FORMULATING AND EXTENDING DEFINITIONS

Task 1 Video: Happy Maps

https://www.ted.com/talks/daniele_quercia_happy_maps

- What kind of maps have you created? How can they be used?

- What kind of map would you like to create? Why?

You will get a transcript of Happy Maps presentation. Think about which grammar tenses are used. Before suggesting the right forms, revise the rules in the table below.

Revision of grammar: tenses. Which tense is used for each of these situations?

	situation	*tense*
1	referring to a result of a past action, we can use the result	
2	speaking about experience in someone's life	
3	there is an indication of when in the past something happened	
4	an action was repeated many times in the past	
5	referring to current situation by using state verbs	
6	referring to a current action	
7	telling a past story in chronological order	

Task 2 What is Web Mapping ?

- How long has it existed?
- What do you need if you want to create a web map?

a) **Scan the text to find information.**

1. What is the difference between web mapping and web cartography?

2. Are the terms web mapping and web GIS synonyms?

3. What are location-based services?

Web mapping is the process of designing, implementing, generating and delivering maps on the World Wide Web. While web mapping primarily deals with technological issues, web cartography additionally studies theoretic aspects: the use of web maps, the evaluation and optimization of techniques and workflows, the usability of web maps, social aspects, and more. Web GIS is similar to web mapping but with an emphasis on analysis, processing of project specific geodata and exploratory aspects. Often the terms web GIS and web mapping are used synonymously, even if they don't mean exactly the same. In fact, the border between web maps and web GIS is blurry. Web maps are often a presentation media in web GIS and web maps are increasingly gaining analytical capabilities. A special case of web maps are mobile maps, displayed on mobile computing devices, such as mobile phones, smart phones, PDAs, GPS and other devices. If the maps on these devices are displayed by a mobile web browser or web user agent, they can be regarded as mobile web maps. If the mobile web maps also display context and location sensitive information, such as points of interest, the term Location-based services is frequently used.

b) Read the second part (quotation) and fill in the missing information.

1. New opportunities in cartography resulting from the use of the web:

2. New problems resulting from the use of the web:

3. The difference between the first web maps and today´s web maps:

"The use of the web as a dissemination medium for maps can be regarded as a major advancement in cartography and opens many new opportunities, such as realtime maps, cheaper dissemination, more frequent and cheaper updates of data and software, personalized map content, distributed data sources and sharing of geographic information. It also implicates many challenges due to technical restrictions (low display resolution and limited bandwidth, in particular with mobile computing devices, many of which are physically small, and use slow wireless Internet connections), copyright and security issues, reliability issues and technical complexity. While the first web maps were primarily static, due to technical restrictions, today's web maps can be fully interactive and integrate multiple media. This means that both web mapping and web cartography also have to deal with interactivity, usability and multimedia issues."
A more general term is neogeography.

Task 3 Read the descriptions in the table and identify different types of web maps. Focus on the keywords and then change the key words into adjectives for types.

	Example	*static*
1.	View only maps with no animation and interactivity	
2.	Maps that show the situation of a phenomenon in close to realtime. Data is updated at regular intervals.	
3.	Maps that offer GIS analysis, geodata is either provided or uploaded by the map user.	
4.	Maps that allow user to apply his own data filtering, selective content and personal styling	
5.	Various people collaborate to create and improve maps on the web	
6.	Users can change map parameters, navigate and interact with the map and link to other sources	
7.	Maps that show changes over time animating a variable	

Task 4 Grammar in definitions
Source of definitions https://www.nationalgeographic.org/encyclopedia/map/

- **The structure of a definition is: …………….   …….………..   ………………**

A special economic zone (term) *is a geographical area* (class) *which is allowed greater economic freedom than other parts of the country* (relative clause).

- **Use of verbs**

> THE TERM *describes, designates, means, refers to, signifies …..*
>
> OR: *is defined as, is known as …*
>
> To give your own definition, use *may / might / can / could* +be defined as …

- **Use of articles in definitions**
  There is usually an indefinite article before the term and before the class.
  *A verbal scale is **a** sentence that relates distance on the map to distance on Earth.*

  However, sometimes you cannot use a/an in front of a term noun if the noun is plural or uncountable.
  GIS are computer systems that capture, store, and display data related to positions on Earth's surface.

  Sometimes a/an is not appropriate in front of the class noun or even in front of the term.
  *Surveying is **the** science of determining the exact size, shape and location of a piece of land.*

Task 5 Complete the definitions with a term and a class noun from the box and *is/are*.

> *system   remote sensing   GIS   process   GPS   technological field*

1._____*that incorporates geographical features with tabular data in order to map, analyze, and assess real-world problems.*

2. _____*of detecting and (or) monitoring chemical or physical properties of an area by measuring its reflected and emitted radiation.*

3. _____*of radio-emitting and -receiving satellites used for determining positions on the earth.*

Task 6 Alternatives to relative clauses: study the box and use it in the following definitions.

> A process (method, system, …) *by which / whereby*
>
> A process (technique) *of -ing*
>
> An instrument *for -ing*

Geolocation is _____ the geographic position of an internet user can be determined.

A theodolite is a surveying _____ measuring vertical and horizontal angles.

Task 7 Extending definitions
a) How is the definition extended in the following case?

GPS is a system of radio-emitting and -receiving satellites used for determining positions on the earth. The orbiting satellites transmit signals that allow a GPS receiver anywhere on earth to calculate its own location through trilateration. Developed and operated by the U.S. Department of Defence, the system is used in navigation, mapping, surveying, and other applications in which precise positioning is necessary.

(ESRI, GIS Dictionary, GPS)

*By examples   *By constituent parts   *By reference to function   *By reference to types
*By reference to history   *Differently

b) Complete the extended definition below using the verbs over the text.

coined   describes   include   is   means   refer   bases

Permaculture **1**_____ a system of ecological design which **2**_____ itself around sustainable agriculture. Bill Mollison **3**_____ permaculture as 'a philosophy of working with, rather than against nature.' Franklin Hiram King **4**_____ the phrase *permanent agriculture* in his 1911 book, Farmers of Forty Centuries or Permanent Agriculture in China, Korea, and Japan. As he used it, the phrase **5**_____ types of farming methods and land management techniques which can continue indefinitely. More recently, the two words, *permanent agriculture,* became one: *permaculture*. This new term can also **6**_____ to *permanent culture*, that is, to a theory of development that includes social aspects as well as material production. Examples of permaculture **7**_____ agroforestry and rainwater harvesting.   (Patterson, K: Oxford Grammar for EAP, 2017, Ch. 18)

Task 8 Formulating a definition

https://www.gns.cri.nz/Home/RBP/Risk-based-planning/A-toolbox/Setting-the-Scene/General-Natural-Hazard-Guidance/Types-of-maps#inv

Take one example from the five maps. Read the description and identify the part with the main characteristics. Then write your own definition that will be used in a textbook for secondary schools.

Write to the document here:
https://docs.google.com/document/d/1C0B0bNnO3CvRE6KIhv4YTjblroMfb1sHJPFpRGlHmQ0/edit

Sources
Task 1 adapted from Wikipedia, the free encyclopedia by E. Čoupková
Task 2 designed by H. Němcová