

# Skills curriculum design

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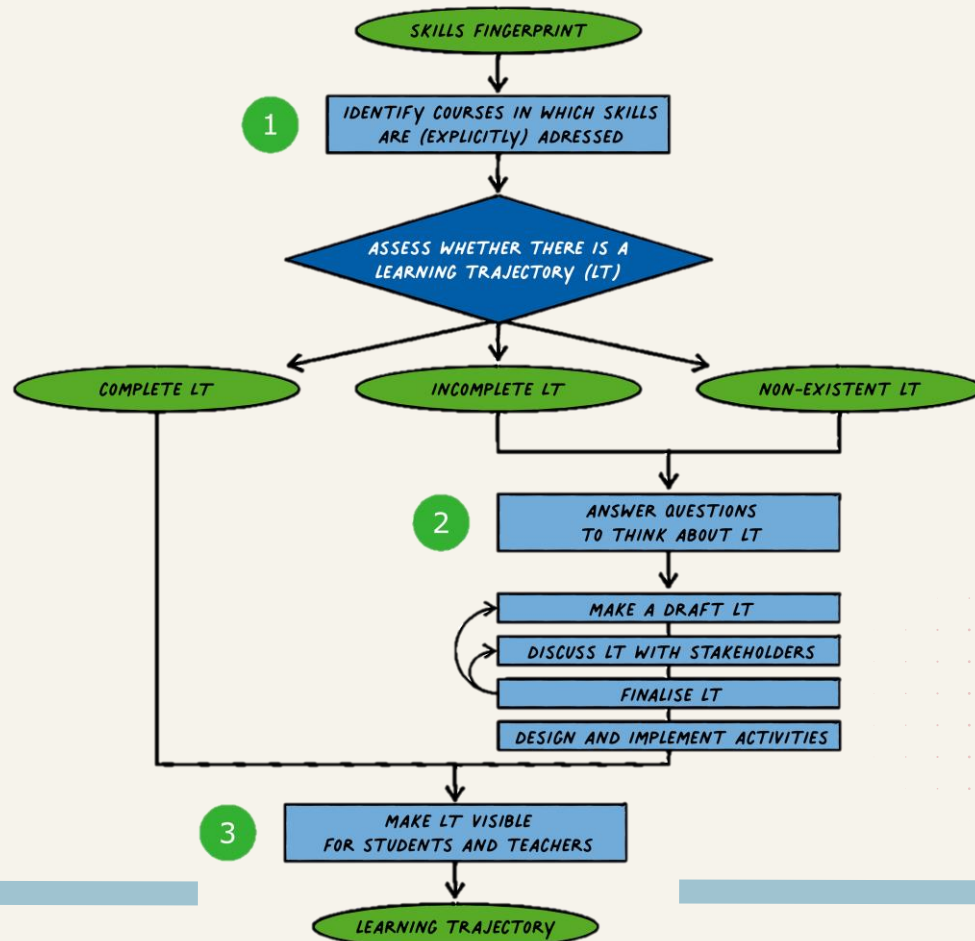
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# Workshop

Step-by-step guide how to integrate skills



# Step- by- step guide





1

# Identify courses in which skills are (explicitly) addressed - fingerprint

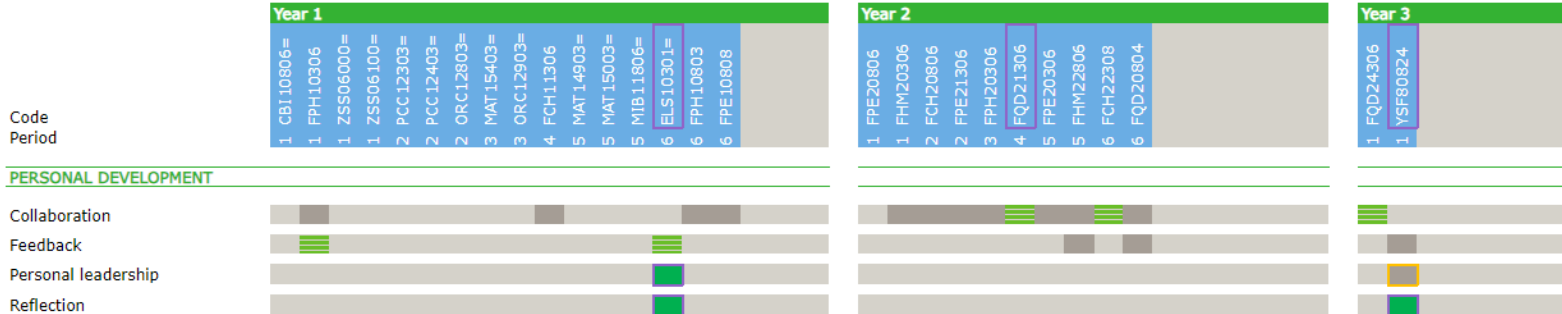
## FINGERPRINT SKILLS LEARNING TRAJECTORIES

### BSc Food Technology

■ compulsory course in the common part of a programme  
■ compulsory specialisation course  
■ course in which students reflect on their skills attainment (optional)

■ not present  
■ implicitly taught (opportur  
■ implicitly taught and asse:

■ explicitly taught  
■ explicitly taught and assessed  
 (possible) good practice  
 desire to change



1. Collaborate effectively in a (multidisciplinary) team to perform project-based work, by structuring meetings, executing different team roles
2. Give constructive feedback to other students, adopting the feedback rules. Proactively ask for feedback and use the valuable feedback for
3. Design and plan your own learning path.
4. Reflect (under supervision) upon personal knowledge, skills, attitudes and functioning, both individually and in discussions with others.

1

# Identify courses in which skills are (explicitly) addressed – learning trajectory

	Year 1 1 <sup>st</sup> half	Year 1 2 <sup>nd</sup> half	Year 2 1 <sup>st</sup> half	Year 2 2 <sup>nd</sup> half	Year 3
	Course 1		Course 2		Thesis
Level	2		2		3
Practiced	Individual Tutorial		Individual Practical		Individual Practical
Taught	Tutorial Explicit				
Assessed					Individual Explicit in report
Feedback	Individual & group Implicit in tutorial		Individual Implicit in report		Individual Explicit in report

2

## Answer questions to think about LT – when there is no LT

- What type of activities are needed for a LT?
  - Integrated in courses
  - Separate skills meetings
  - Continuous course?
- Which courses are suitable for activities in this LT?
- How much time will it take / who will perform these activities?
- How to involve the lecturers?

2

## Answer questions to think about LT – when there is an incomplete LT

- What type of **extra** activities are needed for a LT?
  - Integrated in courses
  - Separate skills meetings
  - Continuous course?
- Which courses are suitable for **extra** activities in this LT?
- How much time will it take / who will perform these (**extra**) activities?
- How to involve the lecturers?

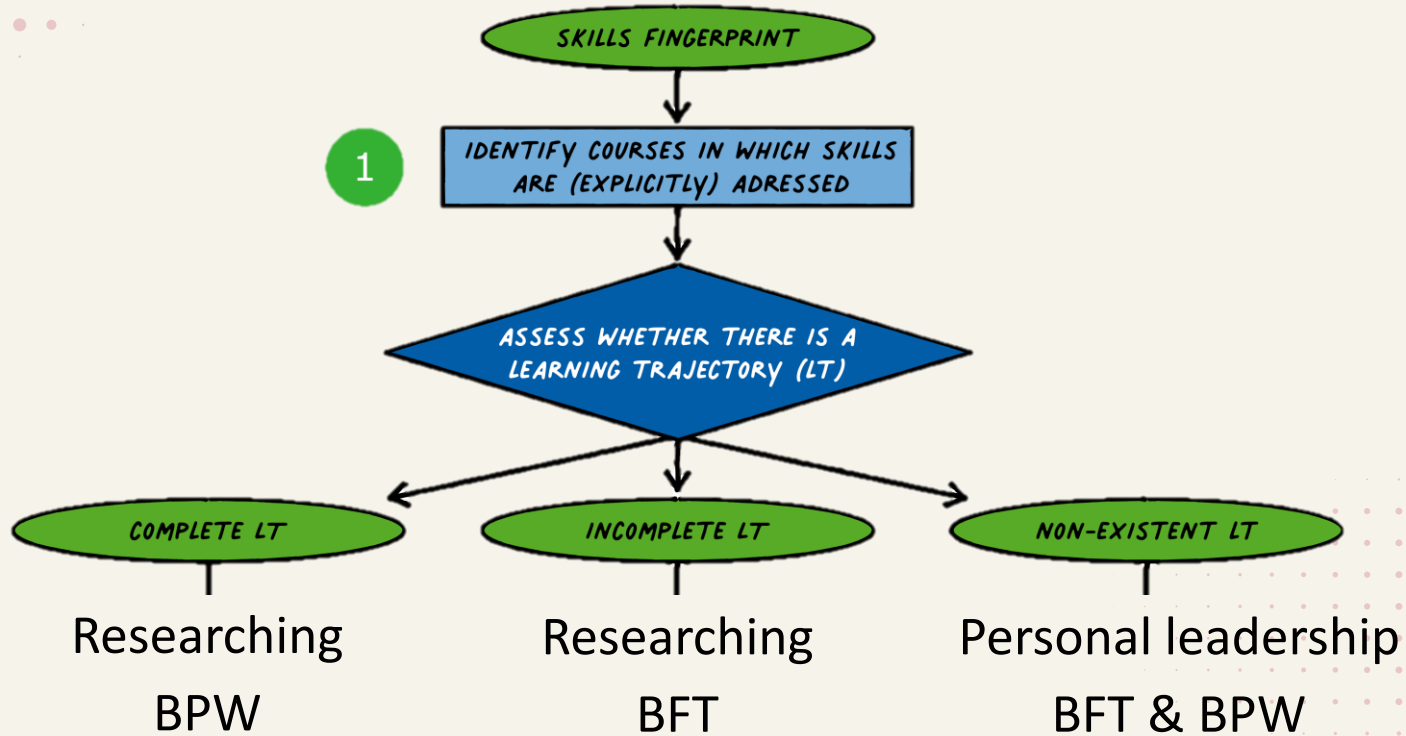


3

## Make LT visible for students + teachers

Two examples will be shown later

# Four examples



# BFT – Personal leadership

Non-existent LT

## Previous situation

- In first course: a few assignments
- Information meetings & talks with study advisors

# BFT – Personal leadership

Non-existent LT

## Type of activity

- Food Technology Skills Academy meetings
- Interactive meetings in which students discuss experiences

## Suitable courses

- No suitable courses

## Time investment

- 2 meetings in first year

## Involvement of teachers

- No involvement – implementation by skills coordinator

# BFT – Personal leadership

Non-existent LT

Example Food Technology Skills Academy (FTSA) meeting –  
*the start of your study*

## Who?

- Skills coordinator + study advisors

## When?

- Year 1 – period 2

## What?

- Sharing experiences, challenges and tips after 3 months of studying, about:
  1. Is this the right study?
  2. Balancing time
  3. Learn to study
  4. Getting settled & finding your place

# BPW – Personal leadership

Non-existent LT

## Previous situation

- End of year 1: Interviews with alumni
- Information meetings & talks with study advisors

# BPW – Personal leadership

Non-existent LT

## Type of activity

- BPW Academic Journey tutorials
- Students reflect on their skills and identify new skills to work on in a Personal Development plan

## Suitable courses

- Introduction Plant Sciences, Plant Sciences in Practice, Research Methods in Plant Sciences, BSc thesis

## Time investment

- 2 tutorials (+/- 45 minutes) in introduction, 1 tutorial in other courses, self-reflection assignment in BSc thesis

## Involvement of teachers

- Teachers of selected courses together with the skills coordinator.

# BPW – Personal leadership

Example Academic Journey tutorial –  
*discovering the professional field*

Non-existent LT

## Who?

- Teachers of Introduction Plant Sciences + skills coordinator

## When?

- Year 1 – period 1, week 3

## What?

- Discovering the professional field of Plant Sciences by looking at professional profiles



# BPW – Personal leadership

## Example Professional profiles

Non-existent LT

### Ondernemer

**Skills**

- Communiceren met klanten en partners
- Leidinggeven en leiderschap tonen
- Presenteren
- Kritisch nadenken
- Doorzettingsvermogen
- Zelfstandig werken
- Problemen (creatief)oplossen
- Netwerken
- Begrotingen maken en boekhouden

**Kerntaken**

- Het leiden van je bedrijf, nieuwe doelen bepalen, bestaande processen evalueren, medewerkers aansturen.
- Het produceren van je product of het uitvoeren van je dienst.
- De marketing en sales rondom je product of dienst
- Het regelen van personeelszaken
- Het beheren van de financiën van je onderneming
- Controleren dat je bedrijf de bestaande wetten en regelgevingen naleeft
- De juiste mensen inhuren of aannemen die je kennis en kunde aanvullen en je bedrijf naar een hoger niveau tillen

**Vakinhoudelijke kennis**

Als ondernemer is het belangrijk dat je voldoende kennis bezit over het product of de dienst die jouw bedrijf levert. Je kunt dan effectief te werk gaan en specifieke vragen van klanten goed beantwoorden.

**Bedrijfsmanagement**

Als ondernemer is het cruciaal dat je weet hoe een succesvol bedrijf in elkaar zit en vooral hoe je dit zelf opzet en winstgevend maakt.

**Werkomgeving**

Voor het verkopen van je product of dienst ga jij naar klanten toe of laat jij ze bijvoorbeeld naar je winkel komen

Ook zal je veel op kantoor, achter de computer te vinden zijn, waar je zaken als de financiën regelt.

### PhD kandidaat

**Skills**

- Onderzoek opzetten
- Kritisch nadenken
- Data analyse
- Informatievaardigheden
- Academisch schrijven
- Presenteren
- Samenwerken met anderen uit je vakgroep
- Plannen en organiseren
- Doorzettingsvermogen

**Kerntaken**

- Je eigen experimenten opzetten en uitvoeren.
- Het verzamelen en analyseren van data
- Nieuwe informatie verzamelen uit de literatuur en deze toepassen op je eigen onderzoek.
- Gebruiken van nieuwe technieken
- Schrijven van publicaties.
- Overleg en communicatie met je onderzoeksteam
- Bijwonen van presentaties en congressen
- Begeleiden van thesisstudenten
- Vakken volgen om je eigen kennis te verbreden.
- Mogelijk meedraaien met onderwijs van de leerstoelgroep.
- Het maken en aanpassen van een lange termijn planning.

**Vakinhoudelijke kennis**

De vak kennis van een PhD kandidaat is afhankelijk van het onderzoeksgebied. Je moet ervoor zorgen dat je altijd op de hoogte bent van de allerlaatste ontwikkelingen in je onderzoeksveld. Op basis hiervan bedenken je relevante, specifieke onderzoeksvragen die je door middel van het uitvoeren van experimenten probeert te beantwoorden. Naast deze specifieke kennis heeft een PhD'er ook wat algemenere kennis nodig:

**Onderzoeksmethodologie**

Als PhD-kandidaat ben je iedere dag bezig met onderzoek. Het is daarom belangrijk dat je precies weet hoe een onderzoek in

**Werkomgeving**

Je kunt werkzaam zijn op een universiteit of bij een onderzoeksinstituut

Je voert experimenten uit in het lab, de kas of in het veld

Het schrijven van papers en de samenwerking met je

# BPW – Personal leadership

Example Academic Journey tutorial –  
*discovering the professional field*

Non-existent LT

## Who?

- Teachers of Introduction Plant Sciences + skills coordinator

## When?

- Year 1 – period 1, week 3

## What?

- Discovering the professional field of Plant Sciences by looking at professional profiles
- Reflecting on: What do I want to do after my studies?

# BFT – Researching

Incomplete LT

## Previous situation

- Students do experiments
- Not all subskills of rubric are explicitly taught / assessed

# BFT – Researching

Incomplete LT

## Type of activity

- Integrated in courses – better alignment
- Food Technology Skills Academy meeting

## Suitable courses

- Courses which have practicals

## Time investment

- Extra instruction in practical: 15 minutes
- Food Technology Skills Academy meeting: 1.5 hours

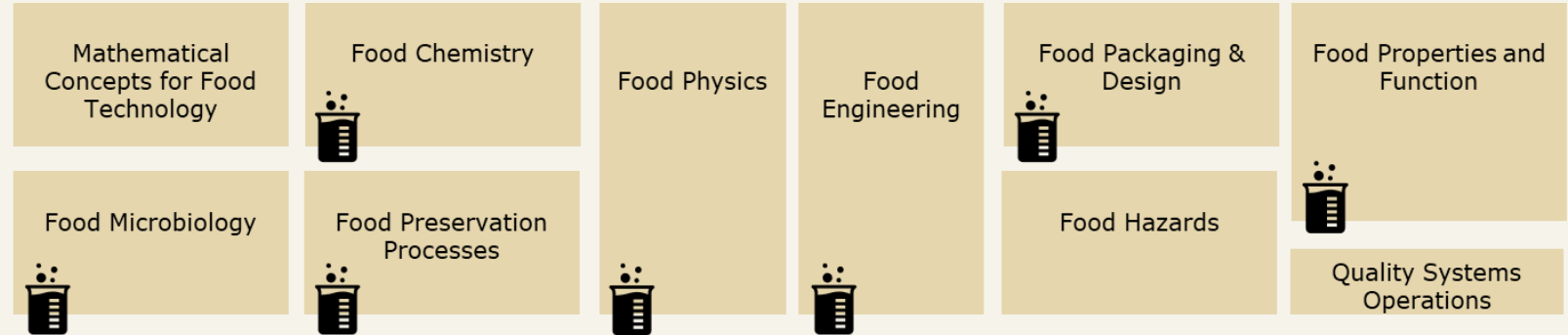
## Involvement of teachers

- Teachers give extra instruction
- Teachers give specific feedback on subskill

# BFT – Researching *Previous situation*

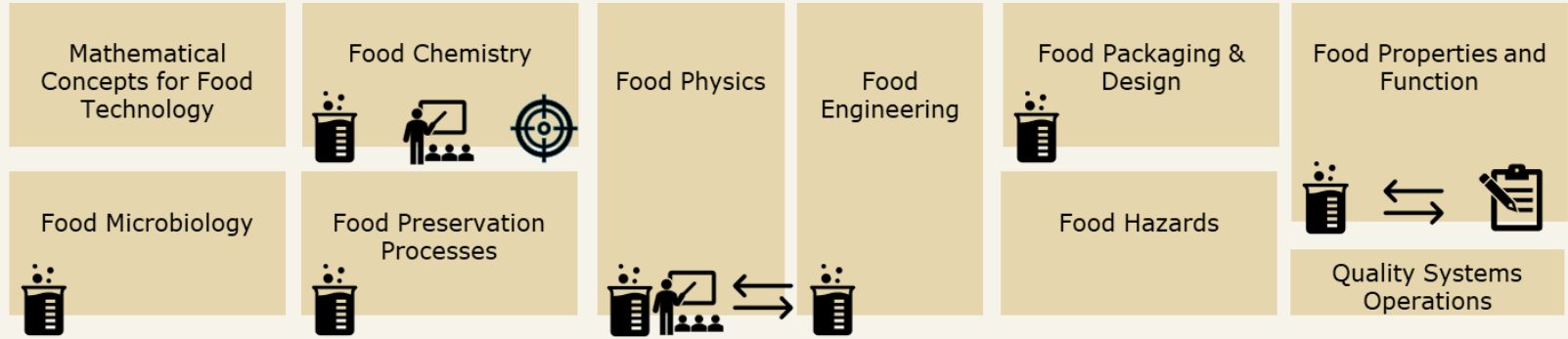
Incomplete LT

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# BFT – Researching *New situation*

Incomplete LT



Practicing during practicals



Reflection + setting goals



Instruction



Feedback



Assessment

# BFT – Researching

Incomplete LT

Example Food Technology Skills Academy (FTSA) meeting –  
*reflect on researching*

## Who?

- Course coordinator + teachers

## When?

- Year 2 – period 2

## What?

- Discuss experiences and share tips about situations in the lab;
  - *‘I understand why to use blank*
  - *‘I know where to throw away the chemicals’*
- Reflect on insights and set goals

# BPW – Research skills

Complete LT

Strongly developed learning trajectory, culminating in the BSc thesis

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Courses	Introduction Plant Sciences	Plant Sciences in Practice	Research methods PS	BPW BSc Thesis
Activities	Multiple tutorials	Own research project, group of 3	Own research project, group of 2	Individual research project
Instruction	Explicit in tutorials and manuals	Explicit in lectures and manuals	Explicit in lectures and manuals	Explicit in manuals on Brightspace
Assessment	Written report	PPT presentation + notes	Written report + presentation	Written report, presentation and "defense"
Feedback	Peer feedback + teacher feedback	Teacher feedback	Peer feedback + coach feedback	Supervisor feedback + examiner feedback



# BPW – Research skills

Complete LT

**Action: Visibility for students and staff**

3

## Make LT visible for students + teachers

### Importance of visibility

- Teachers: alignment between courses
- Students: awareness and tracking skills development

## 3

# Make LT visible for students + teachers

## *Example BPW*

### Overzicht skills BPW jaar 1

● Centrale instructie  
● Geen centrale instructie

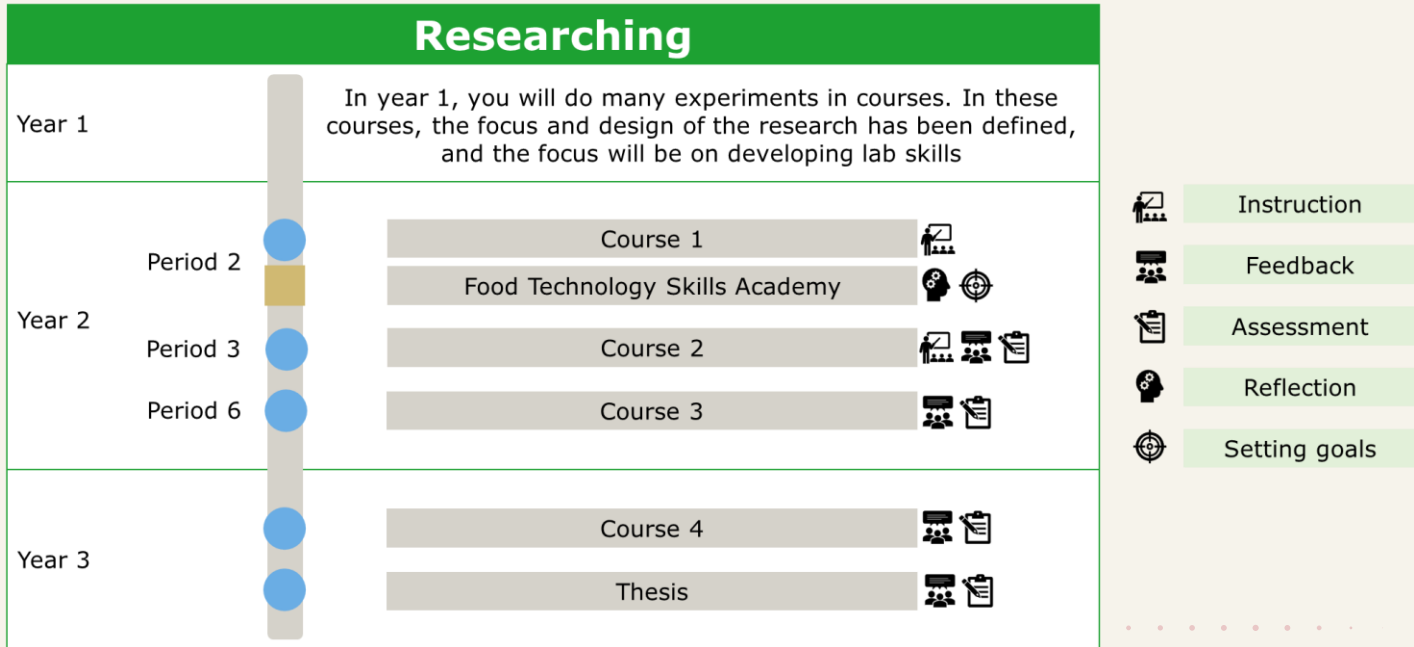
Vak	Verslagopzet maken	Informatievaardigheden	Argumenteren en kritische reflectie	Academisch Engels	Samenwerken	(Peer)feedback geven en ontvangen	Communiceren met mensen met een andere achtergrond	Communiceren met mensen met een andere expertise	Pre
Ecology 1									
Introduction Plant Sciences	●	●	●	●	●				
Mathematics 1					●				
Statistics 1				●	●	●	●	●	

Tijdens het schrijven van je review moet je kritisch nadenken over welke papers je wel en niet toevoegt en bediscussieren hoe de door jouw gevonden informatie samenhangt.

3

# Make LT visible for students + teachers

## *Example BFT*



3

## Make LT visible for students + teachers *Example BFT - portfolio*

**Portfolio:** tool which is used in all Food Technology courses



→ Students can track their own development

## 3

# Make LT visible for students + teachers

## *Example BFT - portfolio*

The screenshot displays a digital portfolio interface titled "Evidence". At the top, there are two tabs: "Evidence overview" and "Activities". Below the tabs, a section titled "My collection goal(s)" contains a tag for "Time management" and an "Add goal" button. A blue button labeled "+ Plan new activity" is positioned below the goals. The main content area features a vertical timeline with three entries:

- Year 1 period 1 - Introduction to Food Technology** (15/10/2024): Includes a description of group work on a case study and a reflection on collaboration skills. It has a blue icon with the number "1" and a vertical ellipsis menu.
- Year 1 period 4: Nutritional Aspects of Foods**: Includes a description of peer feedback on collaboration skills. It has an "Add evidence" button and a vertical ellipsis menu. A "Time management" tag is also present.
- Year 2 period 3: Food Physics**: Includes a description of multiscale analysis and reflection on collaboration skills. It has an "Add evidence" button and a vertical ellipsis menu.

# Activity

## Choose one topic

- 1 Design a learning trajectory
- 2 Design an activity
- 3 Make your LT visible / keeping track of development





# Activity

## Choose one topic

1 Design a learning trajectory

2 Design an activity

3 Make your LT visible /  
keeping track of development

## Designing a learning trajectory or activity

**Type of activity:** What type of (extra) activities are needed for a LT?

- Integrated in courses
- Separate skills meetings
- Continuous course?

**Suitable courses:** Which courses are suitable for (extra) activities in this LT?

**Time investment & involvement of teachers:**

- How much time will it take / who will perform these (extra) activities?
- How to involve the lecturers?

**Action  
point**



# Activity

## Choose one topic

1

Design a learning trajectory

2

Design an activity

3

Make your LT visible /  
keeping track of development

### Designing / visualising a learning trajectory

	Course 1	Course 2	Course 3	Course 4	Course 5	Course 6
Practising						
Instruction						
Feedback						
Assessment						
Reflecting + setting goals						

