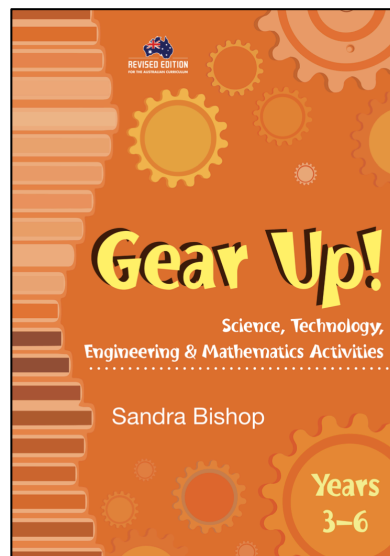


Gear Up! Science, Technology, Engineering & Mathematics Activities, Years 3–6

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Summary:

Gear Up! Science, Technology, Engineering & Mathematics Activities will help guide students in the primary to middle years levels as they further develop their understanding of STEM concepts. This book has been written as a sequel to *Gears: Science, Technology, Engineering & Mathematics Activities*, and can be used with Australian Curriculum: Mathematics, Science and Technology instruction at the years 3 to 6 level. *Gear Up!* adds further investigation tasks requiring the students to revise basic skills and reinforce the notion of action/reaction, force and movement.

The lessons form an integrated unit of study, and have an extensive list of skills and outcomes based on Australian Curriculum content. They not only reinforce basic concepts of physics, but also encourage creativity, allowing children to let their imaginations run wild. The length of the lessons varies according to the content and extent to which you, the teacher, wish to pursue a particular notion. Some lessons may take a few hours to complete, while others may take a whole session.

The lessons begin with the students sharing their prior knowledge and moving towards investigating the gears, researching them, pulling them apart and seeing them in a “real life” context. From there, the students develop their own models, write instructions for constructing those models and develop a kit to market them.

The lessons plans in *Gear Up!* are based on Gears! Gears! Gears![®], manufactured by Learning Resources[®]. Sets of the Gears! Gears! Gears![®] product are necessary to make full use of the activities within *Gear Up!*.

Supporting Resources:

- *Gears: Science, Technology, Engineering & Mathematics Activities, Years F–2* (6110)
- *Mechanics in the Middle Years of Schooling: Science and Technology* (6135)
- *Getting Started with Lego Robotics* (IST7779)