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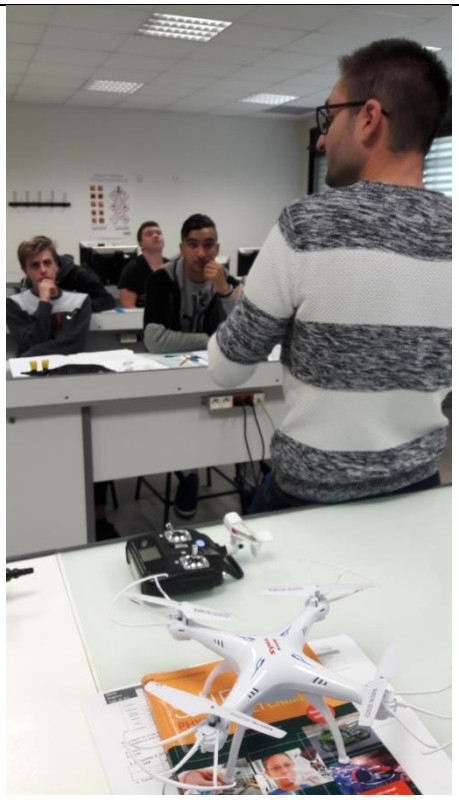
Project ICAROS **Report Code**	***FR-SE-2017-MAR-22***
Title	*Basic mechanics about hovering*
Start/End Date	*22-MAR-2017/ 22-MAR-2017*
Coordinator name and email	*Marc Garrigou – marc.garrigou@ac-toulouse.fr*
Name of teachers	*Patrice SUIN – patrice.suin@ac-toulouse.fr*
Number and age of students	*24 students / 16-18 years old*
Description of activities	*During this session, our students in first year of MEI (industrial equipments maintenance) study the equilibrium condition of a solid submitted to several forces . The aim is to evaluate the force generated by each motor.* *First, their technology teacher came to give a demonstration of hovering flight with our toy drone.* *Then the students listed the forces involved in this balance and wrote down the characteristic features in a table. To be able to do that, they had to evaluate the force values, in particular the weight.* *Lastly they drew the forces on a drone pictures choosing an appropriate scale.*
Learning outcomes	*During this teaching sequence the exam skills practised by the students are :* • *Appropriating* • *Analysing* • *Carrying out* • *Communicating* *<u>The different abilities associated to the degree framework are :</u>* *HS1.1* Measuring and drawing the weight of a solid *HS1.2* *listing the mechanical actions applied on a solid.* *Drawing and characterizing a mechanical action by a force.* *Experimentally checking the equilibrium condition of the solid submitted to two or three forces.*

Photos or other relevant material	 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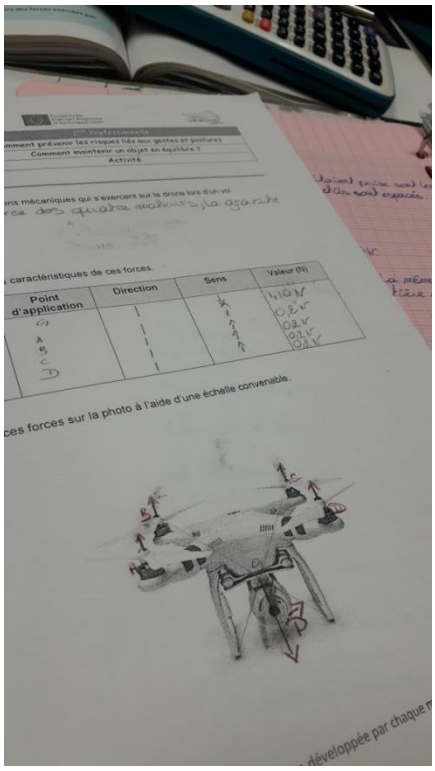
caractéristiques de ces forces
Point d'application
Direction
Sens
Valeur (N)
ces forces sur la photo à l'aide d'une échelle convenable.