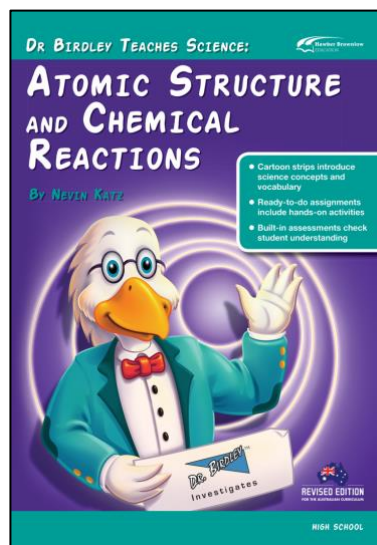


# Dr Birdley Teaches Science: Atomic Structure and Chemical Reactions

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**RRP:** \$19.95  
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**Year Level:** 9–12, Teachers and Administrators  
**Focus Area:** Activities and Exercises, Classroom Practice and Direct Instruction, Curriculum  
**Key Learning Area:** Science



## Summary

*Atomic Structure and Chemical Reactions*, a Dr Birdley Teaches Science book, explains critical concepts in science using words, images and characters. It is focused on standards-based learning objectives and makes science accessible to all learners. It exemplifies good science teaching.

Following the outline provided, teachers help students

1. warm up by assessing prior knowledge and developing vocabulary with vocabulary build-up exercises
2. learn about a new concept with the source cartoon. It explains critical concepts in science using words, images and characters
3. apply the new concepts in independent practice with
  - hands-on activities
  - study questions that prompt students to explain the concepts in words
  - puzzles and practice problems that link visual and verbal information
  - background articles that expand on the cartoon's central points
  - graphic organisers that help students sort and synthesise main ideas.
4. assess new learning with quizzes and tests that check for understanding of key ideas.

Concepts covered in this book include:

- Dalton's Atom
- Conservation of Mass
- Bohr & Electron Cloud Models
- Atomic Bonding
- Lewis Structures
- Balancing Equations
- Models by Rutherford & Thomson

## Other Resources

- *Dr Birdley Teaches Science: Classifying Cells* (INA2281)
- *Dr Birdley Teaches Science: Forces and Motion* (INA2311)
- *Dr Birdley Teaches Science: Constructing the Earth* (INA2267)
- *Dr Birdley Teaches Science: Parts of the Cell* (INA2335)
- *Dr Birdley Teaches Science: Mysteries of the Earth* (INA2304)
- *Dr Birdley Teaches Science: Introducing Cells* (INA2328)
- *Dr Birdley Teaches Science: Elements, Compounds and Mixtures* (INA2298)
- *Dr Birdley Teaches Science: Properties of Matter* (INA2342)