

## Creating from scratch...

Previous compulsory steps / Prior students' knowledge	None
Learning objectives	Familiarize students with mechanisms of construction, engineering processes, and power consumption Learn about minerals and material production
Subjects	Science, Technology, Engineering, Maths
Recommended Age	15-18
Material needed	Computers that can run the game” Satisfactory”
Sequence duration	135 minutes
Tips for shorter duration	Step 3, if it is possible for students to meet in groups of two in their homes, could be done outside the computer lab, thus reducing the total duration by one teaching hour
Individual or group activity	Classroom (lab) and homework in group activities
Skills developed	Collaboration & teamwork, Communication, Creativity, Critical thinking, Planning, Problem solving
Price range of the game	<30€ (STEAM 29,99€ EPIC store 20,99€)
Tips for inclusion	Many accessibility features are provided by Satisfactory (including a misophonia mode). You can see more <a href="#">here</a> .

## Step by step: how to implement the sequence

In this pedagogical sequence, students are going to use a realistic engineering simulation game which is called: “Satisfactory”. This cooperative game makes the players work together to carry out specific purposes. The purpose of the game is to create conditions for life and development on a new planet whose species are ready to attack you. The first engagement with the game should be kept to the basic gameplay. However, the game could then be used in a combination of tools to carry out calculations on the use of production lines, minerals, the energy needed and other relevant issues. One such functional and useful multi-tool is available at: <https://www.satisfactorytools.com/> . All raw materials, tools, and building structures are presented there and various tools are provided to visualize and calculate any material’s exit from production lines.

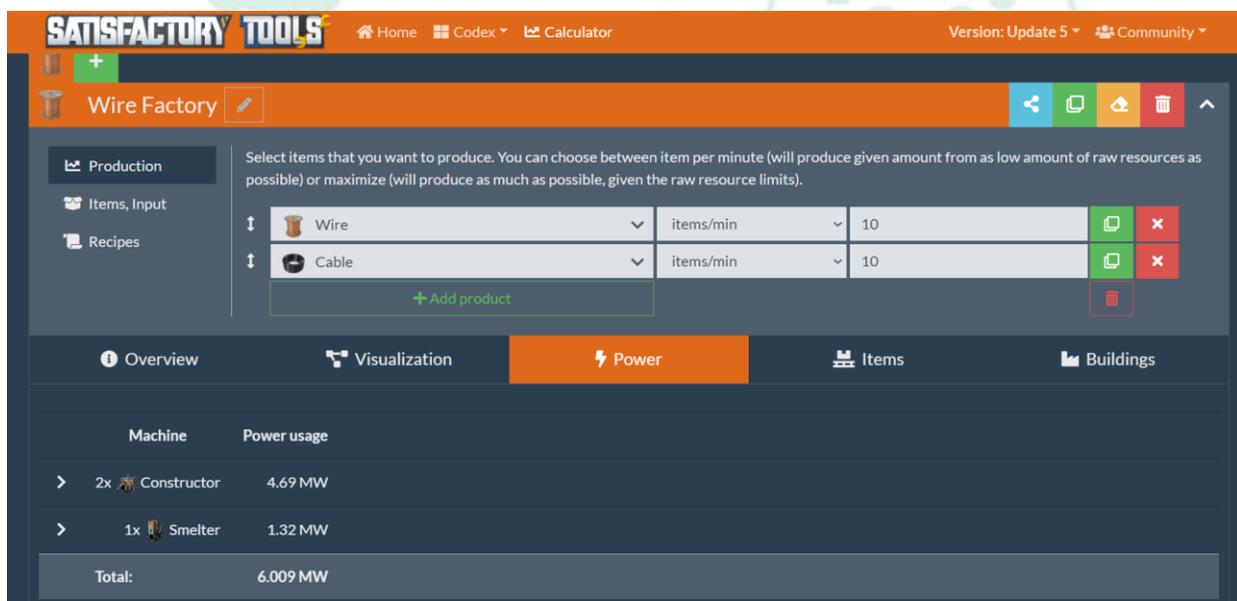


Figure 1. Snapshot of Satisfactorytools from Satisfactorytools.com

For this pedagogical sequence, the tool will be used at the level of basic information.

- **Step 1: Explain the concept and the aim of the game to your students (20 minutes)**

The educator explains the basic concepts of the game to students.

Two Pioneers (astronauts, engineers or factory workers) sent from the Ficsit corporation are landing on a new planet with a breathable atmosphere full of resources, in order to colonize it. They will cooperate starting literally from scratch in order to construct a base (called a HUB) suitable for using any available resource around them and crafting new settlements, production lines and new tools. All these tasks are carried out keeping in mind the creatures that may attack them and the dangerous cliffs and water areas.

Instructions are provided by an AI guide, with the help of inventories of the settlement. Choices are endless and the players must stay alive and keep constructing.

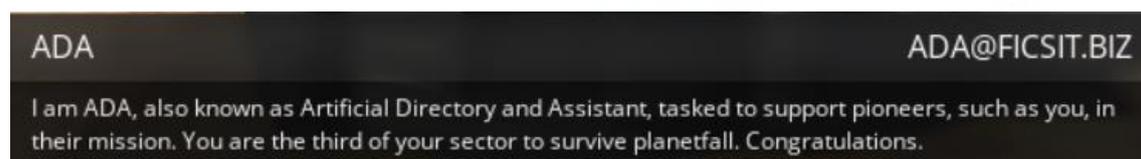


Figure 2. Snapshot of ADA message ("Satisfactory", Coffee Stain Studios, 2020)

Food is also provided (in limited amounts), mainly for healing purposes.



Figure 3. Snapshot of berry fruits (“Satisfactory”, Coffee Stain Studios, 2020)

The educator could also use parts of the video below to help them talk about the game: [GETTING STARTED IN SATISFACTORY! | Satisfactory Gameplay Ep 1 2021 \[4K 60FPS\]](#) in “Kennfucius” channel.

- **Step 2: Explain the gameplay to students through videos in the classroom (25 minutes)**

The educator explains the gameplay through videos in the classroom, paying special attention to the ways of communication and cooperation presented in the following videos:

- [Satisfactory - The Co-op Mode](#) in “The Co-op Mode” channel.
- [Satisfactory Multiplayer Ep 1: Starting Fresh With Update 4! - Coop](#) in “Dr Pixel Plays” channel.

**Note: The educator must see the videos and choose the parts they would like to show, according to their students’ needs.**



- **Step 3: Students in groups of two play the game in the ICT laboratory (45 minutes)**

Next, the educator divides the students into pairs. They let them choose their team members.

The main phases of the game are the following:

1. Dismantle the capsule that has just landed
2. Search for food and basic minerals (iron, copper, limestone)
3. Choose the appropriate place to build the HUB
4. Create/build the tools needed to create more stuff
5. Start building the parts of the HUB

During the game, the educator should intervene minimally and, if it is necessary, note any misbehavior, end arguments, and pay special attention to politeness and mutual support.

They can also use the tool: <https://www.satisfactorytools.com>, to help them know the basic elements of the game that could be used.

- **Step 4: Students play the game as homework (in groups of two) (1-3 hours)**

Players must use resources in an innovative way, and they must work together effectively, learn new concepts, materials and construction procedures, and as is easily understood, cultivate a varied range of skills.

- **Step 5: Reflect in plenary in the classroom (30 – 45 minutes)**

In class, everyone will talk about their experiences of playing the game and working with their classmates. They will talk about the procedures they followed, make special reference to resources and construction procedures, and make reference to possible future uses of the game and the tools mentioned before.

## Getting the game:

<https://store.steampowered.com/app/526870/Satisfactory/>

<https://www.epicgames.com/id/login/>

## References:

GETTING STARTED IN SATISFACTORY! | Satisfactory Gameplay Ep 1 2021 [4K 60FPS]. (2021, February 8). [Video]. YouTube.

[https://www.youtube.com/watch?v=tE1iMpEfAg8&ab\\_channel=Kenfucius](https://www.youtube.com/watch?v=tE1iMpEfAg8&ab_channel=Kenfucius)

Let's Play Trine: Enchanted Edition Co-Op Part 1 - Trine Too Hard. (2016, August 5). [Video]. YouTube.

[https://www.youtube.com/watch?v=94GIhFOSrhs&ab\\_channel=CatalystsGaming](https://www.youtube.com/watch?v=94GIhFOSrhs&ab_channel=CatalystsGaming)

Satisfactory Multiplayer Ep 1: Starting Fresh With Update 4! - Coop. (2021, April 1). [Video]. YouTube.

[https://www.youtube.com/watch?v=IFmPXyxQakk&ab\\_channel=DrPixelPlays](https://www.youtube.com/watch?v=IFmPXyxQakk&ab_channel=DrPixelPlays)

