

Core Skills Analysis

Physics

- Explored the basic principles of gravity and air resistance through observing a parachute takeoff.
- Gained firsthand insight into forces acting on a parachutist during takeoff and flight phases.
- Observed the practical application of lift as the parachute catches air to aid in flight.
- Noticed the balance between weight and upward force that enables controlled airborne movement.

Physical Education

- Understood the physical skills and coordination required for safe parachute maneuvers.
- Observed the importance of body position and control in aerial movement.
- Recognized the role of training and preparation to undertake adventurous physical activities.
- Connected physical endurance with safety and performance during extreme sports.

Safety and Risk Management

- Identified the potential risks involved in parachuting and the importance of safety protocols.
- Observed how equipment (like the parachute) is essential to managing risk in extreme sports.
- Learned the significance of environmental awareness, such as wind conditions, before engaging in the activity.
- Appreciated the preparation and caution required for high-risk recreational activities.

Tips

To deepen Brock's understanding of parachuting and its broader scientific and physical implications, you might engage him in a hands-on project building simple parachutes using household materials like plastic bags and strings to explore air resistance and descent speed. Discuss the history and evolution of parachutes to integrate an element of invention and design thinking. Encourage him to research famous parachutists and the careers related to skydiving or aviation to connect the activity to real-world opportunities. Lastly, explore weather factors influencing parachuting safety, leading to practical lessons on reading meteorological data and considering environmental science.

Book Recommendations

- [The Science of Flight](#) by Steve Parker: A clear, engaging exploration of the principles behind flying machines and forces like lift and gravity.
- [Parachuting: The Skydiver's Handbook](#) by Bill Kelsey: An introductory guide explaining parachuting techniques and safety for younger readers.
- [Extreme Sports Safety](#) by Susan Roth: Focuses on high-risk sports, emphasizing safety practices and equipment.

Learning Standards

- Science Understanding (Physical Sciences): ACSSU118 - The way forces affect motion, focusing on gravity and air resistance.
- Science as a Human Endeavour: ACSHE119 - Understanding the role of technology and safety in designing equipment for physical activities.
- Health and Physical Education: ACPPS073 - Recognizing the importance of physical skills and safety in adventurous activities.
- Geography (Weather awareness): ACHASSK085 - Exploring environmental factors influencing

human activity.

Try This Next

- Create a mini-experiment worksheet where Brock can record the descent times of various homemade parachutes differing in size and material.
- Design a quiz with questions about forces involved in parachuting, such as gravity, lift, and air resistance.