TEMPLATE for BEST PRACTICE EXAMPLES

1. **Name of the project:** SUPER STEAM

2. **Subjects covered from STEAM areas:** math, physics, arts, languages (foreign and domestic) biology, computer science

3. **Target group (age range and size of the group):** this task can be done with any age group, the size of the group depends on the scale of the activity

4. **Duration of the activity:** two weeks

5. **Key words:** STEAM, comics, learning

6. **Key sentence describing context of the activity, followed by short description (200 words):**

   Students are asked to create a comic through which one of the STEAM curriculum lessons is explained.

   One such comic book created bu the students was about the adventures of SUPERSTEAMAN, a super hero and high school student, who has poor math skills. His best friend Stefana helps him solve the riddles in form of mathematical problems that his enemy Professor Z leaves for him to taunt him for his lack of math skills. Through the creation of this content, students learn how to solve linear equations with two unknows.

   In order to help other students, students can create comics without any words that can be used to add any situation students see fit regardless of age or topic. Teachers need to print it, or they can edit it in any picture processing software. A link to an example can be seen at point 12.

7. **Description of the activity environment, including the list of materials and tools needed:**

   The teacher sets a task in class: Can we learn something from comics?

   After the discussion a task should be set as: Create your own comic hero who is relaying on STEAM to solve problems.

   Students are split in groups to work together on their idea. The timeline is set by them and most of work is done from home. The teacher is taking a role of a counselor with whom students discuss ideas for the comic.

   In the last stage at school they present their ideas.

Materials needed: pen, paper, or some text software (like Google docs or MS Word), scanner and printer (optional), computer with picture editing software (Paint, Inkscape etc.), felt pen, drawing pens, water colors or ink based colors.

8. **Step by step, detailed description of the activity, including teaching and learning strategies:**

This activity can be done in two ways.

Frist way:

STEP 1

After giving the task to students they need to think of a story for the comic and choose a lesson from a STEAM subject they want to involve.

Example: Professor Z has left the system of two linear equations to SUPERSTEAMAN that will lead to the next clue. Stefana explains step by step how to solve them.

After the initial scenario is done, they need to prepare it for drawing and decide how it will look. This means that scripts should be divided in to scenes that will be represented by drawings in the comic.

STEP 2

In the second step comic is drawn with a regular pencil, and after it is accepted by all members of the team, the lines are inked using felt pen, ink pen or other.

Coloring can be done in two ways - by hand or by using a computer after the drawings are scanned. This will depend on the age and the skill of the students.

STEP 3

Publicly display the comic and gather feedback from other students and teachers.

Second way:

STEP 1

Download the already created comic book, print it out and give it to your students. They need to imagine their own story as well design the comic clouds and fill them with text.

STEP 2

In the second step, the comic is created by adding word clouds to already existing drawings. It can be done by cutting out printed word clouds or using software to add word clouds to PDF versions of the comic. One way is to laminate the printed version and then use felt pen to write over it.

STEP 3

Publicly display the comic and gather feedback from other students and teachers.

9. **Learning objectives/competencies:**

   The main objective is to ensure students understand the lesson so good that they can explain it.
   The specific objectives are:

   - To have students practice analyzing a problem and breaking it in to smaller problems
   - To have students creating step-by-step instructions for someone to follow
   - To have students work on their creativity as well as communication (through creating a scenario, drawing and explaining their ideas to others)

   At the end, desired goals are:

   A comic to be used in clasroom has been created

10. **Evaluation/Assessment guidelines:**

    The rubric is created with follwing questions as examples:

    Lesson:
    The chosen lesson is interesting to other students
    The chosen lesson is connected to the curriculum
    The lesson is clearly explained
    The problem is well defined at the beggining

    Instructions:
    The lesson follows step-by-step instructions
    The instructions are written clearly
    The language when describing solutions is easy to understand

Creativity:
The comic is pleasant to eye
The colors used are in the function of creating an atmosphere

Team work:
All students contributed and they can explain how everyone in the team contributed
Each team member can explain the solution of the problem they have chosen

11. Lessons learned:

Students learn to manage their time correctly when working in a team.

Students get to practice decision-making and develop creativity by choosing the illustration style for the comic.

The students practice meta-learning by having to think of problems that they already know how to solve.

12. Additional information/Links:
https://drive.google.com/file/d/1lsz7UmkhpYvyOuHlPsz6E7aQMULzrkyX/view?usp=sharing

13. Contact person:

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