Sumo Curriculum

# Teacher’s Guidebook

Curriculum for teaching creativity 21st-century competencies

# Table of contents

# Curriculum for teaching 21st-century competencies

## Introduction: Take a Deep Dive Into Creativity

**Creativity plays such a big part in our everyday life. Creative problem solving is behind every innovation in the world and even more importantly, self-expression can be seen as a key to happiness in life. Everyone is creative and there are no right or wrong answers when students express themselves.**

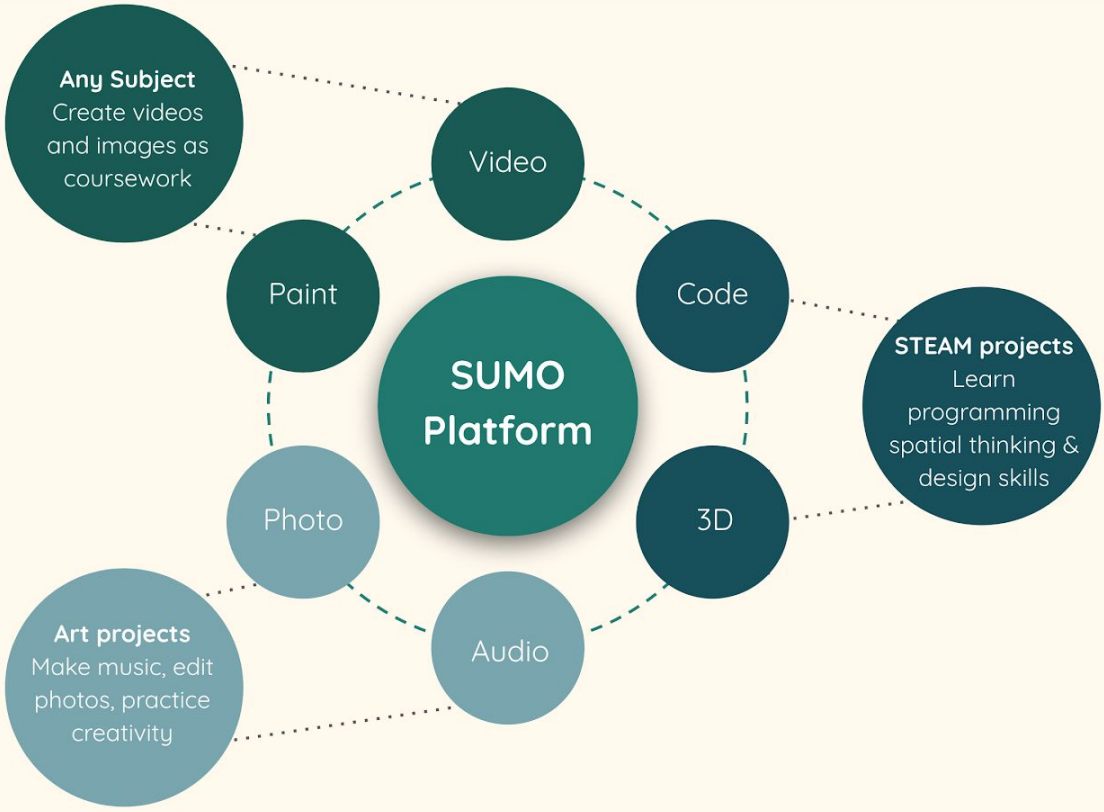
Along with digitalization, it is likely that future jobs are currently in transition or under development. Research shows that critical reading, communication, creativity and collaboration are those skills that are essentially future-proof. Therefore it's crucial to integrate creativity and use of digital tools across school learning activities. When students get to use their imagination while learning, their motivation is significantly higher regardless of the learned subject.

Sumo is a complete set of tools to support high-quality learning experiences to adopt 21st-century competencies in primary, middle and high-schools.

Sumo tools include a separate application for all content areas:

- **Painting & Drawing** (Sumopaint & Sumopixel)
- **Programming** (Sumocode)
- **Music Making** (Sumotunes)
- **Audio Editing** (Sumoaudio)
- **Video Editing** (Sumovideo)
- **Photo Editing** (Sumophoto)
- **3D-Modeling** (Sumo3D)

## What Can You Teach With Sumo?




### Lesson Plans & Full Support for Teachers

Anyone can start using Sumo in the classroom right away. All you need to do is to be bold to try and allow your students to shine.

Along with tools comes a set of lesson plans which help teachers and students to accomplish curriculum learning goals utilizing Sumo Apps and the best Finnish pedagogical practices.

### Sumo's Pedagogical Principles – Must Read Before Continuing

With creative work, it's crucial to understand that the goal is not to create the most polished creative outcome, a dashing video or a perfect composition.

Most important is to encourage students to try and create. All creative pieces are worth a teachers' – and classmates' – positive praise.

Sumo helps teachers to support students with modern, Finnish pedagogy that is recognized as the world's most effective way to learn in schools. The following principles guide your way as an educator.

- **Project-based learning**
  - Learning-by-doing
  - Student-centered approach
- **Peer-learning**
  - Knowledge sharing and students helping each other
  - The teacher is a facilitator, not a dictator
- **Positivity**
  - Everyone is talented
  - With the teacher's help and technology, the talent is revealed
  - No competition – focus on collaboration
- **Creativity**
  - Self-expression
  - Design thinking
  - Meaningful creative outcomes: videos, images, songs, games, etc.
- **Phenomenon-based learning**
  - Building a holistic understanding of the world
  - Cross-disciplinary learning across the school subjects
  - Real-life problem-solving
- **Personalized learning**
  - Considering students' strengths, needs, skills and interests
  - Autonomy for students to decide what and how to learn

# Introduction to Sumo Applications

## Sumopaint

*Draw posters, edit photos, illustrate and make art.*

Most teachers utilize Sumopaint as a tool for students to make infographics, visual portfolios and illustrations of learned topics. Art teachers use Sumopaint as a tool to allow students to make digital art, practice photo editing and learn basic principles of visual expression in a motivational way.

It is a complete tool for students to draw pictures and edit images on a web-browser. Sumopaint works in 30+ languages and is easy enough to use for students aged 9+ years. It comes with lesson plans and helpful instructions.

## Sumocode

*Create apps and games. Learn how to code with gamified examples.*

All students can practice coding using JavaScript as a language. It's possible to create games and apps with just a few lines of code through Sumo's gamified examples. With ready-made lesson plans, the teacher doesn't have to understand coding, but can still help students to learn the basics. The key is for the students to learn by doing and facilitate collaboration between students.

Sumocode works on a web-browser in 30+ languages and is easy enough to use for students around 12 and up. It comes with lesson plans and helpful instructions.

## Sumotunes

*Compose songs, remix, write lyrics, listen and share ideas.*

Anyone can be a musician and composer with Sumotunes. Through composing songs, students learn about different instruments, notation, rhythm, chords, writing lyrics and remixing.

Sumotunes is an easy-to-use web-based music studio to create songs, play with instruments or remix other users' original songs. It supports MP3 export and cloud

storage, so sharing and listening to students' songs in the classroom is easy. It comes with lesson plans and helpful instructions.

## Sumo3D

*Build 3D models and interiors.*

Online 3D Editor allows practicing spatial thinking, design skills and real-world problem-solving. Students can add modules, images, sounds and textures to create full 3D environments. Teachers can use the 3D editor for learning projects where students visualize their ideas for new products and environments.

Ready-made lesson plans make it easy for students and teachers to get started and learn on-the-go while students are helping each other.

## Sumovideo

*Make and edit movies and video clips*

Most teachers use Sumovideo when assigning final assessments as video projects. The app provides easy editing tools so it doesn't take time to learn how to use the application, but students can use it right away to finalize their projects. Since Sumovideo works on a web-browser, sharing videos for the whole class, whole school, parents or publicly on the web is a streamlined process.

Lesson plans guide teachers in planning meaningful curriculum-aligned activities right from the beginning.

## Sumophoto

*Edit and share photos quickly, easily and safely.*

Since photos are widely used to document learning activities, it's important to have a safe and easy to use platform for editing and sharing them between classmates and the teacher.

Students can build their own portfolios with edited, polished photos. Nowadays photos are the main medium of communication and so it's important to teach students to learn the basics of photo editing. Lesson plans to get students learning

about cropping, adjustments, filters, effects and elements are included with Sumophoto.

### Sumoaudio

*Record or edit audio and sounds.*

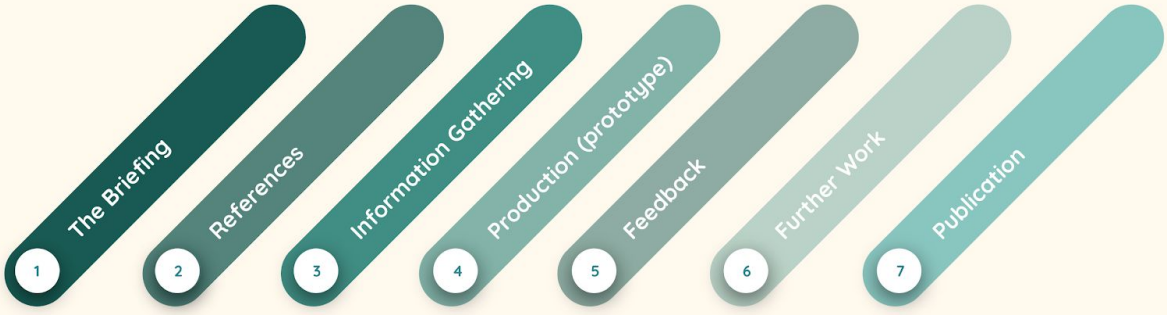
Easy-to-use sound studio. With Sumoaudio you can edit and combine audio files and add effects. It supports MP3 export and cloud storage. It comes with lesson plans and helpful instructions.

## Sumo Model for Creative Learning Projects

Sumo enables anyone to create movies, compose songs, code games and develop 3D models.

Creative problem-solving with Sumo is a process where students create their own creative pieces and products following certain criteria set for the work. With the use of Sumo's Model teacher can ensure a goal-oriented approach, which makes learning projects more meaningful and engaging for the students.

The Sumo Model consists of **seven phases** that help students to solve any creative problems and build great digital products; *songs, movies, programs, images, 3D models, etc.*




All creative projects need to be goal-oriented and the teacher needs to avoid "playing around" -kind of use of the Sumo platform. The goal-oriented use is

ensured through following the **eight phases** when starting a new learning project with Sumo.

## 1. The briefing

The teacher gives meaning to the creative work: What is going to be created, why and when is the deadline? This way the goals are set for the final outcome, whether it is a movie, game or song.

Example briefing: “Compose a cell phone ringtone as a Mothers’ Day gift for your mother or grandmother.”

Why is this briefing good? It includes style reference (cell phone ringtone that mother would like), purpose for the work (a gift) and a clear deadline (before mothers day).

## 2. References

Searching for reference movies, music pieces or games will help students in perceiving what kind of piece is going to be created. It helps them to set a goal for their own work. References can be searched from the Sumo platform or other online sources.

## 3. Information gathering

Gathering all the necessary information for creating the outlined piece. When creating, for example, a new movie about photosynthesis, students need to gather the main information about the topic before beginning to record the video. However, this phase is iterative and students can come back to this during later phases.

## 4. Production (prototype)

Creating the first version of the piece. Learning by doing. Learning as peers is preferred - the teacher becomes a mentor. Students get prepared in getting feedback from peer-learners about their prototype.

### 5. Feedback

Using feedback allows other opinions to be heard. Does the prototype follow the assignment's outline? What is good in the prototype, what should be improved?

### 6. Further work

Based on the feedback, possible adjustments are made to the work and the piece/product is finalized for publication.

### 7. Publication

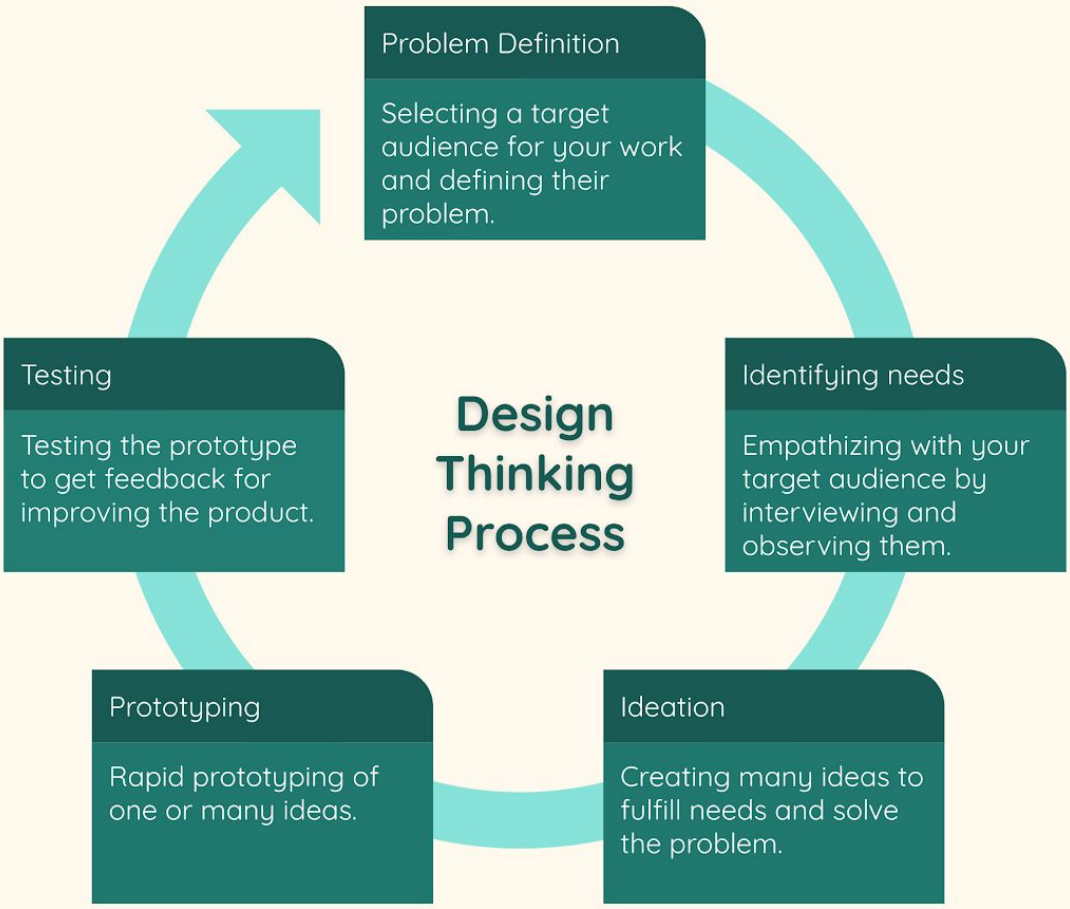
When the work is done, it will be published according to the plan made earlier. Different release channels, ethical standpoints and marketing need to be considered prior to publishing.

### 8. Assessment

With Sumo projects, the teacher assesses the student's creative process, NOT the outcome itself. The creative outcome is always an expression of an artist and should be appreciated as it is. However, the process of creating the piece has quality criteria and clearly defined learning goals. This guidebook includes an assessment framework to be used with Sumo.

## Design Thinking

Another valuable framework to be used when leading a creative learning project is the Design Thinking process. The value of utilizing the Design Thinking process as a guideline for classroom projects relies on its wide usage in creative industries from advertising into product design work.




## Learning Assessment Framework

When assessing students' performance, you should evaluate each individual student. Your assessment criteria need to be transparent and student-friendly. The focus in the assessment needs to be in positive aspects, but at the same time, you need to give realistic feedback for the student. Remember, every creative work is worth the teacher's praise!

The following assessment framework is open-ended to allow assessment of a variety of creative projects. You can utilize the framework after each learning project is completed.

| Sumo Education – Learning Assessment Framework | | | |
|---|---|---|---|
| **Learning criteria** | **Needs more practice** | **Progressing well** | **Progressing very well** |
| **Planning and innovative thinking** | • Limited time used in planning<br>• Problems following instructions<br>• Not aiming for originality in ideas | • Spends time in planning in the beginning<br>• Follows instructions mainly<br>• Expresses original ideas | • Planning carefully and iteratively throughout the process<br>• Follows instructions to achieve higher standards in work<br>• Strives for and shows innovativeness and originality in ideas |
| **Research and information gathering** | • Not finding references or found references are irrelevant<br>• No aim to find help when facing problems | • Finding some relevant references which have some effect on the work<br>• Mostly searching for help when facing problems | • Finds references that clearly support the work<br>• Searches and finds help when facing problems |
| **Collaboration and social interaction** | • Doesn't carry the responsibilities as a group member<br>• Doesn't help others<br>• Doesn't ask for help<br>• Challenges with giving and taking feedback from others | • Carries responsibilities in group-work, but doesn't show leadership<br>• Helping others mainly, but selectively<br>• Asks for help from others<br>• Can give and take feedback | • Shows leadership and proactivity in group<br>• Encourages and helps others<br>• Is willing to receive help from others<br>• Seeks feedback actively and is open for other's ideas<br>• Gives feedback in an encouraging way |
| **Persistent working** | • Lack of intent in finalizing the work in time<br>• Timely loose of focus when working in different stages<br>• Doesn't stick with the working plan | • Shows intention to finalize the work in time<br>• Timely loses deadlines<br>• The quality of the work timely suffers from the lack of persistency<br>• Utilizes the working plan | • Finalizes the work in time<br>• Doesn't compromise on quality to make the job easier<br>• Utilizes the working plan to support own work & clearly benefits from the use of it |

## How to Use Sumo Lesson Plans?

You can find and download Sumo lesson plans at https://sumo.app/edu.
Plans are offered in pdf-form and you're allowed to print them.

All lesson plans are targeted for students aged +10 years old. It is recommended to use lesson plans chronologically, but after completing the first few lessons you can skip content and select projects that meet best with your students' interests and learning needs.

As a teacher, you can also modify the content in the lessons and use your imagination to narrow down or to enrich the activities based on your students' competency level.

It is important to remember that even though you're provided with ready-made lesson plans, you should still always ensure that students are following the goal-oriented approach in the Sumo Activities. Depending on the activity you can ensure that by instructing students to follow Sumo Model or Design Thinking Process – or both.

## Curriculum Learning Goals

**Sumo Lesson Plans and their alignment with curricula**

- SUMO includes 20 ready-made lesson plans.
- Lessons are designed to align with the UK National Curriculum and Finnish National Curriculum.
- Majority of lessons also align with Common Core State Standards and NGSS.
- Subjects covered include Design & Technology, Computing, Music, Art & Design and Literacy.
- Development of broad-based competencies and 21st century skills is at the core of all lessons.

## Lesson Plans Overview

### Overview of Learning Goals you cover with SUMO applications

Along with SUMO comes 20 lesson plans. Here you can see what learning areas are covered when using SUMO applications and lesson plans.

| Design & Technology | Computing | Music | English Writing | Art & Design | Handicrafts |
|---|---|---|---|---|---|
| 3D<br>Paint<br>Tunes<br>Photo<br>Video | Code<br>3D | Tunes<br>Video | Tunes | 3D<br>Paint<br>Video<br>Photo | 3D |

| ICT Competencies | Working Life Skills & Entrepreneurship | Cultural Competence, Interaction, & Self-Expression | Multiliteracy | Thinking and Learning to Learn |
|---|---|---|---|---|
| Code | Tunes<br>Video<br>Paint<br>3D | Tunes<br>Video<br>Paint<br>3D<br>Photo | Code<br>Tunes<br>3D | Code<br>Tunes<br>3D<br>Photo<br>Code<br>Paint |

## Sumo3D Lessons

### Lesson specifications

Lesson 1: Learn the basics of 3D Design (Duration 45 minutes)
Lesson 2: Design a printable 3D model of a mug (Duration 45 minutes)

**UK Curriculum**

Design & Technology – Key Stages 2 & 3

- Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools.
- Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations.

Art & Design – Key Stages 2 & 3

- To analyse and evaluate their own work, and that of others, in order to strengthen the visual impact or applications of their work.

**Finnish National Curriculum**

Working Life Skills & Entrepreneurship – Grades 4-9

- Students learn to design work processes, set up hypotheses, experiment with alternatives, draw conclusions, and find new solutions as circumstances change.

Handicrafts – Grades 4-9

- To guide the student to use the possibilities of information and communication technology in the design, manufacture and documentation of handicrafts, as well as in the production and sharing information within a community.

Cultural Competence, Interaction & Self-Expression – Grades 4-9

- Students are encouraged to express themselves in a variety of ways.

## SUMO Paint Lessons

# Lesson specifications

Lesson 1: What is creativity? (Duration 45 minutes)
Lesson 2: Observe your surroundings (Duration 45 minutes)

**UK Curriculum**

Art & Design – Key Stages 2 & 3

- Students learn to use a range of techniques to record their observations in sketchbooks, journals and other media as a basis for exploring their ideas.
- Analyse and evaluate their own work, and that of others, in order to strengthen the visual impact or applications of their work.
- Use a range of techniques and media, including painting.

**Finnish National Curriculum**

Thinking and Learning to Learn – Grades 4-9

- Learning to listen to yourself and others, see things in the eyes of others, and find alternatives and creative solutions. Encourage to encounter and process unclear and contradictory information.
- Being able to identify different perspectives on the subject they are considering, to find new insights, and to gradually become critical in the subject.

Cultural Competence, Interaction & Self-Expression – Grades 4-9

- Students are encouraged to express themselves in a variety of ways.

## SUMO Tunes Lessons

# Lesson specifications

Lesson 1: Basics of Music Making (Duration 30 minutes)
Lesson 2: Create a Basic Beat with Drums (Duration 30 minutes)
Lesson 3: Learn the Basics of Bass (Duration 30 minutes)
Lesson 4: Melody & Lyrics (Duration 45 minutes)

**UK Curriculum**

Music – Key Stages 2 & 3

- Improvise and compose music for a range of purposes using the inter-related dimensions of music.
- Use and understand staff and other musical notations.
- Identify and use the inter-related dimensions of music expressively and with increasing sophistication, including use of tonalities, different types of scales and other musical devices.

English Writing Composition – Key stage 3

- Write accurately, fluently, effectively and at length for pleasure and information through: writing for a wide range of purposes and audiences, including: stories, scripts, poetry and other imaginative writing.
- Plan, draft, edit and proof-read through considering how their writing reflects the audiences and purposes for which it was intended.

**Finnish National Curriculum**

Music – Grades 4-9

- Guide the student to natural sound use and singing, and develop their playing skills in body, rhythm, melody, and chord instruments as a member of a music group.
- Improvise and plan and implement small-scale compositions or multidisciplinary ensembles through various means and also using information and communication technology.
- Practice listening to the sound environment and music, and to guide him or her to structure and share what he or she has heard.

Thinking and Learning to Learn – Grades 4-9

- Students are encouraged to use their imagination to discover and create a new one, to openly combine different perspectives, and to build new knowledge and insight.

Cultural Competence, Interaction & Self-Expression – Grades 4-9

- Students are encouraged to express themselves in a variety of ways.

## Sumo Code Lessons

# Lesson specifications

Lesson 1: Translating Code Language (Duration 45 minutes)
Lesson 2: Basics of Programming (Duration 45 minutes)

**UK Curriculum**

Computing – Key Stages 2 & 3

- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output

**Finnish National Curriculum**

ICT Competences – Grades 4-9

- Experiment with programming, to gain an insight into how the operation of technology depends on human solutions.
- Practicing the basics of programming.
- Enhancing understanding of the use and function logic of various devices, software and services.
- Gain an understanding of how ICT can be used in the study of different subjects, in further studies and working life, and in social activities and influence.

Mathematics – Grades 4-9

- To guide the student to develop algorithmic thinking as well as skills to apply mathematics and programming to solve problems.

## SUMO Photo Lessons

# Lesson specifications

Lesson 1: Basics of Photo Editing (Duration 45 minutes)
Lesson 2: Imitating Art Masterpieces (Duration 45 minutes)

**UK Curriculum**

Art & Design – Key Stages 2 & 3

- Learn about the history of art, craft, design and architecture, including periods, styles and major movements from ancient times up to the present day.
- Analysing and evaluating their own work, and that of others, in order to strengthen the visual impact or applications of their work.

**Finnish National Curriculum**

Multiliteracy T4 - grades 4-9

- Students are guided to develop their image skills using a variety of image interpretation techniques and presentation techniques.
- The skills of producing, interpreting and communicating knowledge are practiced in a variety of subject-specific ways and in a collaborative manner

ICT Competences – Grades 4-9

- Students will be guided through the diverse acquisition and production of knowledge and the diverse use of information resources as a basis for exploratory and creative work.
- Gain an understanding of how ICT can be used in the study of different subjects, in further studies and working life, and in social activities and influence.

## SUMO Video Lessons

# Lesson specifications

Lesson 1: Basics of Video Editing (Duration 45 minutes)
Lesson 2: Introduction of Myself (Duration 45 minutes)

**UK Curriculum**

Art & Design – Key Stages 2 & 3
- Analysing and evaluating their own work, and that of others, in order to strengthen the visual impact or applications of their work.

English Writing Composition – Key stage 3
- Plan, draft, edit and proof-read through considering how their writing reflects the audiences and purposes for which it was intended.

**Finnish National Curriculum**

Multiliteracy T4 - grades 4-9
- Students are guided to develop their image skills using a variety of image interpretation techniques and presentation techniques.
- The skills of producing, interpreting and communicating knowledge are practiced in a variety of subject-specific ways and in a collaborative manner

ICT Competences – Grades 4-9
- Students will be guided through the diverse acquisition and production of knowledge and the diverse use of information resources as a basis for exploratory and creative work.
- Gain an understanding of how ICT can be used in the study of different subjects, in further studies and working life, and in social activities and influence.

## Learning Project: Design a Service and Advertisement

# Project Learning Goals

**UK Curriculum**

Design & Technology – Key stages 2 & 3
- Use a variety of approaches [for example, biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses.
- Identify and solve their own design problems and understand how to reformulate problems given to them.
- Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations.
- Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups.

Music – Key Stages 2 & 3
- Improvise and compose music for a range of purposes using the inter-related dimensions of music.

English Writing Composition – Key stage 3
- Plan, draft, edit and proof-read through considering how their writing reflects the audiences and purposes for which it was intended.

**Finnish National Curriculum**

Multiliteracy – Grades 4-9
- Students are guided to develop their image skills using a variety of image interpretation techniques and presentation techniques.
- The skills of producing, interpreting and communicating knowledge are practiced in a variety of subject-specific ways and in a collaborative manner

Entrepreneurship – Grades 4-9
- Students learn to design work processes, set up hypotheses, experiment with alternatives, draw conclusions, and find new solutions as circumstances change.
- Practicing the appropriate behaviors and skills for working life and recognizing the importance of language and communication skills.
- Giving students the opportunity to learn through their own experience the importance of work, entrepreneurial activity, and entrepreneurship in the community and society.

## Final Word

“Imagination is the source of all human achievement”

- Ken Robinson

People aren’t robots. We’re humans, and each and every one of us has something great that no robot has: CREATIVITY. At Sumo, we believe everyone is creative and that if only we could all learn to unleash our creativity completely, more people would have meaningful and joyful lives, now and in their futures.

That’s why we built SumoEdu, a community complete with teacher support and lesson plans that help you use Sumo’s creative tools to teach your kids important life and academic skills in a fun and exciting way that will keep them engaged. With Sumo they’ll be going above and beyond with their other academic benchmarks and learning outcomes too!

## Contact Us

We’d love to hear from you.

Contact us anytime: support@sumo.app

Thank you!