

Traveling Through Air

Unit 1

Teacher's Notes

Finding Out About Parachutes

Main Objectives

- Finding out about parachutes
- Finding out about the force of gravity
- Designing and making a parachute



Parachute-like seeds drifting away from the parent plant

Cross-Curricular Objectives

Math

- Measuring surface area
- Understanding volume
- Measuring time accurately
- Developing a pattern for a parachute
- Working to scale

Science

- Learning about gravity
- Learning about forces
- Learning about the properties of textile materials
- Learning about counterbalance

Technology

- Experimenting with different materials
- Following the design process
- Controlling the descent of a load
- Developing patterns using grid paper

Language Arts

- Developing effective communication skills in a variety of settings including group activities
- Making and listening to oral presentations and reports
- Demonstrating comprehension of nonfiction
- Demonstrating comprehension of information resources to research a topic
- Writing for a variety of purposes: to describe, to inform, to entertain, and to explain

Social Science

- Researching achievements of important scientists and inventors
- Identifying important people in the field of transportation
- Identifying examples of inventions and innovations
- Learning about the United States Space Program

Materials for Unit 1

thin cotton material	fabric
glue	clear adhesive tape
thread	string
eyelets	modeling clay
thin plastic bags	paper bags
Checkcard™ (squared card)	copier paper
masking tape	
thin card stock	

Tools & Equipment for Unit 1

stop watch	tape measure
ruler	scissors
hole punch	needle
eyelet punch/Crop-A-Dile	

✚ Portfolio

It is important for all pupils to keep a record of what they have done, how they solved problems, how well they worked within a team, and what they have learned. This is best achieved when pupils keep a diary of their activities in a portfolio.

The portfolio is designed to support the learning objectives stated at the start of the units. Pupils should write down what they have learned and understood from this unit of work. Encourage pupils to use drawings, photographs, and written responses when completing the portfolio.

Unit 1 Evaluation

At the completion of this unit, students should be able to demonstrate their knowledge through teacher questioning, observation, and written work.

Students should:

- Be capable of measuring surface area
- Be capable of measuring time accurately
- Be able to measure volume
- Be capable of calculating speed of descent

- Have a basic understanding of the principles of gravity
- Know about forces
- Know how a parachute works
- Know something about the properties of thin textile materials
- Know something about counterbalance
- Be capable of comparing the properties of different types of materials
- Follow the simple steps of the design process.

Vocabulary

brainstorm

counterbalance

descent

drift

fiber

forces

gravity

panel

properties

soar

umbrella

canopy

descend

distribute

drifting

float

glide

invent

parachute

resistance

textile