

CHRISTMAS HOLIDAY NEWSLETTER

A Wrap-Up of 2022 all in one report



5 PAGE
PLAN

Welcome

Welcome to our Christmas Holiday newsletter and welcome to 2023! We are so proud of everything that we have accomplished over the last few months. We hope that this newsletter will give you an insight into our goals and challenges that we will face during 2023. Bring it on!

At Orbit Racing we believe that contact with our stakeholders and wider community is of utmost importance. We've realised that our journey should be shared with everyone.

We made a promise to produce a newsletter released on a term-by-term basis and so far we've kept it. Enjoy the 2nd Issue of the Orbit Racing Newsletter.

"We each have our own strengths"

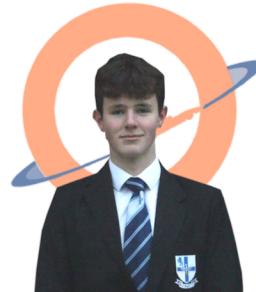
TEAM LINE UP & STRUCTURE

THE TEAM

Our team was founded on the key principle "We each have our own strengths". Each member of our team brings their own qualities to the table. Together create an unstoppable force.

Darragh O'Neill

Darragh oversees the overall **Management of our Team**. During our team meetings, he works through what we have achieved and what we are yet to. Darragh keeps track and delegates all of the tasks that need to be completed, this ensures that we meet deadlines. He offers support to all aspects of the team. Darragh has a background in leadership positions and is drawn to team management. He aims to get the best out of every single member of our team which in turn creates the unstoppable force that we are today.

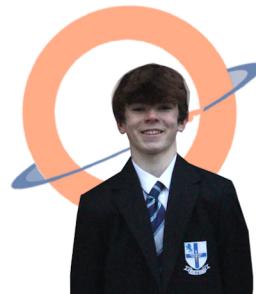


Fiachra Coakley

Fiachra manages the **Marketing and Social Media side** of Orbit Racing team. He controls what goes out on social media throughout our wide range of platforms. This could be from an Instagram post to a Facebook story even to a TikTok. He also works with our brand in the way he is the kit designer and came up with the logo. He creates the posters for the team and will play a huge part with the pit stand in the future. He is succeeding in getting our team out there and creating the Orbit Racing Brand. He is also the Secretary of the team. This involves overlooking the team when necessary and keeping team mates up to date.

Conor Blackburn

Conor's role is the **Manufacturing Engineer**. He both helps the car meet its technical regulations and keeps the designer on track in terms of the car aerodynamics and weight limit. He is also responsible for the assembly of the car and is therefore familiarizing himself and keeping himself up to date with the design engineer. He is capable of operating CAD and assists the Design engineer whenever needed. He runs simulations, makes renders and researches in order to find the optimal components for the car in order for not only succeed, but thrive. It is key he stays in close communication with all of his team and keeps them updated on his progress.

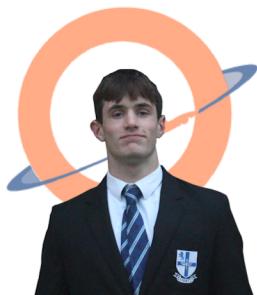


Jack Drumm

Jack is the **Resource and Logistics Director** of Orbit Racing. He is responsible for making contact with any potential sponsors and maintaining contact with current sponsors about what they need or want in regards to benefits. He is in charge of organising sponsorship events and ensuring that the team has everything they need for the events. He places the orders and contacts the distributors about collecting the resources. He works closely with all members of the team and very closely with finance. Any logistical issues that arise while a project is being completed can be brought to him and be solved as a team. He enjoys interacting with people and excels in problem solving so this role suited his skill set perfectly.

Oliver Lee

Oliver Lee is the **Design Engineer** of Orbit Racing. The car is modelled and rendered, on 3D modelling software, Autodesk Fusion 360 and Aero-Tested on SimScale. Oliver works with Conor to create the final product which is raced on the track. He must create a car that will cross the twenty meter track in the shortest time possible, within F1 in Schools Irelands technical regulations. This includes calculating for weight, track resistance and aerodynamic resistance while being sturdy as ell. He aims with the rest of the team to represent Ireland and compete at the world stage in the F1 in Schools World Finals.



PRIMARY F1 IN SCHOOLS

OVERVIEW

After more than 55 classes over the space of 2 months, we finally completed our F1 in Schools Primary STEM Project. After pitching the idea to school management, We were invited to work with 108 students in 3rd Class spread over 4 classes,

The students worked in groups of 4, each taking on a different responsibility within the team, exploring activities such as design, testing, manufacturing, marketing and promotion, all the essential roles in a real F1 team. For two months, we would go down to the primary school every Monday, Thursday and Friday.

To assist us during the classes we created a workbook for the students to use. Students developed their "Soft Skills" during the course of the project. Some of these skills were: Communication, Critical Thinking, Leadership and Teamwork.



PRIMARY F1 IN SCHOOLS

RACE DAY

On Friday the 9th of December we finally had our "Race Day". During this day the students got the chance to present their final presentations to our Enterprise team while our Engineering Team was up in the school gym sending their cars down the 20m track. We are extremely proud that we introduced a younger generation to the F1 in Schools challenge and maybe even ignited a love for STEM.

Each team had to create a presentation to present to our Enterprise team. This gave students a chance to show off what they had learnt, enjoyed and challenges that they overcame during the project, the workbook as very helpful as the students could look back on all of the progress that they had made during the project.

We were able to hold the race in the school gym. Conor and Jack acted as our Race Officials with Oliver acting as our MC for the day. Each team raced within their class with the winners and runners up continuing to a quarter and subsequently semi then grand final. During the races Darragh and Fiachra judged each team's presentation.



DEPARTMENTS

SOCIAL MEDIA & MARKETING

So far we have explored many Social Media platforms, we decided to focus most of our work on Instagram. We post regularly, gaining traction for our team and promoting F1 in Schools.

Since the start of this academic year, we have gained a noticeable following across our platforms totalling over 1,000 followers.

We have also used Instagram as another platform to publish our Newsletter using one of Instagram's business features. This has helped our younger audience easily access our updates and view our progress.

Using the Meta Business Suite we are able to see many aspects of our Social Media, we know that out of our 930+ followers 66% are men and 33% are women. Over 50% of our followers under the age of 35.

CAR DESIGN & DEVELOPMENT

Orbit Racing's goals for 2023 are to create a car that pushes the limits of the regulations given, in order to cover the distance of the twenty meter track as fast as possible. This means making a car that is lightweight and creates minimal resistance (friction and drag) against the track and air.

Making the car is lightweight, means there is less mass to be moved, giving the best acceleration.

The car is being modelled on AutoDesk's 3D modelling software, Fusion 360, which allows you to view the cars weight before it has been made in real life.

This helps with finding the centre of mass, of the car. Ideally the centre of mass, should be directly in ahead of the force that is pushing it, leading to maximum efficiency of the power provided.

The software that we are using to test these metrics is a fluid-dynamics simulation software, called SimScale, and developed by SimScale GmbH.

MANUFACTURING

The car will be made out of an F1 in Schools model block, ceramic bearings, wheel axles, a CO2 cartridge and various 3D printed components, including the nose cone front wing, wheels and more.

It is important to create a car that is durable, as the only thing to stop the car at the end of the twenty meter track, is a wall and a small amount of cushion. It is vital to have good structural support around the front area if the car.



CNC Machine

S P O S N S O R S

Platinum

ROE AUTOCRAFT

 VECTOR MOTORS

Gold

 SEASPRAY FINANCIAL
Wealth & Investment Management

Bronze

BIZQUIP
WE MAKE WORK FLOW

Strategic Partners

 **SIMSCALE**



owayo

 **Boca Bearings**
PRECISION CERAMIC TECHNOLOGY

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Conclusion

Thank you for taking the time to read our newsletter. We look forward to bringing you with us along this journey.

We would like to thank everyone who has supported us so far and all of our new members of the Orbit Racing Community.

During the course of our STEM Project in Willow Park Junior School we received a continuous stream of assistance from all of the staff.

Mr Docherty & Mr McAleer, Principal & Deputy Principal of WPJS.

Mr Mageean, Dean of 3rd Form & all of the 3rd Form teachers and Mr. Alan Fallon

Our Transition Year Dean, Mr O'Neill.

And finally, our Facilitator Ms Drew, our team would not function at the high standards without their counsel and guidance.

Until next time, Thank you.

Darragh, Conor, Oliver, Fiachra and Jack,

Orbit Racing.

