ACCOMPANYING GUIDE FOR TEACHERS

CAREER ORIENTATION WITH STEM COMPETENCES

IN THE FASHION AND TEXTILE INDUSTRY

ALONG THE TEXTILE VALUE CHAIN

Co-funded by the European Union

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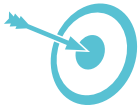

OBJECTIVE

This guide supports teachers in providing students with a practical insight into the competence requirements of the fashion and textile industry. The focus is not on teaching specific professions, but on understanding which skills and competences are needed along the textile value chain. The guide is based on the document "STEM Competences along the Textile Value Chain" and offers ideas for integrating these into career orientation.

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PEDAGOGICAL FOCUS FOR THE TARGET GROUP AND DIDACTICAL IMPLEMENTATION

The didactical approach is consistently structured along the textile value chain. The aim is for students to understand the individual phases not as isolated steps, but as part of an interconnected system and to recognize the related competence requirements.

For students in career orientation, the following aspects are particularly important:

Understanding that fashion is more than design and creative work

Recognizing that technology, science and digitalisation play a central role

Developing awareness of sustainability and responsibility

Focusing on concrete tasks rather than abstract job titles

“Who does what?”
Introduction to the Textile Value Chain

OBJECTIVE: Students learn about the 9 phases and develop an initial understanding of tasks and competences.

Phase 1: Fashion Flow Challenge

The teacher prepares 9 cards representing the phases:

0 – CONCEPT PHASE – DESIGN

1 – FIBER PRODUCTION

2 – YARN PRODUCTION – SPINNING

3 – FABRIC PRODUCTION – WEAVING, KNITTING

4 – PRETREATMENT – WASHING, BLEACHING

5 – DYEING AND PRINTING

6 – EQUIPMENT, FINISHING

7 – GARMENT MANUFACTURING – CUTTING, SEWING

8 – RETAIL

9 – RECYCLING AND CIRCULAR ECONOMY

In addition, short activity cards or key terms are prepared. These cards contain core verbs from the textile value chain. Each card describes a typical action in a practical way so that students can assign it to a phase and explain it using an example.

The goal is for students not only to recognize terms, but to understand their meaning in a real working context.

(0) design, sketch, visualise, conceptualise, plan, create, analyse, optimise

(1) produce, extract, process, analyse, investigate, develop, test, compare

(2) spin, twist, stabilise, measure, test, monitor, adjust, optimise

(3) weave, knit, interlink, connect, program, control, produce, check

(4) wash, clean, bleach, prepare, dissolve, neutralise, treat, check

(5) dye, print, mix, apply, fix, test, vary, compare

(6) refine, coat, impregnate, smooth, stabilise, improve, optimise, test

(7) cut, sew, connect, adjust, assemble, produce, check, repair

(8) sell, advise, present, analyse, market, organise, communicate, observe

(9) collect, separate, sort, dismantle, reuse, recycle, process, transform

Phase 2: Resolution of the Challenge

In this phase, the assignments are reviewed together. Students compare their results and discuss whether the verbs were correctly assigned to the phases.

The teacher then systematically explains the phases and provides a short introduction to each one to establish a shared understanding.

Next, the document "STEM Competences along the Textile Value Chain" is distributed. Students form nine groups, each working on one phase. They read the content, discuss it and clarify the tasks and connections involved.

Each group then presents its phase briefly to the class, explaining in their own words what happens in this phase and which activities are involved.

Open questions are collected and discussed in the group. The aim is that explanations are developed collaboratively. If needed, the teacher provides support.

Phase 3: Final Phase: Core Competences for Career Orientation – Self-evaluation

The teacher distributes the self-reflection sheet and invites students to complete it honestly. Personal reflection is the focus, there are no right or wrong answers.

Afterwards, selected insights are shared and discussed in plenary. The aim is to make different perspectives visible and to establish first connections to individual career orientation.

CAREER GUIDANCE:
STEM IS IN VOGUE

Promoting sustainability in the textile and fashion industry through STEM careers.

PROJECT NUMBER

2024-1-DE02-KA210-VET-000247981

PROJECT PARTNERS

CorEdu, Germany

Eurocultura, Italy

GoSpark , Slovenia

Co-funded by the European Union

0
PHASE

CONCEPT PHASE DESIGN

1
PHASE

FIBRE PRODUCTION

2
PHASE

YARN
PRODUCTION
SPINNING

3
PHASE

FABRIC
PRODUCTION
WEAVING
KNITTING

4
PHASE

PRE TREATMENT WASHING BLEACHING

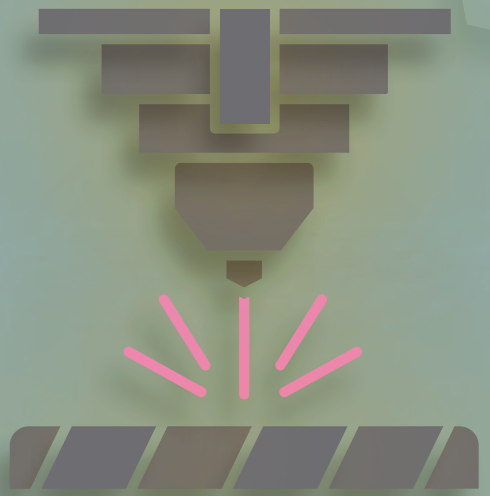
5
PHASE

DYEING AND PRINTING

6
PHASE

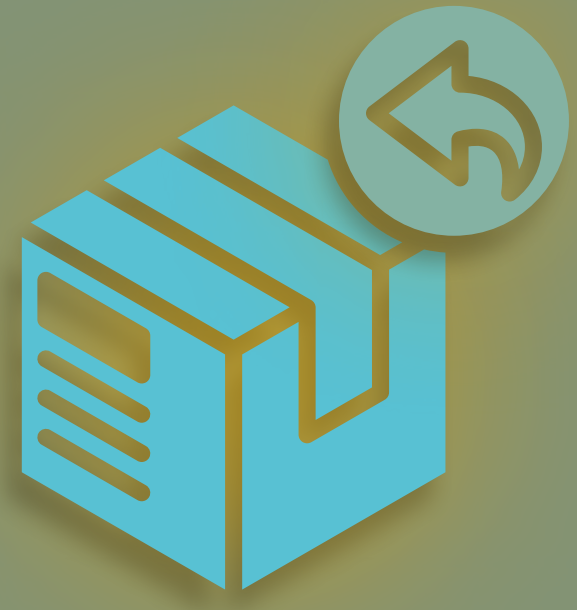
FINISHING

7
PHASE



GARMENT
PRODUCTION
CUTTING
SEWING

8
PHASE



RETAIL

9
PHASE

RECYCLING AND CIRCULAR ECONOMY

DESIGN

SKETCH

VISUALISE

CONCEPTUALISE

PLAN

CREATE

ANALYSE

OPTIMISE

PRODUCE

EXTRACT

PROCESS

ANALYSE

INVESTIGATE

DEVELOP

TEST

COMPARE

SPIN

TWIST

STABILISE

MEASURE

TEST

MONITOR

ADJUST

OPTIMISE

WEAVE

KNIT

INTERLINK

CONNECT

PROGRAM

CONTROL

PRODUCE

CHECK

WASH

CLEAN

BLEACH

PREPARE

DISSOLVE

NEUTRALISE

TREAT

CHECK

DYE

PRINT

MIX

APPLY

FIX

TEST

VARY

COMPARE

REFINE

COAT

IMPREGNATE

SMOOTH

STABILISE

IMPROVE

OPTIMISE

TEST

CUT

SEW

CONNECT

ADJUST

ASSEMBLE

PRODUCE

CHECK

REPAIR

SELL

ADVISE

PRESENT

ANALYSE

MARKET

ORGANISE

COMMUNICATE

OBSERVE

COLLECT

SEPARATE

SORT

DISMANTLE

REUSE

RECYCLE

PROCESS

TRANSFORM

SELF-EVALUATION

YOUR FASHION CHECK

Find out what is inside you

Welcome to the Fashion Lab!

This is not about what you should become, but about what you can do, what you enjoy and where you see yourself

1 YOUR FEELING AFTER THE CHALLENGE

Tick spontaneously:

- ○ I really enjoyed it
- ○ It was interesting
- ○ It was okay
- ○ I need more insights

What did you like most?

2 YOUR SKILLS IN THE FASHION WORLD

Tick what fits you:

Design and Ideas

- ○ I have many creative ideas
- ○ I find solutions to problems
- ○ I enjoy working with digital tools

Materials and Fabrics

- ○ I observe carefully
- ○ I like investigating things
- ○ I think about sustainable materials

Production and Implementation

- ○ I work precisely
- ○ I like understanding how things work
- ○ I like clear processes

Processing and Impact

- ○ I want to understand how things change
- ○ I am interested in environmental issues
- ○ I think about impacts

Technology and Future

- ○ I am interested in AI and technology
- ○ I like trying new tools
- ○ I find automated processes exciting

Consumption and Decisions

- ○ I reflect on my consumption
- ○ I question information
- ○ I want to understand where products come from

Sustainability and Circularity

- ○ I think in systems
- ○ I want to find solutions
- ○ I find recycling interesting

3 YOUR TOP AREAS

These two areas fit me best:

1. _____
2. _____

Why?

_____

_____

_____

4 HOW DO YOU PREFER TO WORK?

- ○ practically with my hands
- ○ digitally with tools
- ○ creatively
- ○ technically
- ○ in a team
- ○ independently

5 YOUR STRENGTHS AND INTERESTS

This is how I prefer to work:

- ○ creating and designing
- ○ investigating and understanding
- ○ making and building
- ○ planning and organising

I would like to explore more in this area:

_____

_____

6 YOUR AHA-MOMENT

What did you learn today:

_____

What surprised you:

_____

_____

7 YOUR NEXT STEP

What would you like to try next?

_____

_____

_____

_____

_____

_____

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CorEdu
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Co-funded by the European Union