

# Where's Up?

## Summary

Students will use a needle and a magnet to create a compass

## Group Size

Individual

## Materials

Needles  
Magnets: bars, rings horseshoes, etc.  
Styrofoam plates  
Water pitcher  
Water

## Additional Resources

### *Books*

- *Usborn Science Activities--Vol. 1*  
, by Joan and Maurice Martin (Usborn Publishing Ltd, Usborn House, 83-85 Saffron Hill, London, EC1N 8RT, England. Copyright 1992, [www.edcpub.com](http://www.edcpub.com) or [www.ubah.com](http://www.ubah.com)); ISBN 0-7460-0698-5
- *Usborn Science Activities--Science With Magnets*  
, by Joan and Maurice Martin (Usborn Publishing Ltd, Usborn House, 83-85 Saffron Hill, London, EC1N 8RT, England. Copyright 1992, [www.edcpub.com](http://www.edcpub.com) or [www.ubah.com](http://www.ubah.com)); ISBN 0-7460-1259-4
- *World Book, Young Scientist--Light & Electricity--Magnetic Power*  
, by Hemesh Alles (World Book Inc., 525 West Monroe Street, Chicago, Illinois 60661. Copyright 1992); ISBN 0-7166-2791-4
- *The World Book Student Discovery Encyclopedia--Vol. M*  
, (World Book Inc., 233 N. Michigan Ave., Chicago, Illinois 60601. <http://www.worldbook.com>, 1-800-975-3250. Copyright 2000); ISBN 0-7166-7400-9

### *Video*

- *The Magic of Magnetism*  
, (100% Educational Videos; 4921 Robert J. Matthews Pkwy, El Dorado Hills, California 95762, <http://www.schoolvideos.com/index.cfm>); VHS Product #1010S, DVD Product #S1401

## Background for Teachers

You can make a compass by creating a magnet.

Earth is a magnet.

By rubbing a magnet in the same direction over a needle, a magnet is created.

## Intended Learning Outcomes

1. Use Science Process and Thinking Skills
2. Manifest Scientific Attitudes and Interests

## Instructional Procedures

### Invitation to Learn

Ask "Why does a compass point north?"

### Instructional Procedures

Pass out needles and magnets.

Have half of the class stroke needles on the north end of the magnet and the other half stroke needles on the south end.

Place needles on floating Styrofoam disks in water-filled plates.

Have students journal results.

Rearrange students in different groups and compare results.

### Extensions

Measure the distance, in centimeters or inches, that a compass is affected by different magnets.

Allow students with special needs to think and respond to journaling activities as a homework assignment with parents. Also allow them to share their results with class members as part of the Language Arts Core Curriculum.

### Family Connections

Students check out five marked and magnetized needles and classify according to polarity.

Create a compass course for students and parents to complete after school.

Have teams create a compass course to be exchanged with another team.

Share journal results with parents.

Allow students with special needs to think and respond to journaling activities as a homework assignment with parents.

### Assessment Plan

Have students design an experiment to test compared results.

### Authors

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