EXTRAKLASS WORKSHOP FOR PRIMARY SCHOOLS

Junior Astronauts: space and rockets

In this session, children investigate gravity, air pressure and the forces that get a rocket off the ground. The instructor brings a gravity well and rocket launchers, so the school has nothing to prepare.

HOW A SESSION WORKS

Each session is built around one science concept, explained by the instructor and then tested by the children in two or three hands-on experiments. The 1 hour session, Out of This World, covers gravity and how it keeps planets in orbit around the Sun. The 2 hour session adds Rocket Races, on how a rocket pushes itself forward. Rockets launch outdoors when the weather allows. The 4 hour session adds Junior Astronaut Training, on air pressure, and Bernoulli's Flying Machines, on the four forces of flight.

> *Junior Einsteins Science Club® is an award-winning programme. This session enriches the science strands of the plan d'études: Découverte du monde par tous les sens in cycle 1, and Éveil aux sciences, sciences humaines et naturelles in cycles 2 to 4.*

LEARNING OBJECTIVES

1 HOUR

Out of This World

- Children can explain that gravity keeps planets in orbit around the Sun.
- Children can put the planets in order from the Sun.
- Children can describe how a marble moves around the gravity well.

+2 HOURS

Rocket Races

- Children can explain that a rocket moves forward by pushing gas out the back.
- Children can launch a balloon rocket along a line.
- Children can build a bottle rocket from vinegar and bicarbonate of soda.

+4 HOURS

Junior Astronaut Training

- Children can explain that air pressure can hold water inside an upside-down glass.
- Children can describe what happens to a marshmallow in a vacuum.
- Children can launch a film canister pop rocket.

+4 HOURS

Bernoulli's Flying Machines

- Children can name the four forces that act on a plane.
- Children can describe how a ping-pong ball behaves in an air stream.
- Children can build a glider that flies.

PRACTICAL INFORMATION

This session is for children aged 5 and up, in one class of up to 18 children. Schools choose a length of 1, 2 or 4 hours. The session needs a room with tables. For the 2 and 4 hour sessions, rockets launch outdoors when the weather allows. If it rains, the instructor replaces the outdoor launches with an indoor flight activity, with no change to the booking.

Our instructor brings every material needed and tidies the room afterwards. Under the Extraklass charte, the class teacher stays in the room for the whole session and keeps responsibility for the class.

Children wear goggles and stand back during every rocket launch. Marshmallows are used in the experiments but not eaten.

The teacher picks the language for the session: Luxembourgish, French or English. German is available on request. Every instructor's safeguarding checks are performed and recorded before they work with children.

To request a session, call +352 621 888 799 or write to luxembourg@junioreinsteinsscienceclub.com.

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