

Teacher's Guide for ODYSSEY

January 2013: Photo Speak

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Teacher's Note:

This guide contains project ideas, short answer, extended response, fill-in, and true/false with correction. The variation is designed to have the students think critically, as well as to test their comprehension. An answer key to the short answer sections can be found at the end of the guide.

Extended Response: Comprehension & Critical Thinking

The questions below can be used as written, simply answered in complete sentences or easily transformed into longer essay (ELA) style questions, or even research topics. In any case, have the students support their answers with details from the text or use critical thinking skills to create a thorough and interesting answer. The questions, essays and projects have been aligned with the **Common Core Standards**. Consider the level of your students when deciding how to use the questions.

"Two Visions: Different Directions" p. 6-11

1. Explain the photographic artwork of David Maisel's, 'History's Shadow' exhibit.
2. How does Maisel, 'reach from today's time zone to the past'?
3. How does Maisel combine new and old technologies to create his artwork?
4. What is Maisel's reason for not identifying the object he is photographing?
5. Why does Erik Johannson describe himself as a surrealist photographer?
6. How did Johannson's grandmother inspire him artistically?

Activity: *Erik Johannson has derived three rules for successful photorealism. Think of a hobby that you take part in, and reduce it successfully down to 3 rules.*

"Photography Goes Wild" "Photospeak" p. 12-17

1. What is 'metadata'?
2. How is metadata used to create databases?
3. What images and photos are combined to allow you to take a virtual driving tour in many of the world's cities?
4. Why is there a moral question surrounding the usage of these 'super-pics'?
5. Why is the number of pictures being taken increasing dramatically?
6. What statistics are reported in the article, "Photo Speak" regarding the amount of pictures people will take in the year 2012, the users' age, and time spent?
7. What are some of the reasons that a person will use a Smartphone instead of a camera to capture pictures and videos?
8. Why is current photography more like an 'ongoing story' than ever before?

9. How does the 'resolution' affect the quality and usability of a picture?
10. In what ways can you imagine that photography will continue to change in the future?

"Fotos for the Future" p. 20-21

1. What is the negative side of having digital images instead of printed images?
2. What is 'bit rot'?
3. What are some of the methods that are being researched to preserve digital media for the future?
4. How will YOU take steps to preserve your personal photos and documents?

"Look Up, Look Down, Look All Around" p. 28-32

1. Describe Asad Muhammad and Mathew Ho's project and their intention.
2. What materials did the teenagers use and what was the outcome?
3. Why do you think that this particular project became such big news?
4. Why is it easier in current times to shape the 'truth' of photographic stories?
5. What does GPS stand for and how exactly does it work?

"Jamming with John Lennon" p. 33-35

1. What is the literal interpretation of the word "holography".
2. Explain the process of how holograms work.
3. What are the different ways in which we can view simple and more complex holograms?
4. How are holograms revolutionizing science and technology?
5. Do you think that hologram technology will be better used in the medical or entertainment industry? Why?
6. How do you see the technology of holograms elevating your life experiences in the future?

"Biomedical Imaging" p. 36-39

Mark the following statements TRUE or FALSE. Provide correct answer if FALSE.

_____ 1. Today's biomedical images often contain critical data or communicate important scientific concepts.

_____ 2. Photosynthesis has become one of the most powerful current tools used in the exploration of biological processes.

_____ 3. Equipped with filters, microscopic imaging equipment can show what genes do in cells.

_____ 4. An organelle is a structure within a cell.

_____ 5. The raised surface within a three-dimensional space on which a microscope focuses is called the focal plane.

_____ 6. Resolution microscopy uses laser light to photograph an object repeatedly at different focal planes.

_____ 7. Genes are parts of the DNA molecules that contain hereditary information.

_____ 8. Ophthalmic means related to the eye.

_____ 9. Macular degeneration is a disease affecting the central part of the cornea at the back of the eye.

_____ 10. Creating effective images requires training and experience, plus an understanding of biology.

_____ 11. Biomedical images have become obsolete in healthcare.

_____ 12. Although manipulating or changing data is not acceptable, adjusting contrast, brightness, color or other factors to help people see better is generally acceptable as clarification.

"FPO: Get Real" p. 44-45

1. What change was Julia Bluhm responsible for in *Seventeen* Magazine?
2. Julia Bluhm calls this change a 'huge victory'. Do you agree? Why or why not?
3. How could these changes make a difference in the health of young girls?

ANSWER KEY:

"Biomedical Imaging"

1. *True*
2. *False, Fluorescence*
3. *True*
4. *True*
5. *False, flat surface*
6. *False, confocal microscopy*
7. *True*
8. *True*
9. *False, retina*
10. *True*
11. *False, crucial*
12. *True*