Kit-Build Concept Map Quick Guide

Learning Engineering Laboratory
Hiroshima University
2009-2021

HIROSHIMA UNIVERSITY

Fun Facts
of last 3 years of use

12
Course/Subjects

5
Institutions

1740
Users

1915
Minutes of use

Language Selection

Selected language will be applied throughout the system during initial use.
The default language of the system is Japanese (JP) and the system needs to be
reloaded if the selected languages is differ with the currently applied language
settings.

Please select your preferred language.

English (EN)	日本語 (JP)

*If you close the language dialog
without selecting the language,
you will be asked the next time the
browser is loaded.*

閉じる

*Select Either English (EN) or Japanese
(JP) by clicking the appropriate button.*

User Dialog - Welcome Screen

The system needs to identify user who use it to offer different functionalities according to the role applied to the user. Two main different role of user to use the system are: Teacher and Student.

Student can recompose concept maps from Kit-Build kits of a particular Topic and get feedback while recomposing the concept map. This activity is called Kit-Building.

Teacher has the responsibilities to prepare the contents, compose concept maps, and prepare a kit for their concept maps. The prepared kit will be used by Student in Kit-Building activity. Teacher also have access to Analyzer feature to see and analyze students' concept maps.

➡) Guest Sign-in   *Click this button to show the dialog again.*

➡) Sign In   *Click this button to login with username and password set by Administrator*

Hi!, Welcome to Kit-Build Concept Map

In a few moments you will experience learning by concept map reconstruction with Kit-Build concept map.

It is highly recommended that you use a laptop computer or desktop PC, and use a modern web browser that supports HTML5 and Javascript (such as Chrome, Firefox, or Chromium-based Edge) for the system to run properly.

Before we start, please enter your name. This will help us identify and save your concept map.

[ ]

If privacy is important, you can use any name you like.

Please select the desired role.

○ Teacher/Instructor   ○ Student

OK   **Close**
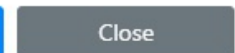
Provide a name, select the preferred role and click OK. Select Student to Experience Kit-Building activity.

You can switch between roles by signing-out and signing-in again with a different role.

Kit-Building

The main purpose of Kit-Building activity is to understand a learning topic by reading the provided content and recompose a concept map from a kit.

Prerequisite: Sign in as Student
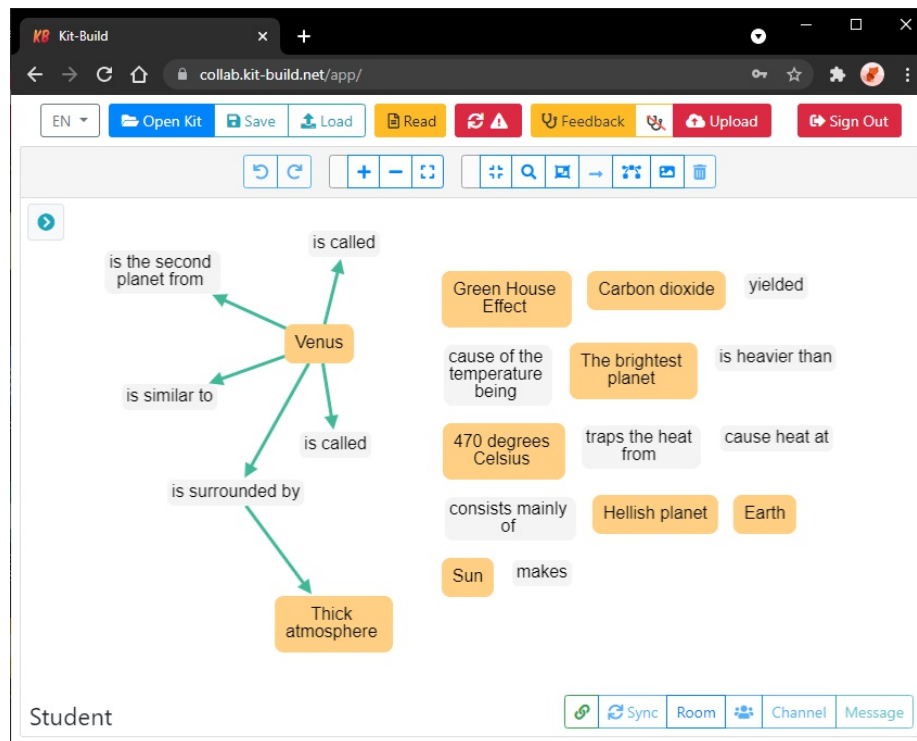
Students are expected to compose a concept map in the same structure as teacher's concept map. By composing the same concept map structure as their teacher's concept map, students could understand what their teacher expect them to comprehend.

Click Open Kit button to open a Kit
Save button to save the concept map
Load button to load concept map

Read button to read the contents
Reset button to reset concept map as given in the initial kit.

Feedback button to get Feedback from system
Clear Feedback button to clear Feedback
Upload button to Save and Finish the Kit-Building activity

Kit-Building: Proposition and Composing a Concept Map

Proposition is a meaningful relationship between two concepts that is connected with a link.
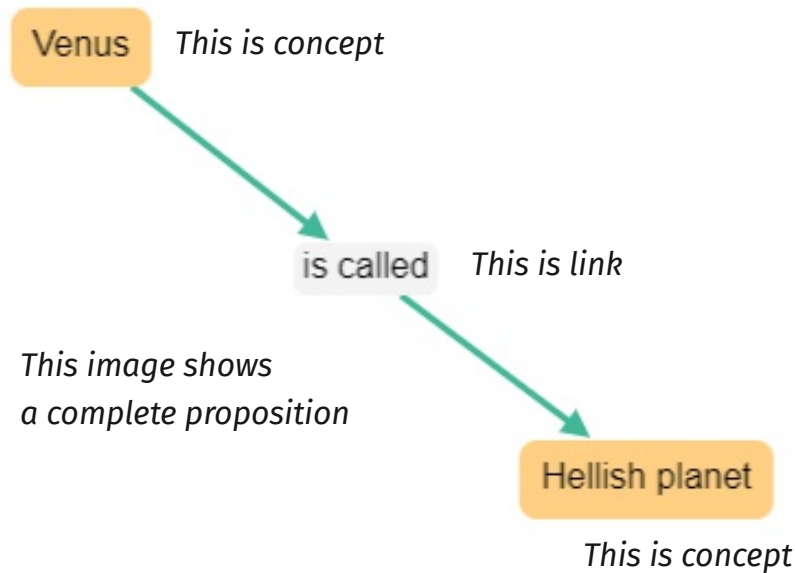
Connect link with a concept by clicking a link node and drag and connect blue/red handle to an appropriate concept.

Connecting a link with a concept can also be done by dragging a concept node to a link node directly.

Venus

This is concept

is called *This is link*

This image shows a complete proposition

Hellish planet

This is concept

Venus

Disconnect the handle from a concept by clicking and releasing the handle out from a concept to cancel a proposition

is called

Hellish planet
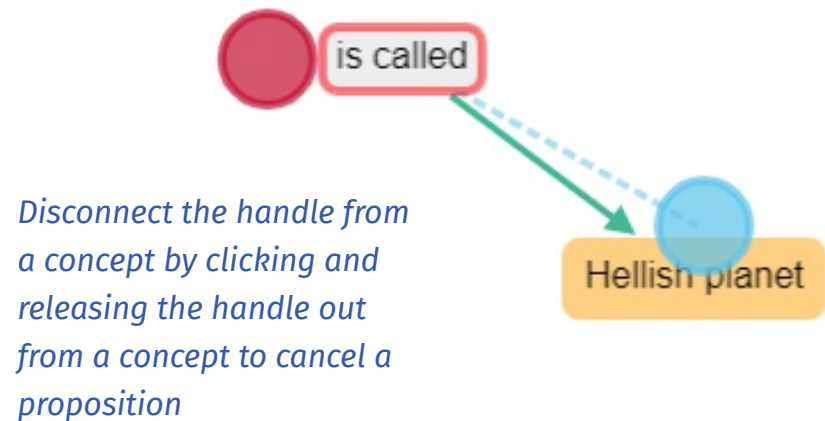
Kit-Building: Opening a Kit

Starts the Kit-Building activity by opening a Kit to recompose into a complete concept map.

Open Kit | **Save** | **Load**

Click Open Kit button to open an Open Dialog window

Topic and Kit

Topic	Kit
General Topic	Kit for map Venusのゴールマップ...
Introduction	**Venusのゴールマップ**
English	Venus Kit **Venusのゴールマップ** ✔
General Zemi	
Venus: The Brightest Planet ✔	
ネットワーク 授業01	
sample lec	

1. Select a Topic

2. Select the desired kit

NOTE:
If you don't see any topic listed in the dialog. Please click the Sign Out button and Sign-in again as Student

3. Click Open   **Open**   **Cancel**

The selected kit will be shown on canvas, replacing any existing concept map

Kit-Building: Getting a Feedback

Starts the Kit-Building activity by opening a Kit to recompose into a complete concept map.

Green: Matching Links Proposition exists in teacher concept map

Blue: Excessive Links Proposition not exists in teacher concept map

Unnconnected/ Partially connected: Missing Links

Orange: a proposition is expected between two concepts

Hellish planet

470 degrees Celsius

cause of the temperature being

is called

cause heat at

makes

is surrounded by

Green House Effect

is the second planet from

consists mainly of

Venus

Thick atmosphere

traps the heat from

Carbon dioxide

is called

is similar to

Sun

Earth

yielded

The brightest planet

is heavier than

Kit-Building: Real-Time Collaboration

Starts the collaboration with two or more users.
One user has to create a room for others to join.

Create Room   *3. Enter Room Name*

Room   Student's Room

Enter a room name. Room name cannot empty.

4. Click OK   OK   Close

Room   ×

No room available

*2. Click
Create Room*

Create Room   Leave Room

🔗 🔄 Sync   Room   👥   Channel   Message

1. Click Room

🔗 Sync

NOTE:
*A crossed chain icon indicated connection
problem to collaboration server (TCP Port 3000).
If you see this icon collaboration activity cannot
be performed by user.*

Room   ×

Student's Room   1 👤 ✓

Create Room   Leave Room

🔗 🔄 Sync   Student's Room   👥   Channel   Message

*Newly created Room and the
number of users inside the
room will be shown*

Kit-Building: Joining a Collaboration

Join a collaboration with others to work together with a concept map in real-time.

2. Click
The desired room
(Student's Room)
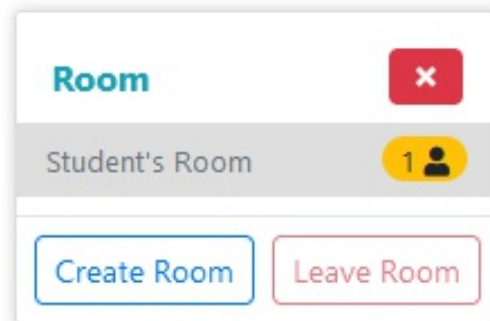
Enter room: Student's Room?
Your map will be synchronized and messages will be cleared.
Continue?`

3. Click Yes

1. Click Room

Joining room SYNC/COPY the concept maps from others to the joining user.

After joining, all concept mapping activities and actions will be synchronized to all users in the same room.

Kit-Building: Discussion

Discuss and communicate between members in a room

2. Click Message Icon

1. Click a Concept/ Link node

Hellish planet

Channel message dialog will appear

2. Type your message and press ENTER to send
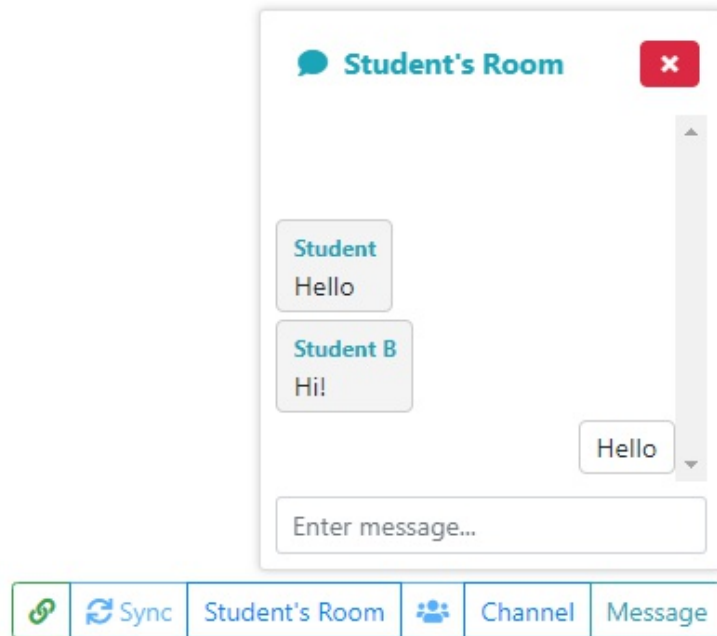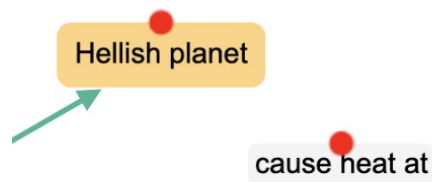
1. Click Message

Newly incoming message or unread messages of a particular concept or link will have a blinking red dot above the respective node.
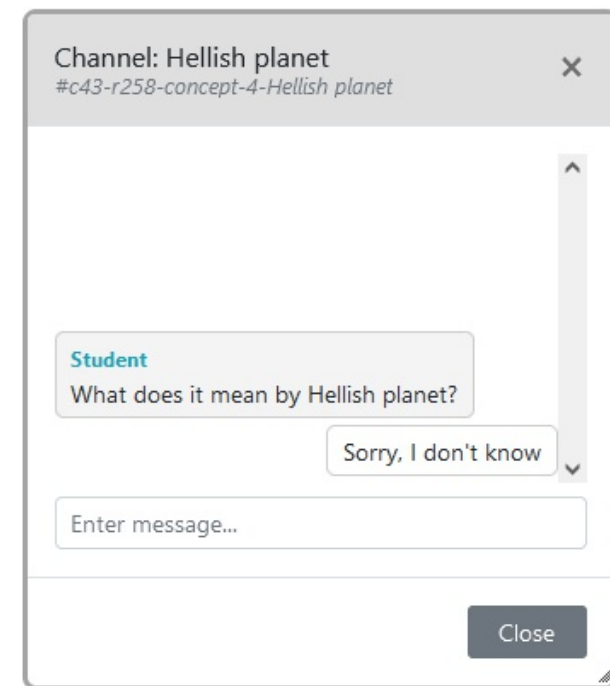
3. Type your message and press ENTER to send

Kit-Building: Tracking Discussion

Tracking discussion and conversation between concepts or links to handle multiple/several conversation simulatenously.

Discussion Channel ✕

C Hellish planet

L cause heat at **New**

2. Click a Concept or Link node from the list

🔗 ⟳ Sync | Student's Room | 👥 | Channel **1** | Message

1. Click Channel

Channel: Hellish planet ✕
#c43-r258-concept-4-Hellish planet

Student
What does it mean by Hellish planet?

Sorry, I don't know

Enter message...

Close
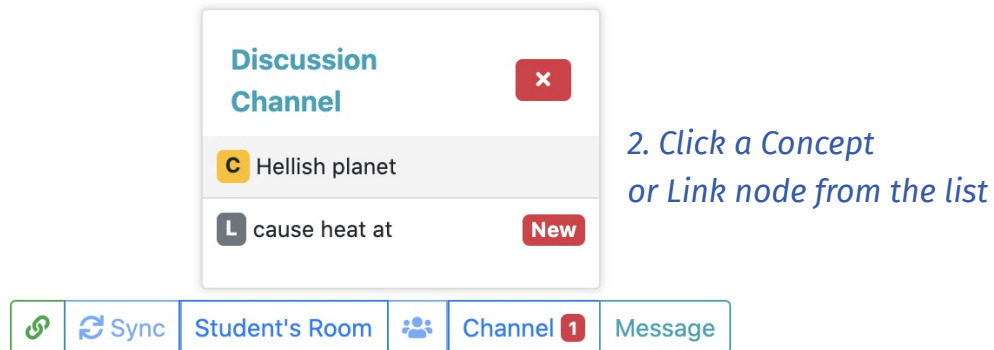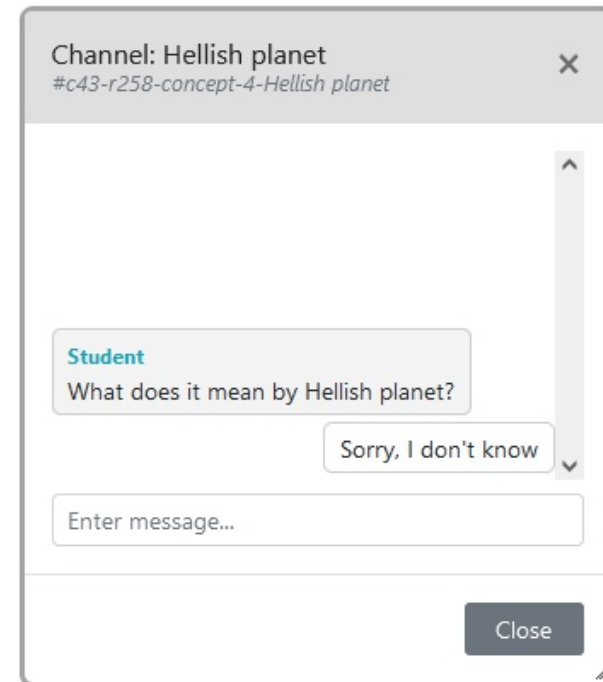
The clicked channel message dialog will appear and the contents will change according to the active concept or link discussion channel.

Comparison Analysis

Analyzing concept maps made by students and compare students' concept map with teacher concept map.

[→ Sign Out]

If you had signed in as Student, sign out by clicking the Sign Out button.

[→] Guest Sign-in

Click this button to show the sign in dialog again.

Provide a name, select the appropriate role and click OK. Select Teacher role to experience Analysis activity.

Hi!, Welcome to Kit-Build Concept Map

In a few moments you will experience learning by concept map reconstruction with Kit-Build concept map.

It is highly recommended that you use a laptop computer or desktop PC, and use a modern web browser that supports HTML5 and Javascript (such as Chrome, Firefox, or Chromium-based Edge) for the system to run properly.

Before we start, please enter your name. This will help us identify and save your concept map.

If privacy is important, you can use any name you like.

Please select the desired role.

○ Teacher/Instructor   ○ Student

Click OK   **OK**   **Close**

Welcome, Teacher!

Let's start composing or analyzing concept maps of Kit-Build.

OK   *Click OK*

| EN ▼ | ☰ App ▼ | 📁 New/Open Map |

Click App

Concept Mapping

Static Analyzer   *Click Static Analyzer*

Dynamic Analyzer

System Administration

Static Analyzer Interface

Static Analyzer: Opening a Teacher Map for Analysis

Opening a Teacher Map for analysis related to the students
concept map static aspects, including the individual
comparison and group map comparison analysis to teacher's
concept map.

Topics and Concept Maps

Topic	Goalmap
General Topic	Venusのゴールマップ ✓
Introduction	
English	
General Zemi	
Venus: The Brightest Planet ✓	
ネットワーク 授業01	
sample lec	

📂 Open Teacher's Map

*1. Click this button to open the
dialog window of teacher
concept map*

3. Select a Teacher Map

2. Select a Topic

Open   Cancel

*NOTE:
If you don't see any topic listed in the dialog.
Please click the Sign Out button and Sign-in
again as Teacher/Instructor.*

4. Click Open

Static Analyzer: Student Concept Map Similarity

Comparing students concept map with teacher concept map
and see the similarity score.

*Similarity scores of students
concept maps are shown in
lower-left list of Static Analyzer
page.*

NOTE:
*The students data are coming from
legit student concept mapping
activities. Student names have been
anonymized due to security and
privacy reasons.*

Learners Maps

Kits	All
Groups	All
Type	All

Name	Score
☐ Student-39	[F] [Fx] 75.0%
☐ Student-39	[Fx] 75.0%
☐ Student-39	[Fx] 91.7%
☑ Student-39	[L] [Fx] 100.0%
☑ Student-40	[F] [L] [Fx] 58.3%
☑ Student-41	[F] [L] [Fx] 41.7%
☐ Student-42	[F] [Fx] 41.7%
☑ Student-42	[L] [Fx] 41.7%
☐ Student-43	[F] [Fx] 8.3%
☐ Student-43	[Fx] 8.3%

Tag labels:

F - The first saved concept map
L - The last saved concept map
Fx - The uploaded concept map
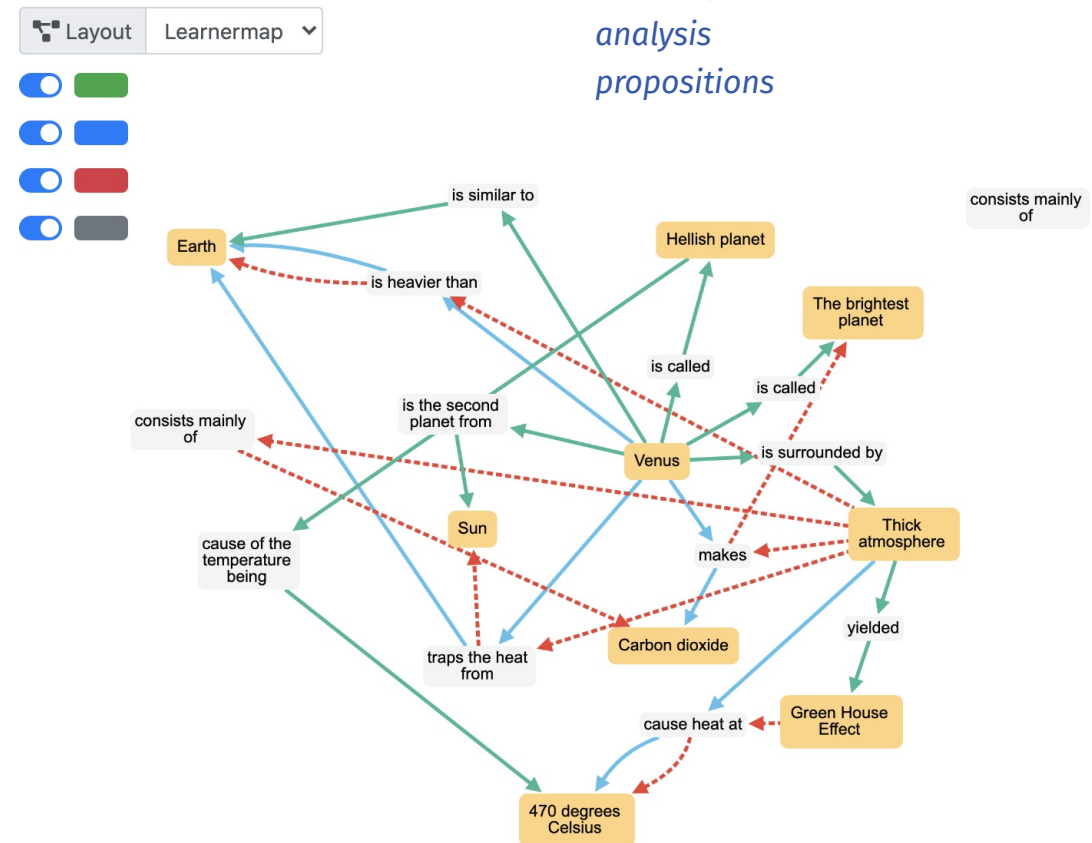
Static Analyzer: Individual Concept Map Analysis

Comparing a student concept map with teacher concept map
and see parts of the concept map that are similar or differ.

Learners Maps

Kits	All
Groups	All
% Type	All

Name		Score
☐ Student-39	**F** **Fx**	75.0%
☐ Student-39	**Fx**	75.0%
☐ Student-39	**Fx**	91.7%
☑ Student-39	**L** **Fx**	100.0%
☑ Student-40	**F** **L** **Fx**	58.3%
☑ Student-41	**F** **L** **Fx**	41.7%
☐ Student-42	**F** **Fx**	41.7%
☑ Student-42	**L** **Fx**	41.7%
☐ Student-43	**F** **Fx**	8.3%
☐ Student-43	**Fx**	8.3%

⫘ Layout   Learnermap ▾

LMID: 544 Student-40 UID: 45 Type: fix Time: 2021-03-17 06:42:24 GMID: 23 Kit ID: 24

Static Analyzer: Concept Map Comparison Analysis

Comparing a student concept map with teacher concept map
and see parts of the concept map that are similar or differ.
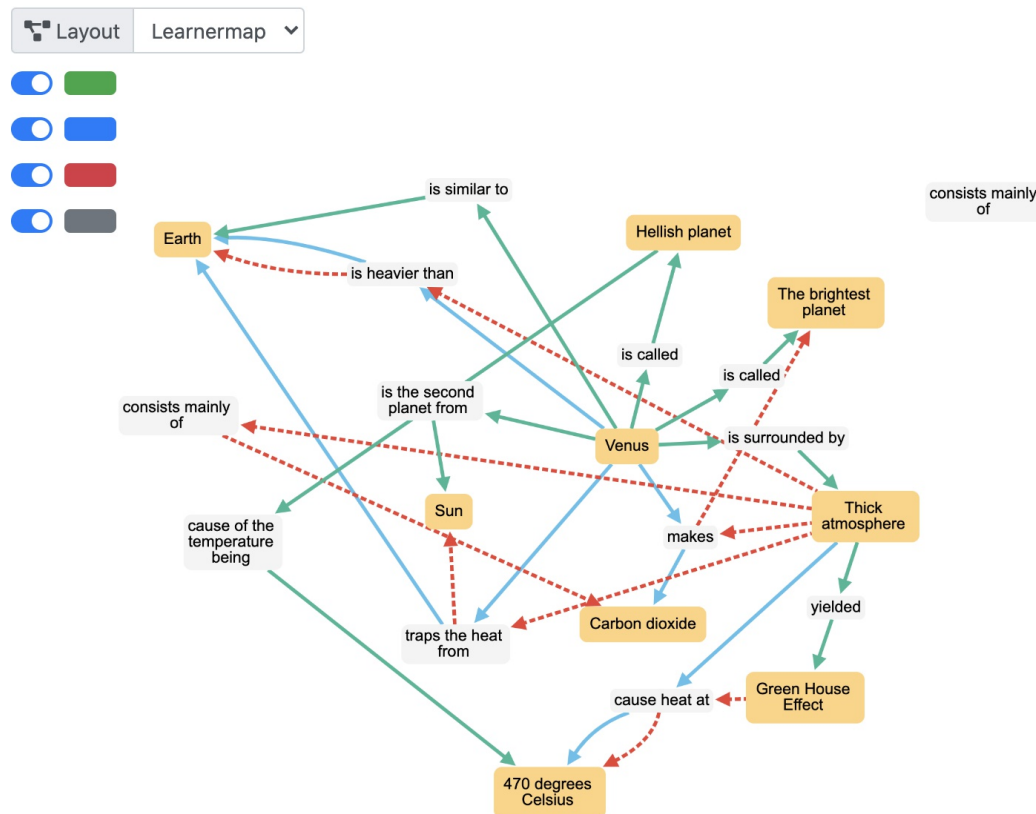
Green: Matching Links
Propositions made by students are exists in teacher concept map

Blue: Excessive Links
Propositions made by students are not exists in teacher concept map

Red: Missing Links
Propositions made by teacher that is not made by students

Grey: Unconnected Links
Links that are not formed into propositions by students (not connected)

Static Analyzer: Group Concept Map Comparison Analysis

Comparing several student concept maps with teacher concept map and see parts of the concept map that are similar or differ.

The canvas will show the group analysis result of all selected students concept map from the list.

Groups — Show Groups Map

| Teacher | **Group** | Range |

Min ———— 1
Max ———— 72

☐ First ☑ Last **Clear**

Learners Maps

Kits — All
Groups — All
Type — All

Name		Score
☐ Student-39	**F** **Fx**	75.0%
☐ Student-39	**Fx**	75.0%
☐ Student-39	**Fx**	91.7%
☑ Student-39	**L** **Fx**	100.0%
☑ Student-40	**F** **L** **Fx**	58.3%
☑ Student-41	**F** **L** **Fx**	41.7%
☐ Student-42	**F** **Fx**	41.7%
☑ Student-42	**L** **Fx**	41.7%
☐ Student-43	**F** **Fx**	8.3%
☐ Student-43	**Fx**	8.3%

1. Select concept map from list for inclusion in the group analysis

- Check first or last to automatically select all first or last concept maps of each student.

2. Click the Group button to show the group analysis.
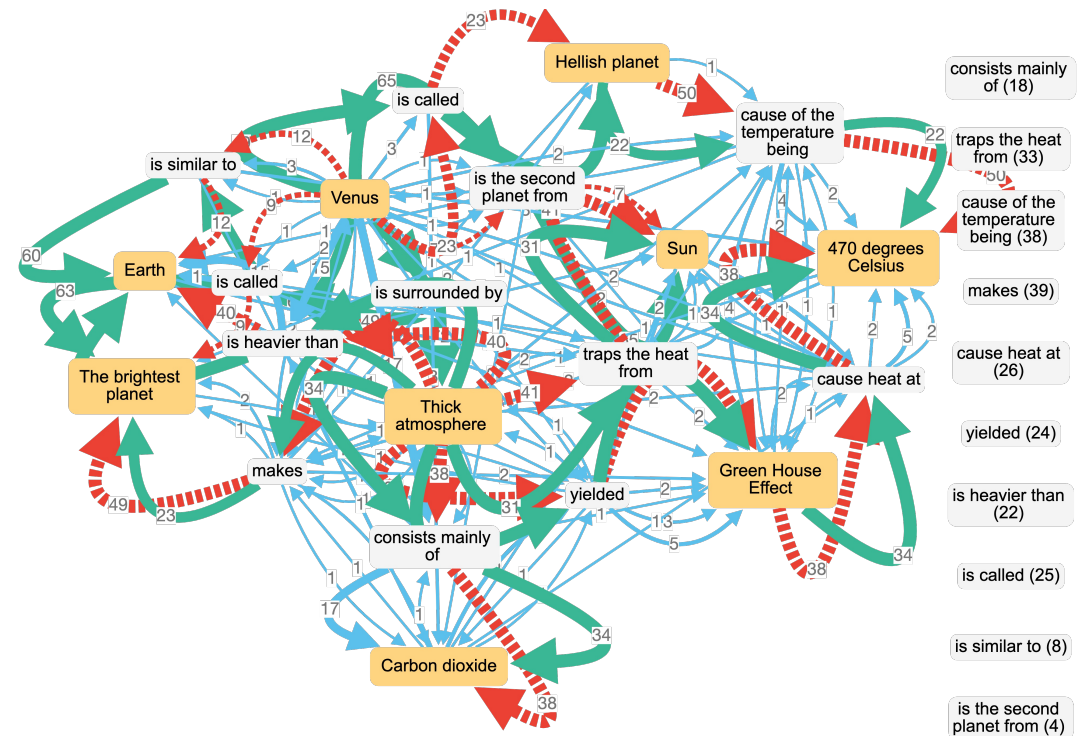
The number shown denotes how many students are associated with each proposition analysis result.

Static Analyzer: Limiting Visualization of Group Comparison Analysis

Limiting the visualization of group concept maps comparison analysis result.

The canvas will show the group analysis result of all selected students concept map from the list with only propositions between the selected minimum and maximum value.

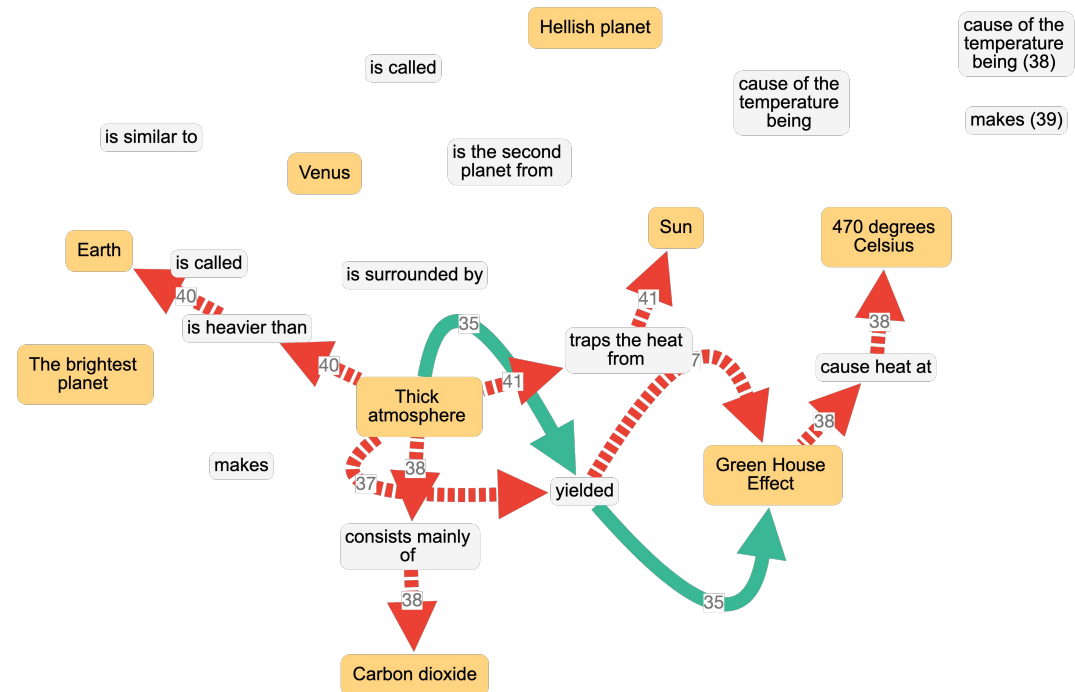*Drag the Min and Max slider to set the range and limit the visualization of group comparison analysis result.*

Click the Teacher button to show the teacher map.

Process Analysis

Analyzing the process of concept map making of students to see the behaviour of students when composing a concept map with a particular teacher concept map or kit.

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It is highly recommended that you use a laptop computer or desktop PC, and use a modern web browser that supports HTML5 and Javascript (such as Chrome, Firefox, or Chromium-based Edge) for the system to run properly.

Before we start, please enter your name. This will help us identify and save your concept map.

If you had signed in as Student, sign out by clicking the Sign Out button.

> **➡ Guest Sign-in**

Click this button to show the sign in dialog again.

If privacy is important, you can use any name you like.

Provide a name, select the appropriate role and click OK. Select Teacher role to experience Analysis activity.

Please select the desired role.

○ Teacher/Instructor   ○ Student

Click OK   **OK**   **Close**

Welcome, Teacher!

Let's start composing or analyzing concept maps of Kit-Build.

OK

Click OK

EN ▾   **☰ App ▾**   **📂 New/Open Map**

Click App dropdown menu

Concept Mapping
Static Analyzer
Dynamic Analyzer

System Administration

Click Dynamic Analyzer

Dynamic Analyzer Interface

Dynamic Analyzer: Opening a Teacher Map for Analysis

Opening a Teacher Map for analysis related to the students concept map process and dynamic aspects, including the individual dynamics and group map dynamic analysis.

Open Map

Topic	Goalmap
General Topic	Venusのゴールマップ LM: 122 ✓
Introduction	
English	
General Zemi	
Venus: The Brightest Planet ✓	
ネットワーク 授業01	
sample lec	

Open Map

1. Click this button to open the dialog window of teacher concept map

2. Select a Topic

3. Select a Teacher Map

The number show how many student concept maps are associated with the teacher map.

NOTE:
If you don't see any topic listed in the dialog.
Please click the Sign Out button and Sign-in again as Teacher/Instructor.

Open Cancel

4. Click Open

The canvas will show the selected and opened teacher map.

Dynamic Analyzer: Student Concept Mapping Time

Comparing students concept map with teacher concept map
and see the similarity score.

*The list will show how long the
students compose each concept
map.*

NOTE:
*The students data are coming from
legit student concept mapping
activities. Student names have been
anonymized due to security and
privacy reasons.*

Name			Duration
☐ K:24	Student-81	F	11:29
☑ K:24	Student-81	L	13:06
☑ K:24	Student-84	F L	06:10
☐ K:24	Student-87	F	03:47
☐ K:24	Student-87		06:44
☐ K:24	Student-87		09:08
☑ K:24	Student-87	L	17:27
☑ K:24	Student-91	F L	22:24
☑ K:24	Student-99	F L	04:08
☑ K:24	Student-102	F L	08:31
☑ K:24	Student-103	F L	08:25
☑ K:24	Student-104	F L	08:28
☑ K:24	Student-105	F L	08:24
☑ K:24	Student-106	F L	08:36

Tag labels:

F - The first saved concept map
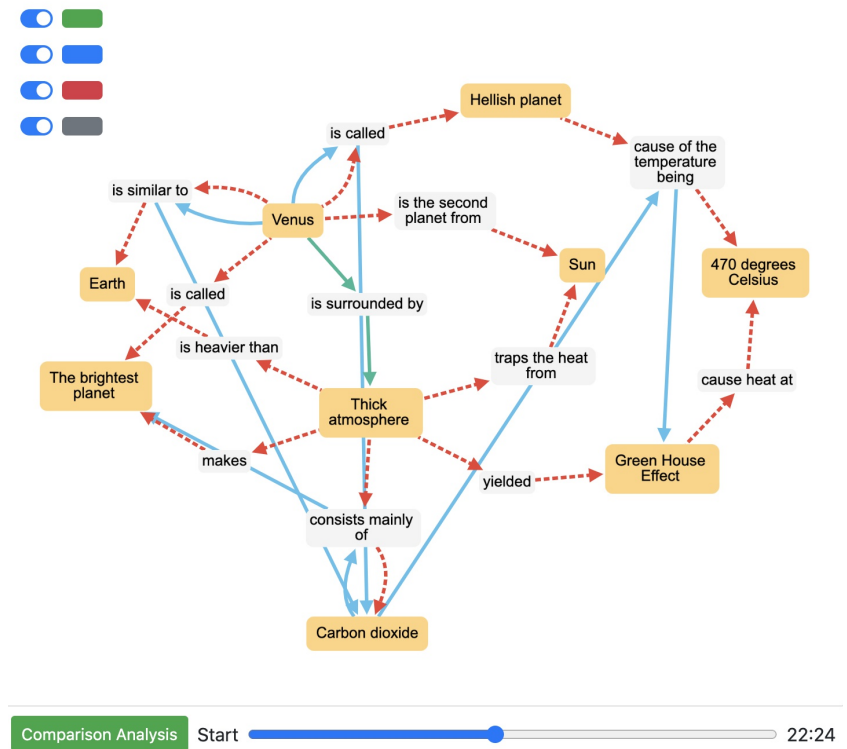*L - The last saved concept map*

Dynamic Analyzer: Individual Concept Mapping Process

Visualizing how their concept mapping activity through time
to compose a concept map of a given kit.

*Click one of the student
concept map from the list*

*Disable/enable the
visualization of a particular
type of proposition
when necessary using the
switches.*

Name				Duration
☐	K:24	Student-81	F	11:29
☑	K:24	Student-81	L	13:06
☑	K:24	Student-84	F L	06:10
☐	K:24	Student-87	F	03:47
☐	K:24	Student-87		06:44
☐	K:24	Student-87		09:08
☑	K:24	Student-87	L	17:27
☑	K:24	Student-91	F L	22:24
☑	K:24	Student-99	F L	04:08
☑	K:24	Student-102	F L	08:31
☑	K:24	Student-103	F L	08:25
☑	K:24	Student-104	F L	08:28
☑	K:24	Student-105	F L	08:24
☑	K:24	Student-106	F L	08:36

Comparison Analysis   Start ———————————●———— 22:24

*Drag the slider left and right at the bottom right of the
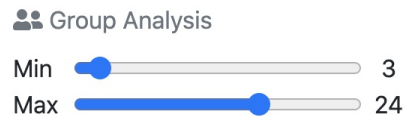screen to see how they were progressing from time to time.*

Dynamic Analyzer: Group Concept Mapping Process

Visualizing how their concept mapping activity through time
to compose a concept map of a given kit.

*Select several student concept
maps from the list*

*Adjust the visualization Min
and Max limit*

Learnermap · Reload

Session ☐ First ☑ Last **Clear**

| Name		Duration
☐ K:24 Student-81	F	11:29
☑ K:24 Student-81	L	13:06
☑ K:24 Student-84	F L	06:10
☐ K:24 Student-87	F	03:47
☐ K:24 Student-87		06:44
☐ K:24 Student-87		09:08
☑ K:24 Student-87	L	17:27
☑ K:24 Student-91	F L	22:24
☑ K:24 Student-99	F L	04:08
☑ K:24 Student-102	F L	08:31
☑ K:24 Student-103	F L	08:25
☑ K:24 Student-104	F L	08:28
☑ K:24 Student-105	F L	08:24

Group Analysis

Min — 3
Max — 24

*Disable/enable the
visualization of a particular
type of proposition
when necessary using the
switches.*

*Begin analysis by clicking the
button below at lower left
corner of the screen.*

Group Analysis ❯
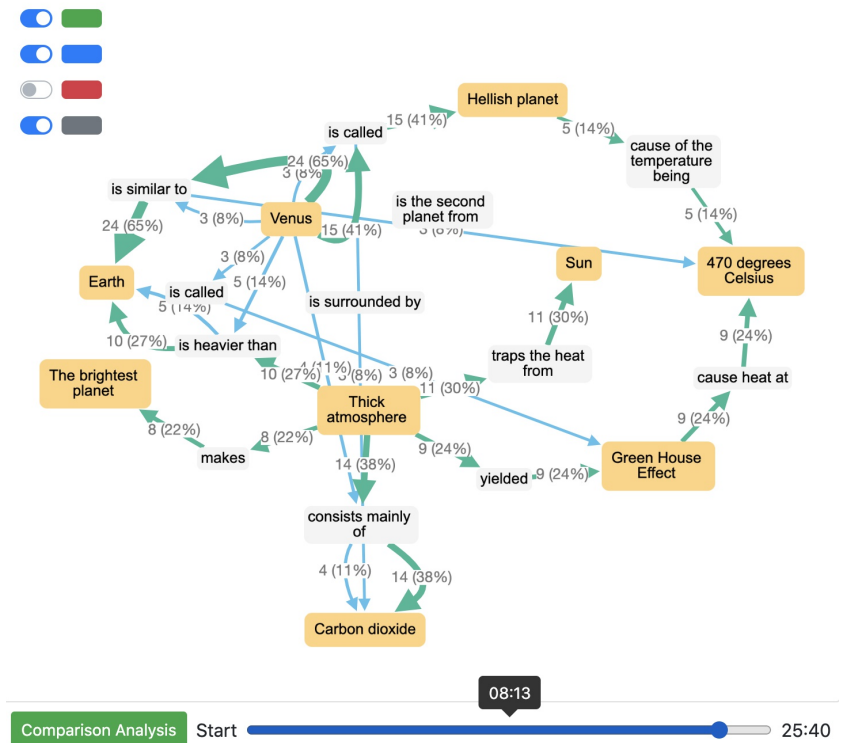
*Drag the slider left and right at the bottom right of the
screen to see how they were progressing from time to time.*

*The number shown denotes how many students are associated
with each proposition analysis result at the selected time*

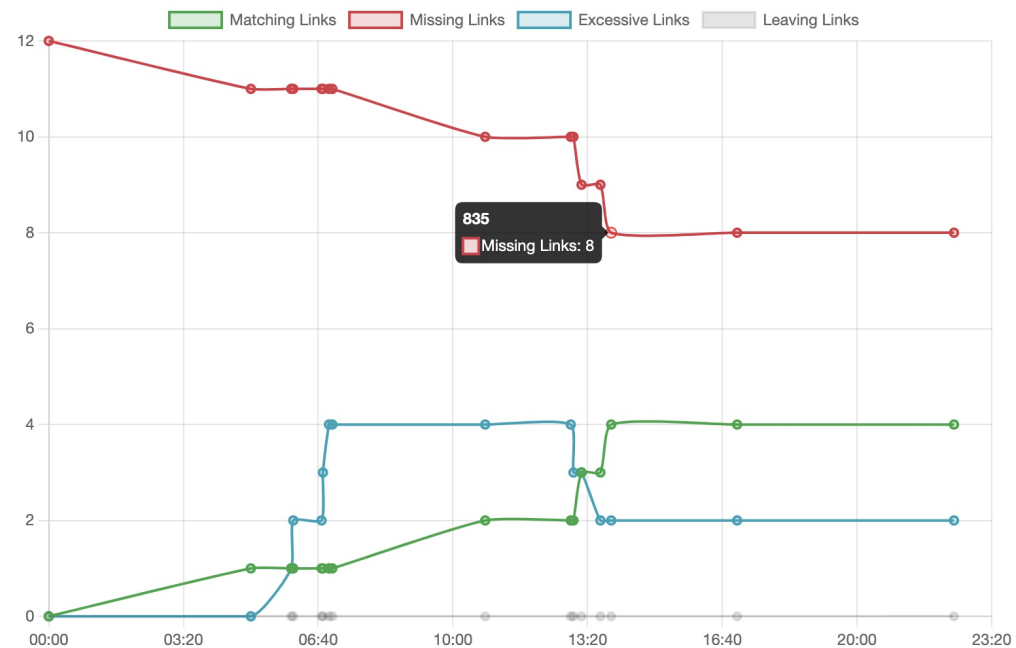# Dynamic Analyzer: Visualizing Comparison Analysis to Time

Visualizing how their concept map improve from time to time
in regards their teacher concept map.

*Click one of the student
concept map from the list*

Comparison Analysis

*Click this button to open the
dialog window of comparison
analysis chart to time*

Name			Duration
☐ K:24 Student-81		F	11:29
☑ K:24 Student-81		L	13:06
☑ K:24 Student-84	F	L	06:10
☐ K:24 Student-87		F	03:47
☐ K:24 Student-87			06:44
☐ K:24 Student-87			09:08
☑ K:24 Student-87		L	17:27
☑ K:24 Student-91	F	L	22:24
☑ K:24 Student-99	F	L	04:08
☑ K:24 Student-102	F	L	08:31
☑ K:24 Student-103	F	L	08:25
☑ K:24 Student-104	F	L	08:28
☑ K:24 Student-105	F	L	08:24
☑ K:24 Student-106	F	L	08:36

Legend: ☐ Matching Links   ☐ Missing Links   ☐ Excessive Links   ☐ Leaving Links

835
■ Missing Links: 8

Close

Dynamic Analyzer: Proposition Focus Analysis

Finding students who focused on a particular set of proposition towards one or more concepts.

1. Select several student concept maps from the list

2. Click the Proposition Set Analysis button to show teacher map
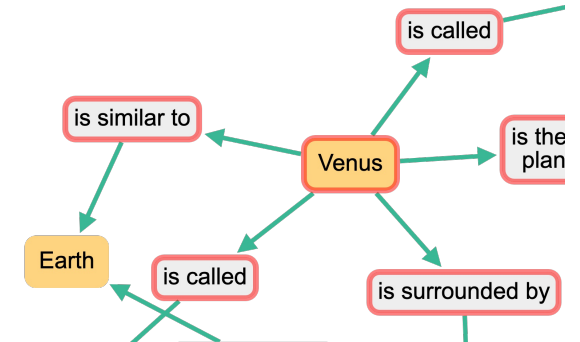
Proposition Set Analysis ›

4. Click the Proposition Set Analysis button again to start the analysis.

Proposition Set Analysis ›

A dialog analysis result will be shown that show list of students who have focused on selected propositions and how much the similarity of their concept mapping process to the selected propositions.

Students with similarity less than two propositions are not shown on the list.

3. Double click a concept node on canvas to highlight all propositions associated to the node for analysis.

Proposition Set Similarity Analysis

Student-81	80.00%
Student-84	80.00%
Student-87	40.00%
Student-91	40.00%
Student-102	60.00%
Student-103	80.00%
Student-104	60.00%
Student-107	80.00%
Student-108	80.00%
Student-110	40.00%

Close