Goethe Schule

Annual Program 2025

Year: 1ES
 Subject: Information and Communication Technology
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Contents

Unit 1: PLE (Personal Learning Environments) - Digital Tools for Learning

Objectives:

- Help students recognize the best applications and technological resources available to personalize their learning environments.
- Reinforce and expand students' knowledge of digital tools to enhance their learning.
- Strengthen students' existing skills and provide opportunities to explore new features and applications within these digital tools.
- Use AI tools for research, consultation, writing, and translation.

Contents:

- **LMS (Learning Management System):** Moodle – Accessing classes, submitting assignments, personalizing the LMS.
- **Educational applications and software:** Configuring the computer for effective learning.
- **Google Suite Applications:**
  - Optimizing Google Drive for efficient file organization and project collaboration.
  - Advanced use of Gmail for effective communication with peers and teachers, including email management.
  - Dynamic collaboration in shared documents using Google Docs, Sheets, and Slides.

Unit 2: Digital Citizenship - Fake News

Objectives:

- **Cybersecurity:** Protect personal information online and learn how to recognize and avoid risks like cyberbullying and phishing.
- Develop skills to differentiate between reliable and fraudulent sources on the internet.

- Search for and use truthful and objective information.
- Promote respect, empathy, and responsibility in the use of technology, encouraging positive interactions and preventing cyberbullying.

Contents:

- Learn why people post false or misleading information online.
- Identify criteria to differentiate fake news from credible news.
- Practice evaluating the credibility of information found on the internet.

Unit 3: Word Processors

Objectives:

- Become familiar with word processors, specifically Google Docs and Microsoft Word.
- Understand the basic and advanced functions of both tools for document creation, editing, and formatting.
- Develop practical skills to manage settings such as margins, line spacing, fonts, and page numbering.
- Insert and adjust visual elements like images and shapes in documents.
- Manage and edit web content.
- Strengthen the ability to produce clear and professionally presented documents in academic and work environments.
- Use AI tools for consultation, writing, and translation.

Contents:

- **Introduction - Comparison between Google Docs and Microsoft Word**
- Open, save, and edit text files.
- Formatting: Settings, margins, line spacing, paragraph alignment, fonts, page numbering, paragraph borders, page borders, covers, page breaks, columns.
- Insert drawings with shapes and auto shapes, WordArt: title editing, text boxes, image adjustments.
- Copy and edit information and images from the web.

Unit 4: Spreadsheets

Objectives:

- Become familiar with basic spreadsheet tools.
- Learn to edit cells and apply font, fill, and border formatting.
- Sort data alphabetically by categories.
- Understand and use simple mathematical functions like SUM and AVERAGE, and logical functions such as IF, COUNT, MAX, and MIN.
- Introduce students to creating and editing charts using table values, enhancing their ability to organize and present data effectively in academic and professional settings.

Contents:

- **Basic tools:** Editing cells, font formatting, fill, borders.
- Sorting alphabetically by categories.
- **Mathematical functions:** SUM, AVERAGE.
- **Logical functions:** IF, COUNT, MAX, MIN.
- **Charts:** Introduction and editing of charts using table values.

Unit 5: Introduction to Object-Based Programming with Blocks (SCRATCH)

Objectives:

- Introduce students to block programming in SCRATCH.
- Foster understanding of basic concepts such as sprite movement and customization using costumes.
- Develop skills to create simple animations, incorporate sound effects, and apply logic using control blocks.
- Learn to use variables to store information, explore basic mathematical operators, and apply conditional functions and loops.
- Encourage creativity in building interactive projects.

Contents:

- **Introduction - Functional blocks - Sprite movement basics.**
- Appearance changes: Using costumes.
- Creating simple animations.
- Adding sound effects.
- Using control blocks for program logic.
- **Introduction to variables:**
  - Storing information using variables.
  - Using basic mathematical operators.
  - Conditional functions and loops.

Unit 6: Introduction to Robotics (Tinkercad & Arduino)

Objectives:

- Encourage creativity and understanding of robotics using Tinkercad and Arduino.
- Enable students to turn ideas into tangible projects through circuit simulation and programming.
- Develop skills in using electronic components and Arduino programming.
- Promote logical thinking and problem-solving by connecting elements like resistors and LEDs.
- Stimulate experimentation in electronic device design, reinforcing interest in technology and robotics.

Contents:

- **Introduction to Tinkercad Circuits:**
    - Registering with an institutional account.
    - Basic electronic components.
    - Simulation, programming blocks, text conversion.
    - Adapting to Arduino language for compiling programs.
    - **Using AI tools applied to Arduino programming.**
- **Arduino IDE platform:**
    - Basics, commands, selecting a programming board, uploading programs to an Arduino board.
- **Introduction to Electronics:**
    - Basic components (Resistors, LEDs, buzzers, buttons).
    - Breadboard connections.

Unit 7: Introduction to Computational Thinking (Flowcharts & Lucidchart)

Objectives:

- Foster an understanding of computational thinking through flowcharts.
- Develop skills in creating and analyzing flowcharts using Lucidchart.
- Promote logical and structured thinking for graphical representation of algorithms.
- Encourage experimentation and reflective practice in problem-solving through visual tools.

Contents:

- **Introduction to computational thinking.**
- Structure and basic symbols of flowcharts.
- Using Lucidchart to create flowcharts.
- Practical application through exercises and challenges involving algorithm representation and group evaluation.

Evaluation and Accreditation Criteria

Class Participation Rubric

Level	Oral Participation	Language Use	Commitment	Group Work & Academic Honesty	Attitude in Class
Insufficient (1-3)	Rarely participates	Doesn't understand or use subject-speci	Often unprepared and disorganized	Doesn't contribute to group work, plagiarizes	Frequently disrupts class, is often late

		fic vocabulary			
Good (4-7)	Sometimes participates	Understands some vocabulary but uses it incorrectly	Shows interest in some topics, sometimes submits work late	Occasionally responsible in group work	Occasionally disrupts class, not always on time
Very Good (8-10)	Frequently participates	Demonstrates good vocabulary knowledge	Generally organized and engaged	Usually responsible and honest	Mostly punctual and respectful
Outstanding (11-15)	Always participates and collaborates	Uses technical language correctly	Fully engaged, submits work on time	Highly responsible, contributes effectively to teamwork	Punctual, respectful, and fosters a positive class environment

Grading Breakdown

- **Individual Assignments & Evaluations:** 40%
- **Group Work & Activities:** 40%
- **Class Participation:** 20%