher-order thinking skills, students analyze and evaluate.

VISUAL ARTS

Ask students:

“Think about the era in which the painter, Johann Zacharias Quast, was working and living, and identify common stylistic elements in art from the time. How might his artwork have been influenced by society and culture?”

Linked to Standard: Grades 9-12. Foundations Visual Arts. Connecting. 11. Relate artistic ideas and works to societal, cultural and historical contexts to deepen understanding. Identify the connections between historical and cultural contexts and define stylistic elements of artistic movements (e.g., how the impact of World War II influenced the western art world and shifted focus from Europe to New York City). (F.V.Co.11)

Ask students:

“Analyze *The Bug Plate*. What do you think the artist, Johann Zacharias Quast, was influenced by—both historically and artistically—and how does that translate to elements seen in *The Bug Plate*?”

Linked to Standard: Grades 9-12. Proficient Visual Arts. Responding. 7. Perceive and analyze artistic work. Use contextual and aesthetic information to construct interpretations of an artwork or collection of works. (P.V.R.07)

SCIENCE

Ask Students:

“How could a scientist use an artwork from the past, like *The Bug Plate*, to analyze effects of human activity on biodiversity and ecosystem health?”

Linked to Standard: Grades 9-12. HS-LS2-7. Analyze direct and indirect effects of human activities on biodiversity and ecosystem health, specifically habitat fragmentation, introduction of non-native or invasive species, overharvesting, pollution, and climate change. Evaluate and refine a solution for reducing the impacts of human activities on biodiversity and ecosystem health.

Ask Students:

“How could a scientist use an artwork from the past, like *The Bug Plate*, to make a claim about common ancestry and biological evolution?”

Linked to Standard: Grades 9-12. HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence, including molecular, anatomical, and developmental similarities inherited from a common ancestor (homologies), seen through fossils and laboratory and field observations.

ENGLISH LANGUAGE ARTS

Ask Students:

“What do you consider to be the main ideas presented in the video, and what makes you say that? What do you consider to be the supporting details presented in the video, and what makes you say that?”

Linked to Standard: Grades 11-12. Reading Standards for Literacy in the Content Areas: History/Social Studies [RCA-H]. Key Ideas and Details. 2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.

HISTORY & SOCIAL SCIENCE

Ask Students:

“How did Asian societies interact with European societies over the course of history? Can you see any evidence of the societies interacting by analyzing *The Bug Plate* and information from the video?”

Linked to Standard: Grades 9-12. World History I. Topic 1. Dynamic interactions among regions of the world [WHI.T1].
1. Explain different ways in which societies interact across regions (e.g., trade; cultural, religious, linguistic, and technological exchange and diffusion; migration; exploration; diplomatic alliances; colonization and conquests).

Ask students:

“Why were factories driven to develop technological advancements and techniques that could come close to replicating Asian porcelain?”

Linked to Standard: Grades 9-12. World History I. Topic 2. The Agricultural and Industrial Revolutions in Europe and social and political reactions in Europe [WHII.T2]. 1. Analyze the economic, political, social, and technological factors that led to the Agricultural and Industrial Revolutions. c. the technological advancements of the textile, energy, and transportation industries in the 18th and 19th centuries.

RIGOROUS CHALLENGES

Encourage students to respond to the [video](#) in ways that are driven by the creative process. Students' final products will differ as they apply their own unique skills, knowledge, and interpretations to the challenge.

VISUAL ARTS

Challenge Students:

"In the video we learn that sometimes the artists of the era painted/drew insects from their imaginations based on what they knew about real insects. Using your knowledge about insects and reference images of real insects, create a series of artworks of imaginary insects and/or arachnids. Focus on a particular principle of design to unify all of the insects."

Linked to Standard: Grades 9-12. Foundation Visual Arts. Creating, 3. Refine and complete artistic work. Refine concepts and content by focusing on a particular principle of design such as emphasis, balance, contrast, or pattern. (F.V.Cr.03)

Challenge Students:

"Write a brief essay to explain the link between *The Bug Plate* and commercialization of porcelain."

Linked to Standard: Grades 9-12. Proficient Visual Arts. Connecting, 11. Relate artistic ideas and works to societal, cultural and historical contexts to deepen understanding. Explain the relationship between artworks and commercialization or propaganda (How Norman Rockwell's work, such as "Rosie the Riveter," supported the war effort in World War II). (P.V.Co.11)



HISTORY & SOCIAL SCIENCE

Challenge Students:

"Select another piece of art from the 1840s from anywhere in the world. Analyze it and write about how influences are seen from other cultures and why that is so."

Linked to Standard: Grades 9-12. World History I. Topic 1. Dynamic interactions among regions of the world [WHI.T1]. 4. Demonstrate the ability to analyze primary sources, including texts, maps, diagrams, works of art and architecture.

SCIENCE

Challenge Students:

"Create an artwork that shows how a change in an environment of your choice can result in evolution of a population of a given species, the emergence of new species, or the extinction of other species. Be prepared to explain your choices and the details in your artwork."

Linked to Standard: Grades 9-12. HS-LS4-5. Evaluate models that demonstrate how changes in an environment may result in the evolution of a population of a given species, the emergence of new species over generations, or the extinction of other species due to the processes of genetic drift, gene flow, mutation, and natural selection.

ENGLISH LANGUAGE ARTS

Challenge Students:

"Choose an everyday item, like porcelain tableware, and research the process of how a factory mass-produces it. Write an explanatory essay detailing the steps. Be sure to introduce relevant vocabulary terms and historical context."

Linked to Standard: Grades 11-12. Writing Standards for Literacy in the Content Areas [WCA]. Text Types and Purposes. 2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include text features (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.

c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas, concepts, or procedures.

d. Use precise language, domain-specific vocabulary and techniques to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.

e. Establish and maintain a style appropriate to audience and purpose (e.g., formal for academic writing) while attending to the norms and conventions of the discipline in which they are writing.

f. Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).