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| TitleAir resistance | Date:Class: |
| Link to National Curriculum: Sc4,2a, 2c |
| Learning objectives:* Understand the concept of air resistance
* Understand that air resistance is a frictional force resisting movement
* Understand the properties that affect air resistance
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| Resources* Worksheet “air resistance”
* Different materials with which to make parachutes (cloth, string, tape, small weight)
* Powerpoint “air resistance”
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| Risk Assessment**Hazard:** falling objects, heights (if dropped from higher up)**Precaution:** ensure that children are acting safely if dropping objects from a height**Risk**: low |
| Lesson Outline |
| Structure | Time | Activity |
| Starter | 5 mins | Discuss that air resists an object moving through it. Ask the children if they can think of some things that might be affected by air resistance.  |
| Introduction | 10 mins | Show the children how to construct a basic parachute using a square of cloth tied with string at the corners and a weight to pull the string down.  |
| Activity | 30 mins | Give the children the required materials and ask them to construct different sized parachutes. Ask them to conduct an experiment to see how size affects the rate they fall |
| Plenary | 5 mins | Go over the key points. Ask what might happen to air resistance if the air is thinner. Ask the children to predict how the speed of a balloon payload would change as it falls from space.  |
| Differentiation / Assessment opportunitiesHave the children draw the following situations and label in order of which they would fall most quickly. Small and large parachute with a light manSmall and large parachutes with a heavy manAsk what else might increase air resistance.? Speed of travel, size, shape, surface friction |