**Hunter Frostick**

* 3.1: People use computer programs to process information to gain insight and knowledge.
  + The proliferation of computing has created a vast amount of data, there is data almost about everything. The use of these large data sets about things, such as logs of all visitors to a web site, provide opportunities for extracting information and knowledge but also creates new challenges as more data is coming in everyday. An example of collecting vast amounts of data to identify trends is when Google records all of their searches in a two day period which can lead to finding certain trending searches at certain times of day. These search tools are essential for finding information but the challenges it faces are filtering out data that is not of interest of the user searching for specific things. Information filtering systems take large data sets and eliminate this data that is not of interest. Software tools, including spreadsheets and databases help to efficiently organize and find trends in information.
* Computers are used in an iterative or interactive approach when processing digital information to gain insight and knowledge. Going through all data in large data sets and filtering and cleaning it is an iterative approach. Doing so by combining data sources, clustering data and classifying data are all parts of the process of using computers to process information.
* The interactive approach means that people can gain knowledge and insight when translating and transforming digitally represented information. Patterns can emerge that one might night have seen before when transformed using computational tools.

Scratch program.

<https://scratch.mit.edu/projects/360308465/editor>

* 3.1.2: People use computer programs to process information to gain insight and knowledge.
* Collaboration plays an important role when solving data-driven problems. Collaboration facilities that solve computational problems using multiple perspectives, experiences, and skill sets. With the use of shared data through shared internet access to large databases or by a shared google spreadsheets gives rise to enhanced insights and knowledge.
* Developing hypotheses and questions and in testing hypotheses and answering questions about data is what helps gain that insight and knowledge. Collaborating with a partner or using online collaborative tools is another way to gain insight and knowledge, along with investigating large data sets collaboratively can lead to different insights that you personally wouldn't have seen and a better knowledge of the environment that would not have been obtained working alone.

Resources:

1. <https://computing-concepts.cs.uri.edu/wiki/Data_and_Its_Analysis>

Vocabulary:

1. Iterative
2. Interactive
3. Database

stated that the number of transistors in an integrated circuit would double every two years. That statement may not mean much to you, but in layman's terms, this effectively means that the processing power of computers will double every two years.

**Seth Vickers**

* 7.1: Computing enhances communication, interaction, and cognition
  + Email, SMS, chatrooms, phone calls, conference calls, video chats, and social media are all examples of how computing has enhanced communication. Cloud computing is now making it so that not only can we communicate in a plethora of new ways, but we can also work and collaborate in forms unavailable to us before. Communication, however, is not the only aspect of our daily lives enhanced by computing. Transportation, for example, has been revolutionized by GPS, smart buildings, and smart transportation.
  + The creation of all of this disruptive technology, an innovation that creates a new market and value network and eventually disrupts an existing market and value network, displacing established market-leading firms, products, and alliances, a question that often arises is one of scale. If something works for ten people will it work for one hundred? What about one thousand? How about one billion? The sheer number of people that computing reaches creates this issue of scale but it also provides a solution to many other problems in the form of “citizen science” and crowdsourcing.
  + People now interact with computational devices more than ever as we innovate further and further, proliferating always-on mobile computers.
* 7.2: Computing enables innovation in nearly every field
  + Machine learning and data mining have allowed us to make leaps and bounds in areas such as business, medicine, and science. Not only can we crunch numbers in an instant that would have taken hours if not days to do by hand, but instant communication and the collective of all written human knowledge being at the fingertips of the individual has made innovation easier than ever before.