



## Heating and Cooling Lessons

### Websites

#### [abpi: Solids, Liquids, and Gases](#)

From this page teachers can navigate children to a series of appealing animations with simple text about states of matter, changes between states, and dissolving. It also includes additional classroom activities that would be suitable for extensions. Designed for children aged 7-11.

( <http://www.abpischools.org.uk/resources/solids-liquids-gases/index.asp> )

#### [Materials](#)

This site, provided by the Canada Science and Technology Museum, contains a quiz about different materials and their properties..

( <http://www.sciencetech.technomuses.ca/english/schoolzone/materials.cfm> )

#### [Illuminations: Resources for Teaching Math](#)

If the children you're working with have used a balance scale to explore the property of weight, this online game provides a good mathematics extension. Children explore the relationships between the weights of different abstract shapes by placing them on either side of a balance scale. This version uses numbers suitable for primary classrooms.

(<http://illuminations.nctm.org/ActivityDetail.aspx?ID=131> )

#### [Chemical Heritage Foundation: Chemistry in History](#)

While the reading level of this site is too advanced for most children in grades 1-3, this is a good teacher resource for learning about the scientists that created the study of chemistry, and a good place for children to find pictures of these men and women.

( <http://www.chemheritage.org/classroom/chemach/index.html> )



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### Books

#### **Elementary Physics series: Solids, Liquids, and Gases**

Ben Morgan. (2003, Blackbirch Press)

Written for elementary-age students, these three reference books offer clear, color photographs and straightforward text. For solids, liquids, and gases, respectively, each book provides a definition and description, different examples, and an explanation of how materials change between states.

#### **Matter: See It, Touch It, Taste It, Smell It**

Darlene Stille; illustrated by Sheree Boyd. (2004, Picture Window Books)

Full of colorful illustrations, this book does a great job discussing the properties of all matter, and matter in its three states.

#### **Solids, Liquids and Gases (Starting with Science)**

The Ontario Science Centre; photographs by Ray Boudreau. (1995, Kids Can Press)

Thirteen demonstrations help students explore the properties of the three common states of matter. A "What's Happening?" section explains the science underlying each investigation. A section for parents and teachers extends the activities described in the book.

#### **What Is the World Made Of? All About Solids, Liquids, and Gases (Let's-Read-and-Find-Out Science, Stage 2)**

Kathleen Wiedner Zoehfeld; illustrated by Paul Meisel. (1998, Collins)

This beginning reader introduces children to the differences between solids, liquids, and gases with examples from everyday life.