

## EXERCISE BIKE – CHARGER

### Inspiration:



**The aim of the project** - create a functioning charging station that produces electricity while a person is riding.

**The project is implemented by** department of Auto, Energy, and Mechanical engineering

### Project idea and description

The main idea of the project is to create a publicly accessible charging station in the school, where any student or teacher can ride a bicycle and thus charge their electronic devices.

The project is divided into three parts or stages, for each stage is responsible different departments.

The first element – Bicycle – Car department responsibility. We took an old bicycle with defects. Car mechanics disassembled it, and welded the frame in the necessary places. Then the painters prepared it and painted it in our school's green color. This week's task for auto mechanics is to put everything together so that the bike functions as it should.

The second element is a frame. This is Mechanical engineering department's responsibility. The main goal is to create a stable, visually appealing frame that can be easily adapted to different bikes. The frame will not be related to the specific bicycle, ideally, you can put any bicycle in the frame – ride and charge your devices. The goal is to finish the frame this week as well.

Current stage - the first drawing was created (google drive file FRAME) and production started. During the process, new ideas emerged to simplify the frame, so the original concept have been modified.

The third element - the electrical part. There are several variations, but the main idea is to use a car alternator and a small battery. This is the final stage of the project, which will be implemented when the bike and frame are fully completed. Unfortunately, there will be more

information about this later, when we get to the implementation point. The energy department is responsible for this phase.