

Report project activities with students



Introduction Activity

Coordinator name

Juan Bergdahl

Name of teachers

Cecilia Granlund and
Lars Åström

Number and age of students

13 students 17-20 years old



Introduction Activity 1-A1 (SE-16-10-24)



Description of activities

Showed Power-point on planned application.

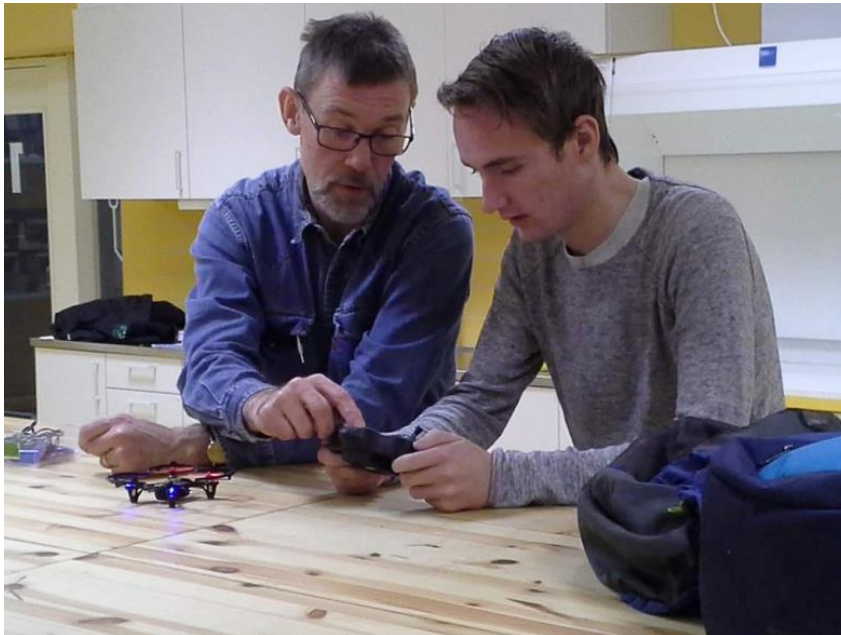
Students tried flying small quadcopters. There was a short information on facts about quadcopters and possible applications.



Learning Outcomes Activity 1-A1 (SE-16-10-24)



The students were introduced to the project and had some hands-on experience of flying quadcopters. They were also introduced to their coming use of the quadcopter and its application.



Ethics and quadcopters

Activity 2-A2

SE-16-11-21

Description of activities

The students were given an instruction to list positive and negative aspects of the applications of drones, using examples from internet.

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The task is about to list the positive and negative aspects of drones, or rather with its applications, thus how they can be used in the community. Start to take a moment to look for information online, what are the different arguments for and against drones? Use relevant sources, think of what intentions the author may have. 2. Follow the instructions below.

List all aspects, that is, - and disadvantages, as you'll find. Please also carefully citation after every aspect and summarize in a few sentences for each source, what aspect the source raised. Example: □ Disadvantage / Arguments against: drone war.

Source: "To kill a child," Nyhetsmorgon, Morning news, TV4, Youtube clips When the drone used in war leads to innocent civilian people die. The drones are controlled from a remote location, where the military simply press a button to release the bomb, without having to face the consequences. The population in war-affected countries live in fear of the constant hum of drones. Benefit / Arguments for...

Summarize in a short text of the various advantages and disadvantages, and on this basis to discuss the ethical issues that drones raises.

Arguing on the basis of your articles on how you set your mind to drones. Are there any conflicts between your argument?

The National Agency for Degree of Engineering program can read the following:

"This training is based on an ethical and responsible approach to technology and a critical, creative and constructive thinking is promoted. In the program, students are given the opportunity to develop the ability to search, sort out and process information with source critical awareness."

Ethics and quadcopters

Activity 2-A2

SE-16-11-21

Learning outcomes

The students have learned to reflect on different ethical aspects around drone applications.

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ICAROS PROJECT

Positive / Benefits of drones

Swedish companies are using drones to transport medicine in trackless Rwanda, in Rwanda, 800,000 people were killed in just 100 days. It is interesting for those transporting medical care that it's a mighty fast and efficient distribution of their products are used at the right time ... because you can not go by car trains, etc., and if you use the helicopter it costs a lot to transport.

Negative / Disadvantages of drones

Most of us heard about the drones for the first time during the war in Afghanistan where the United States has used drones at war and kill people.

Study visit to Fastighetskontoret (Office of city planning and construction) Activity 3-A3 SE-16-12-14



Description of activities

To civil servants describe their work on the planning of the urban development project Malmen. The students have the possibility to ask questions.

Learning outcomes

The students learn about the process of planning a new residential area and the challenges that have had to be overcome.

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Study visit to the construction area of the new residential area Malmen

Activity 4-A4 (SE-16-12-19)



Introduction Activity

Walking around the construction area of the new residential area Malmen, looking at problem solutions, discussing how drones could be used to monitor the developing process.



Study visit to the construction area of the new residential area Malmen

Activity 4-A4 (SE-16-12-19)



Learning outcomes

The students learned about the complexity of planning and carrying out of preparations and constructions in a future residential area. They learned about the physical conditions and the need of different of advanced machinery, staff with different competencies and categories, the need for detailed planning, monitoring and coordination.



Ethics and quadcopters

Activity A5

About drones

Compilation from the transport board and SMFF / RCFF Icaros Project

When flying drones, you are obliged to follow the laws and regulations that apply to all aviation. Which rules apply and if permission is required depends primarily on what the drone will be used.

Keep track of the airport control zones

You need permission to fly within an airport control zone, which sometimes extends several mil from the airport...

Shooting with drones

Aerial photography with drones covered by surveillance teams, which means that it may require permission from the County Administrative Board to fly a drone camera...

In restricted areas

There are also restricted areas in Sweden where it is forbidden to fly, for example, of prisons, nuclear power plants and national parks. When flying drones, you are obliged to follow the laws and regulations that apply to all aviation.



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Ethics and quadcopters Activity A5

County Board Västmanland, Länsstyrelsen Västmanlands län

The application of video surveillance by drones

A camera mounted on a drone subject to surveillance law. To shoot with a drone called therefore to conduct surveillance in these contexts. To do so you must have permission from the county administrative board if you want to photograph a place to which the public has access.

The board is required by law to assess the interest of monitoring outweigh the individual's interest in not being supervised. We therefore need some information from you, including how you plan to use the camera, what places you want to photograph and how to handle the images.

You must submit an application to the county administrative board in the county where the monitoring will take place. Your application may cover several counties. In that case, you should apply in the county where the monitoring is mainly to take place.

Who is responsible for the pictures?

Where do you photograph?

What is the purpose of surveillance?

How should the drone be used?

What equipment is used?

How should the images be used?

Should the images be saved?

Should the sound be listened / recorded?

How do you inform the public about surveillance?

Other information that the provincial government should know.



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Remember ... it may require additional permits for getting you fly with your drones. For example, permission from airports • (each time) to get to fly in an airport control zone, and • Transportation Board if you are flying on missions or earn money on your flight.

