Short answer:

1. What is metadata? Give an example of how a piece of metadata could be used to increase the usefulness of an image or document.

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| Metadata can explain why specific info inside a picture or document may be useful to the reader |

2. What is a model?

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| A representation of a real-world object as a set of complex mathematical equations |

3. What's the difference between a raster image and an ASCII representation of a text document?

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| Raster images are images represented by sections pixels. ASCII is a set of 8 bits that represent strings and symbols. |

4. What are filename extensions? What are they used for?

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| Filename extensions are used to determine what type of file something is. It is used to tell the computer how to read a certain file. |

5. What is lossless representation? What is lossy representation? What are the trade-offs in using each representation?

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| Lossless representation has no bits lost from one image to another. But lossy representation is a compressed version of an image with bits missing to make the file smaller |

6. What is steganography and what is it used for? Describe in your own words the steganography algorithm used in the activity.

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| Steganography is used to hide secret info or convey messages inside of pictures with little chance of detection |

7. What would you have to do to delete a document from your computer so that it could not possibly be read by anyone else?

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| You would have to delete it then download a massive file to rewrite the bits. This is because when you delete something it only labels bits as ready to be overwritten so the only way to get rid of them is to overwrite them with a much bigger file download |

8. What is free and open source software? Provide an example.

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| Open source software is code that is open to everyone to see so people can make their own renditions of programs |

Free Response:

1. How has retouching has become a controversial issue? Give an example.

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| Retouching images is controversial because it changes the original image to make it seem like something else is happening. One thing is people changing what their bodies look like online on posts changing what people see of them. |

2. Would you rather own a camera (or camera phone) with a higher number of megapixels or lower? Explain.

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| Higher megapixels is generally a signifier for better camera quality, even though |

3. Other than digital images, what might be an example of a computer model? Explain your answer based on the definition of a model.

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| A computer model may be a model of an object that can interact with a generated 3d environment |

4. The code that implements App Inventor is open source and its impact on education is obvious. Find another example of open source software and describe its positive impact on education, business or society.

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| One of the most popular search engine firefox is open source. They give away their source code for beginning programmers to learn how coding works. This helps new coders learn and feel more welcome into programming if they have a program to learn from. |