



Manual for learning with the Living Textbook

Version 23-8-2019

Welcome to the Living Textbook learning environment

In this environment you can browse "bodies of knowledge" composed by experts or start creating one of your own.

Before you can continue and work with the living textbook, you will need to login. You can either log in using your university credentials (SURFconext) or an account specifically created for you.

University login

Local account

SURF CONEXT

Click on the image to login with your university credentials.

By entering this website you agree that we use software to track user activity. This information is only available to the administrator and is only used to improve and develop the Living Textbook learning environment in general. Personal data will not be available for anyone to see or saved. By logging in, you also accept our general [privacy policy](#).

If you create your private study area in this application, please note that these might be deleted after 6 months of inactivity



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UNIVERSITY OF TWENTE.

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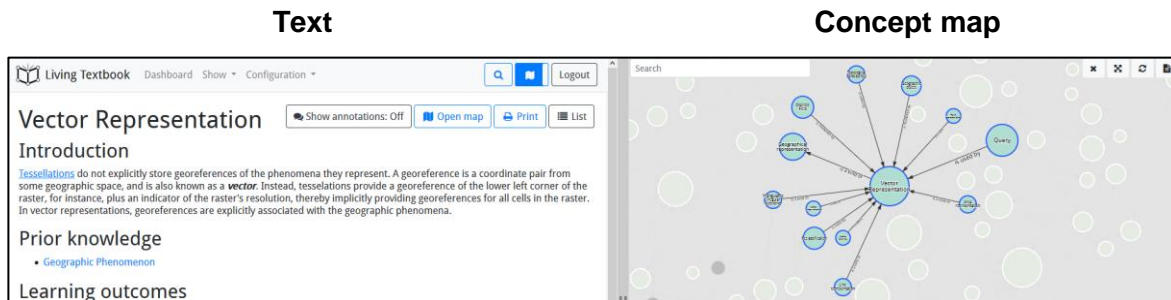
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Introduction

What is the Living Textbook?

The Living Textbook (LTB) was developed to replace written textbooks at the Faculty ITC by a digital format that allows for more flexibility and modern ways of teaching and learning. Instead of just putting a PDF on the web to study, the LTB offers a view on the knowledge network of the expert through a concept map, combined with text:



What is a Concept (map)?

A concept is a theoretical construct that has been formed by combining particular instances into a general idea. Concepts relate with each other via meaningful connections, such as “is defined by”, “is a kind of”, “is a property of”. The concepts and the connections together form the ontology of a certain knowledge area. This is displayed in the LTB in the Concept map.

What is a study area?

The LTB is organised in different study areas. A study area can be for a course or a specific knowledge area. Within the study area you find the concept map and the concepts of that study area.

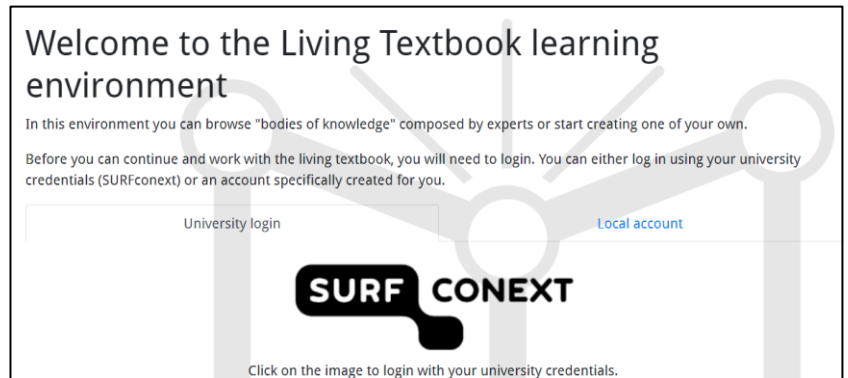
Functionality of the LTB

The LTB supports functions like searching, commenting, discussing, and marking texts and concepts. This manual describes how you can use the LTB in your studies in an effective way. We hope you enjoy it.

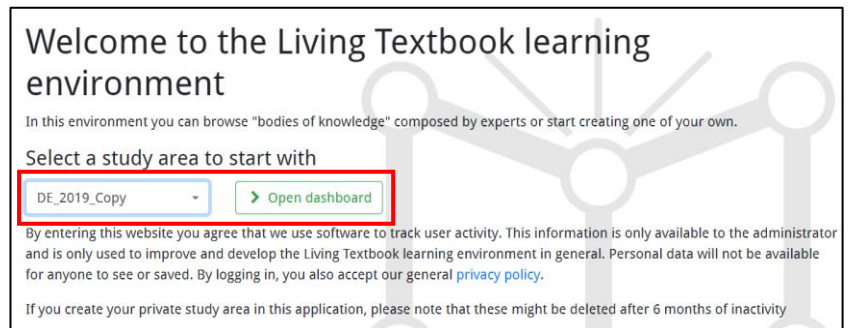


Login to the LTB and find the study area you want to study

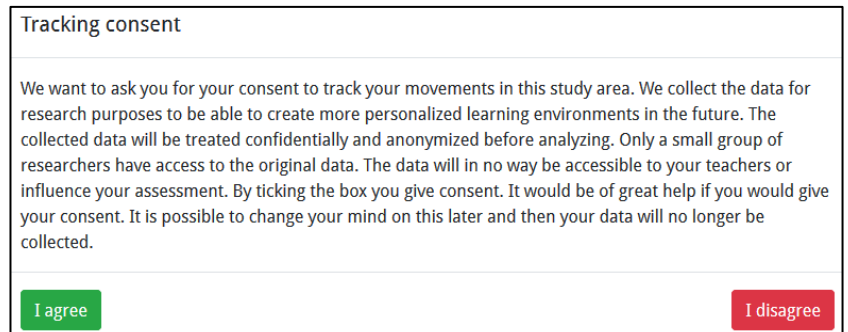
1. Use the link to the LTB:
<https://ltb.itc.utwente.nl>
2. Log in with your university credentials or a local account



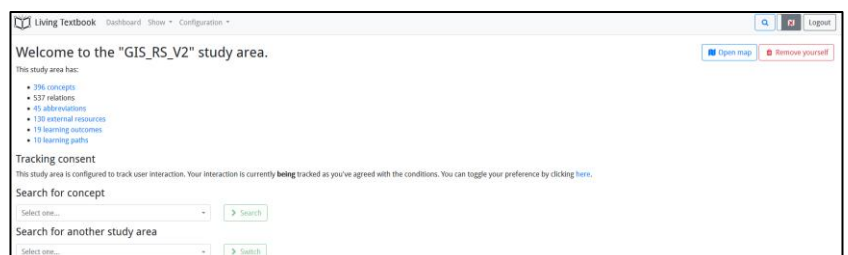
3. Select the study area that you want to study. Then click on **Open dashboard**



4. When you access a study area for the first time, you will be asked if the system can track your movements in this study area anonymously for research purposes. It is possible to change your mind on this later.



5. After you have logged in and chosen the study area you would like to study, you enter the **Dashboard**.



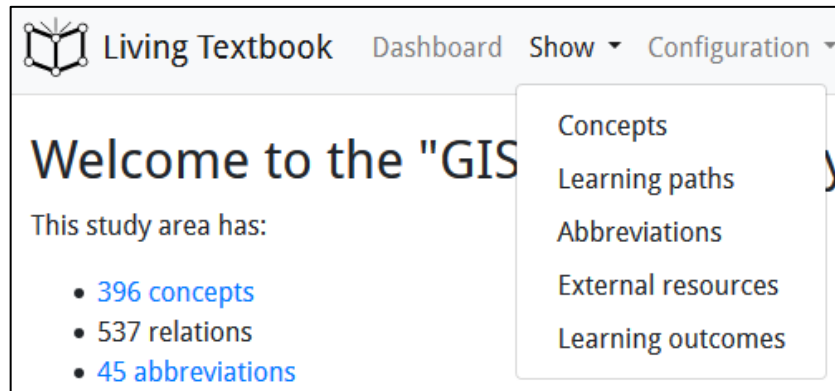
6. It might be that you enter the LTB through clicking on a link in the learning material offered in a course. Then you first have to login as described above. And then you have to click on the link in the learning material again to go directly to the place indicated in your learning material.



Choosing the appropriate manner to access the study area

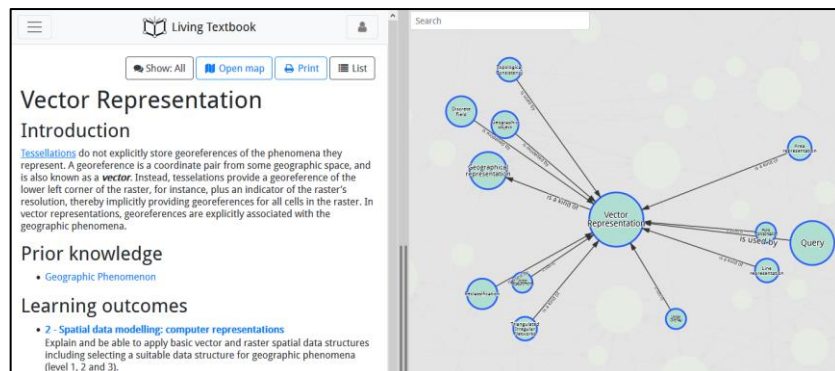
The study area is accessible in many different manners. Choose the manner that fits your current learning purpose.

To follow a pre-defined learning path: A Learning path is a pre-defined combination of concepts that has been defined in advance by teachers. Click in the Menu on **Show** and choose **Learning paths**.



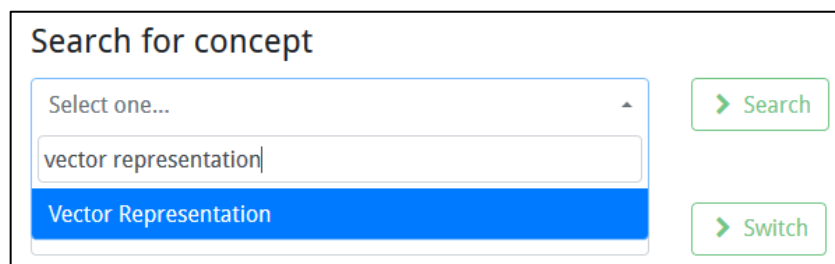
For exploring the concept map of the study area:

Click on [Open map](#) to get an overview of all concepts in the study area. You can find your way through the map via clicking and drag-and-drop. If you click on a concept in the concept map, the text about this concept will appear on the left side of the screen.

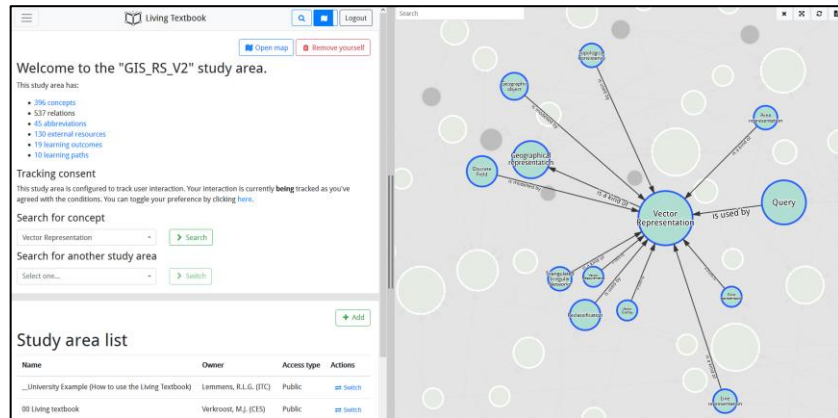


For searching a specific concept:


Fill in the name of the concept in the box below **Search concept** and choose the appropriate concept from the list.

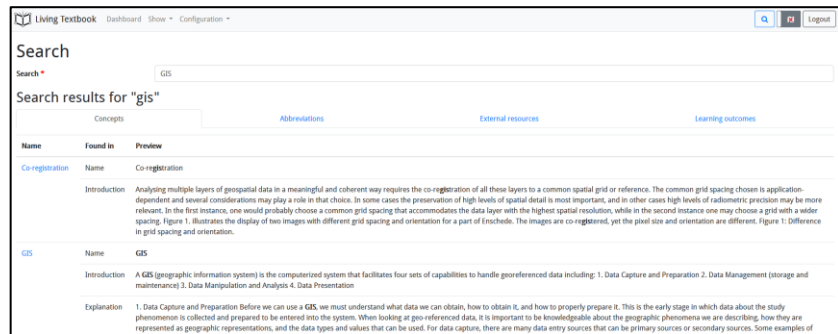


After you click on **Search**, the concept map will open with the chosen concept centred in the middle.



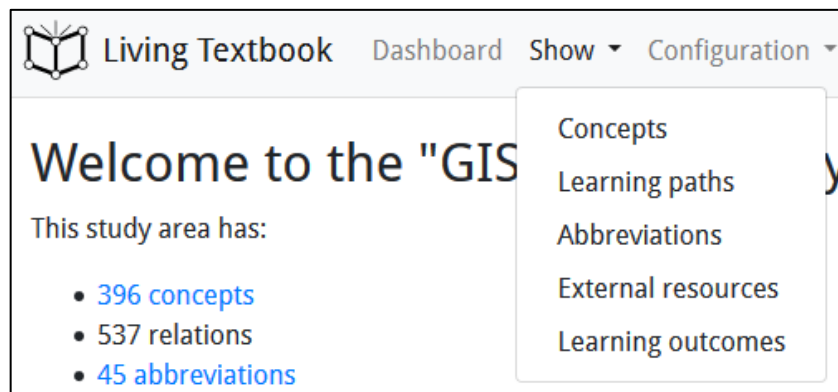
To find out where a specific term is used:

Click on the magnifying glass  in the right upper corner and fill in your search term. The output will show you in which concepts, abbreviations, external resources and learning outcomes the term is used. From there, you can directly go to the place that fits your search request best.



To look up concepts related to a certain learning outcome, abbreviations used, and the external resources addressed in the study area:

Click on **Show** in the Menu and choose what you would like to explore.





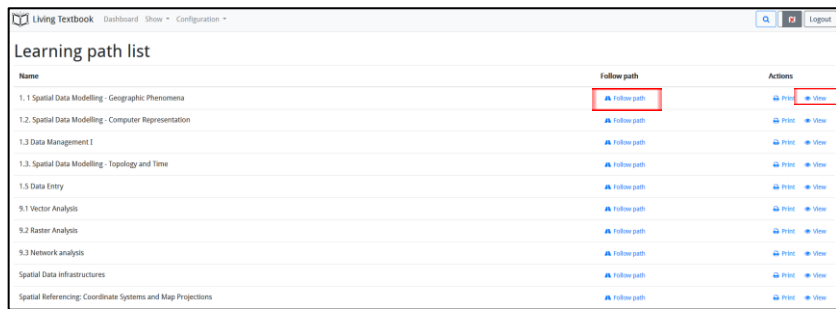
When the left part of the screen, showing the text of a concept is small, the menu collapses into a hamburger menu in the top left corner. Click on this to open the full menu.



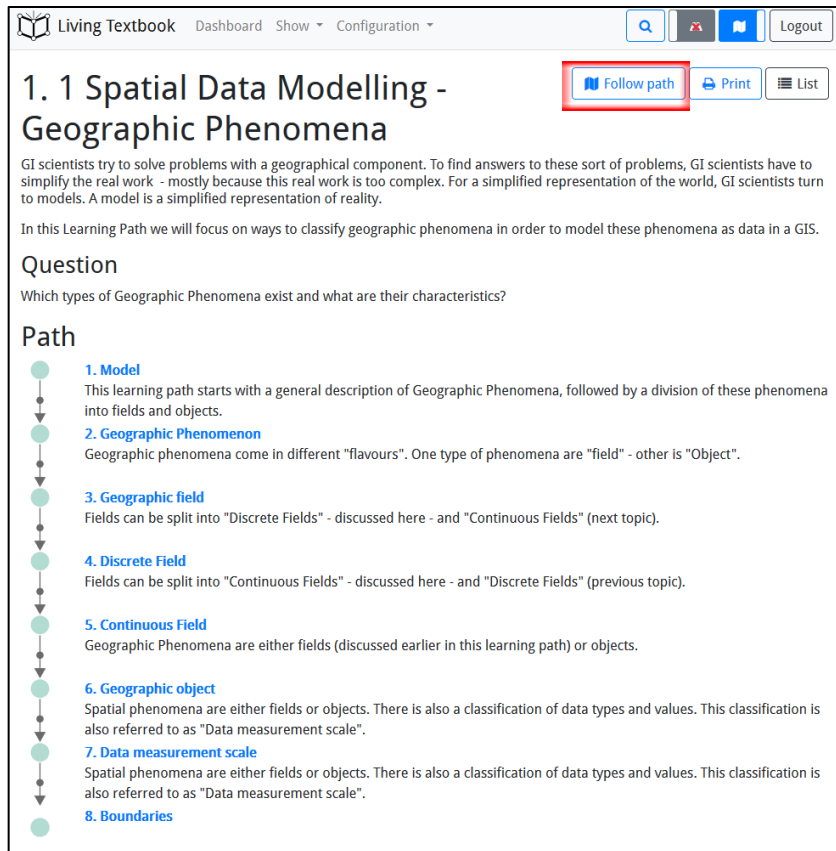
Following a learning path

A learning path can be shown in full view or as a bar below at the screen.

1. Choose the learning path you want to follow from the list with learning paths by clicking on **View** for the full screen view or on **Follow path** for the bar view.



Full learning path view



Click on **Follow path** to change to Bar view.



Bar view

2. Click on the first concept to start following the learning path.

3. If you are interested to see this concept in the Concept map, click on **Open map**

4. Some tips for following the learning path:



It is possible to **hide the learning path** by clicking on the X in the right upper corner of the learning path.



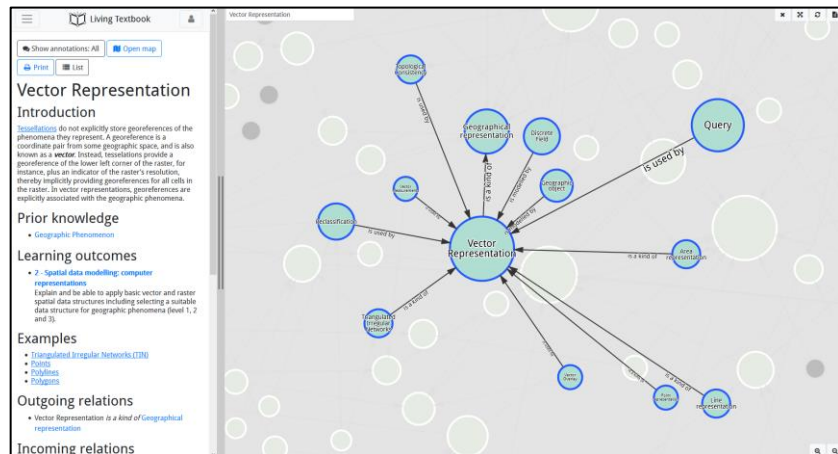
If the learning path is long, you can **move to the right or the left** by clicking on the arrows at the left and right side.



Finding your way in the Concept map

The Concept map of a study area can be quite large and complex. We, therefore, suggest that you start exploring the Concept map by clicking on some concepts and move from there.

1. Click on a concept in the Concept map. The chosen concept is centred, and its first-order relationships are shown.



2. Read the relationships in the direction of the arrow.



In this example, you start reading at the beginning of the arrow (Area representation), read the text on the arrow and then read the text near the arrow head. This means that Area representation is a *kind of* Vector Representation.

3. Some tips for browsing the Concept map:



You can **zoom in or out** in the Concept map by clicking on one of the magnifying glasses in the lower right corner of the screen.



It is possible to **enlarge or diminish the part of the screen showing the Concept map** by dragging the vertical bar in the middle of the two parts of the screen.



The **Concept map can be shown full screen** by clicking on the arrowed cross icon in the right upper corner of the screen.



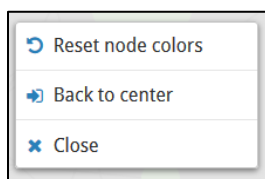
You can drag a concept to a certain place on the screen with your mouse.



It is possible to **colour mark a certain concept** so you can find it back more easily. This colour marking is only visible for you. Click with the right mouse button on the concept you would like to colour mark and choose **Change colour**.



The **Concept map is refreshed** by clicking on the circled arrows icon in the right upper corner of the screen.



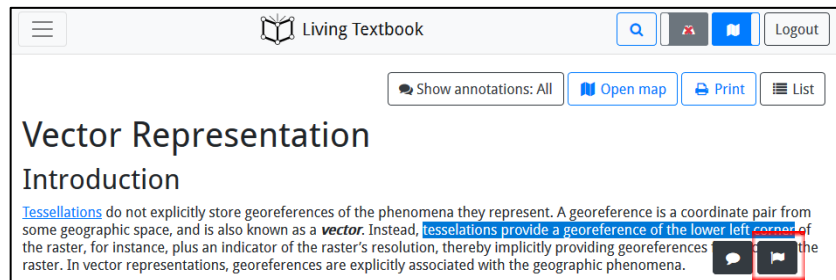
The **colours and the zooming can be reset** by right-mouse clicking in the white space of the concept map.



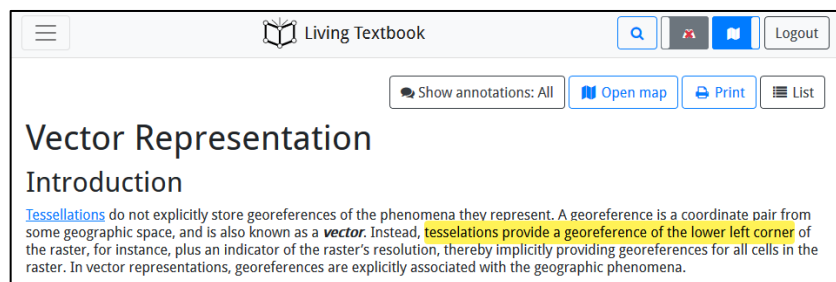
Highlighting text

It is possible to highlight certain parts in the text for yourself.

1. Select the piece of text you would like to highlight and click on the flag icon that appears after selecting the text.



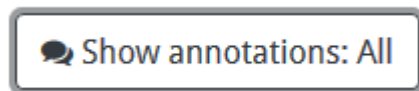
2. Click on **Create mark** and the text will be highlighted yellow.



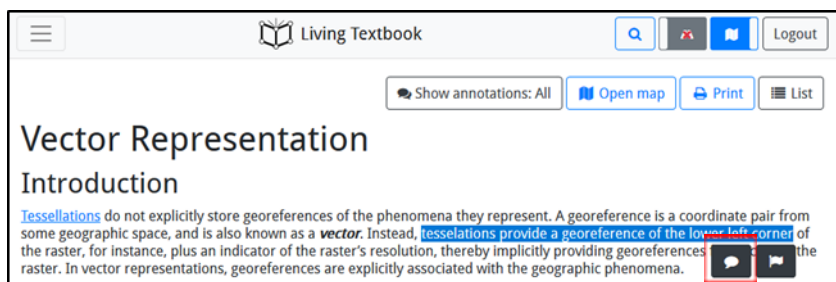
Putting notes in the text and/or commenting to them

You can put notes in the text for yourself or share these with others. Shared notes can be commented on by others, leading to lively discussions on the content.

1. Turn on the annotations view by clicking on the Annotations button at the top of the screen. It has 3 states: **off**, **own**, and **all**.



2. Select the piece of text you would like to comment on and click on the **text balloon icon** that appears after selecting the text.





3. Click on **Create note** and type your comment.

4. Choose the visibility of your note

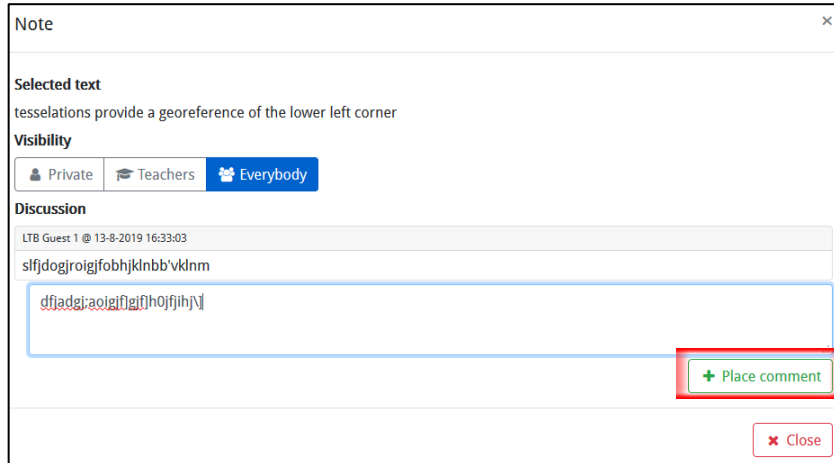
- Private** The note is only visible to you.
- Teachers** The note is visible for you and your teachers
- Everybody** The note is visible for all people who have access to the study area.

5. Click on **Add** to post the note. The text containing a note is highlighted green.

6. To see the actual note, you hover over the text and click on the text balloon icon.



- If you want to, you can comment on the note. This reaction will be visible according to the visibility defined by the person writing the original note. Click on **Place comment** to put your comment in the discussion.

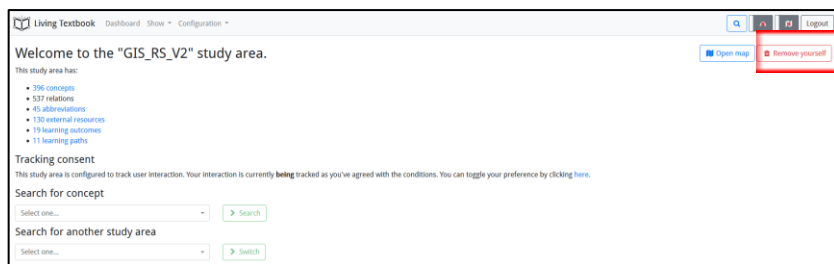


Editing your personal settings

Remove yourself from a study area

Only remove yourself from a study area when you do not need any access anymore. If you remove yourself and would like to renew your access, the study area owner has to give you access manually.

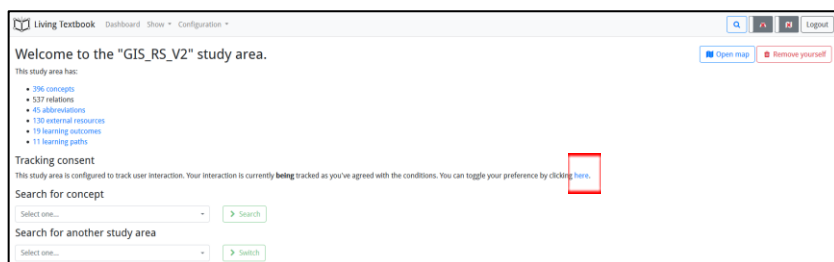
To remove yourself from a study area, you go to the Dashboard and click on **Remove yourself**.



Change your data tracking status

When you first enter a study area, you are asked for permission to track your movements in the study area for research purposes. You can come back on this decision later any time. From that time on, your new anonymous data tracking status is in place.

To change your data tracking status, you go to the Dashboard and click under Tracking consent on **here**.



Printing from the LTB

Concept texts and learning paths can be printed to PDF. Printing limits the possibilities offered by the LTB to only reading. This can be useful in specific cases but is not recommended because you cannot print everything. It is just too much. The prints contain the main texts.



Print a learning path

Open the learning path overview and click on **Print** next to the learning path you would like to print.

Name	Follow path	Actions
1. 1 Spatial Data Modelling - Geographic Phenomena	Follow path	Print View
1.2. Spatial Data Modelling - Computer Representation	Follow path	Print View
1.3 Data Management I	Follow path	Print View
1.3. Spatial Data Modelling - Topology and Time	Follow path	Print View
1.5 Data Entry	Follow path	Print View
9.1 Vector Analysis	Follow path	Print View
9.2 Raster Analysis	Follow path	Print View
9.3 Network analysis	Follow path	Print View
Data Management II : GIS and Database	Follow path	Print View
Spatial Data Infrastructures	Follow path	Print View
Spatial Referencing: Coordinate Systems and Map Projections	Follow path	Print View

Print a single concept

Open the concept you would like to print and click on **Print** in the upper right corner.

Living Textbook Dashboard Show Configuration

Vector Representation

Show annotations: All Open map **Print** List

Introduction

[Tessellations](#) do not explicitly store georeferences of the phenomena they represent. A georeference is a coordinate pair from some geographic space, and is also known as a **vector**. Instead, tessellations provide a georeference of the lower left corner of the raster, for instance, plus an indicator of the raster's resolution, thereby implicitly providing georeferences for all cells in the raster. In vector representations, georeferences are explicitly associated with the geographic phenomena.

Prior knowledge

- [Geographic Phenomenon](#)

Learning outcomes

- 2 - Spatial data modelling: computer representations**
Explain and be able to apply basic vector and raster spatial data structures including selecting a suitable data structure for geographic phenomena (level 1, 2 and 3).

Examples

- [Triangulated Irregular Networks \(TIN\)](#)
- [Points](#)
- [Polylines](#)
- [Polygons](#)