



KIST GRADE 4

# WATER BALLOON DROP CHALLENGE

FEBRUARY 2, 2018

On Friday, February 2<sup>nd</sup>, 13:30-15:00, Grade 4 students at KIST are invited to test the laws of physics in a 'How the world works' investigation and contest. The rules are as follows:

- 1 Build an apparatus that can hold and protect a small water balloon (typical type found in discount shops with approximately 300ml capacity) dropped from a height of 3+ meters.
- 2 Apparatus must be no larger than 20cm x 20cm x 20cm and weigh no more than 500g.
- 3 Apparatus must NOT contain dangerous or breakable materials such as but not limited to glass, metal, chemicals, etc.
- 4 Must be easy to insert, remove, and inspect the water balloon within apparatus.
- 5 Water balloon and apparatus must fall directly down. Parachutes are prohibited.
- 6 Students work independently. Collaboration is encouraged, but every student must create a unique apparatus.
- 7 Apparatus with water balloon will be dropped by a teacher from a height of approximately three meters. Water balloons that do not break will be dropped in their apparatus again from a height of approximately 6 meters, then 9 meters.
- 8 Rule infringement will result in disqualification. Rules subject to modification by Grade 4 teachers.