

Weather Balloon Checklist

Step by step towards the stratosphere

6 weeks before the launch

- ☐ Team formation
- ☐ Research, tutorials

4 weeks before the launch

- ☐ Order material and equipment
- ☐ Construction of the capsule
- ☐ GPS Tracker test

3 weeks before the launch

- ☐ Choose the location for your launch
- ☐ Determine the date and time for your launch
- ☐ Request the start-permission from the authorities
- ☐ Get a liability insurance

24 hours before the launch

- ☐ Check the weather forecast
- ☐ Predict the flight path
- ☐ Determine the exact take-off weight of your payload
- ☐ Calculate the helium amount needed
- ☐ Load the battery of your camera

- ☐ Load the battery of your GPS Tracker
- ☐ Load the battery of your laptop
- ☐ Format SD card
- ☐ Attach your contact details to the capsule

The launch

- ☐ Attach the pressure regulator to the helium bottle
- ☐ Start the GPS Tracker and test it
- ☐ Cut the cords on length and tighten them: 5m between the parachute and the balloon, 10m between the parachute and the capsule
- ☐ Fill the weather balloon with the calculated amount of Helium
- ☐ Seal the weather balloon and connect it with the cord from the parachute
- ☐ Activate the camera, battery supply or datalogger and put it into the capsule
- ☐ Seal the capsule with gaffer
- ☐ Connect the capsule with the parachute
- ☐ Launch the weather balloon

Immediately after the launch

- ☐ Follow the balloon to the predicted landing destination
- ☐ The flight will take about 3 hours until the capsule will land
- ☐ Locate the capsule with the GPS Tracker
- ☐ Recover the capsule

Materials and tools needed

- ☐ Weather balloon
- ☐ Parachute
- ☐ Special cord

- ☐ Helium
- ☐ Pressure reducer
- ☐ Polystyrene for the capsule
- ☐ Cardboard
- ☐ Gaffer
- ☐ Cotton gloves
- ☐ Camera with SD card
- ☐ External power supply
- ☐ GPS Tracker
- ☐ GPS Tracker as a backup
- ☐ Datalogger to measure the maximum altitude
- ☐ Cutter, scissor
- ☐ Pipe wrench (to attach the pressure reducer)

Further information, tips and tricks as well as some useful tools for the

- **calculation of the helium amount needed**
- **flight prediction**

can be found on our website: www.stratoflights.com/en/tutorial.