

Books

A Field Guide to the Stars and Planets, 4th edition, 1999, The Peterson Field Guide Series, Houghton Mifflin Co.

The Ultimate Asteroid Book, Lehman, Lee J., Schiffer Publishing, Ltd.; ISBN: 0914918788, 1998, \$18.95

The use of the asteroids brings an influx of new symbols, and the addition of new symbols means the number of ideas which may be communicated is increased. It is as if you were working with a language which contained a vocabulary of ten words. You could create many more meanings than ten by combining these words in different ways.

Web Sites

Near Earth Asteroid Rendezvous presents current data on a spacecraft that will orbit an asteroid

<http://near.jhuapl.edu/>

Asteroid observing services from Lowell Observatory including target generation, observational aids, data, and related information

<http://asteroid.lowell.edu/>

NASA Quest site presents online projects, interactive activities, learning channel scheduling, and strategies for including the Internet in classroom activities.

<http://quest.arc.nasa.gov/>

National Science Content Standards

Content Area	Standards
Physical Science	B1, C3, C6
Earth Science	A3, B1, B2, C1, C2, C3, C4
Science and Technology	A1, A2, B2, B3, B4
Science in Personal & Social Perspectives	C1, D1, D2, E2, E4, E5, E7
History and Nature of Science	A1, A2, B1, B2, B3, C1

Asteroid!

To return to the lesson, select Exit from the File pull-down menu.

Materials			
Activity	Material	Amount	
Crater Creator	"Asteroids" (Marbles, plastic beads, BBs, and so on)	per group	
	Meter stick	1 per group	
	Sand (enough for 6cm depth in container)	per group	
	Shallow container (such as a shoebox)	1 per group	
	Clamps	1 per group	
	Ring stand	1 per group	
	Metric ruler	1 per group	
	Balance	1 per group	
	Watch or clock with a second hand	1 per group	
	Pencil	1 per student	
	Paper	1 per student	
Time After Time	Adding machine tape (long piece)	1 per group	
	Meter stick	1 per group	
	Scissors	1 per group	
	Colored pencils	per group	
	Geologic Time Chart*	1 per group	
	Mass Extinction Time Line*	1 per student	
	Asteroid Impact Time Line*	1 per student	
	Hole punch	1 per class	
	Earth science, paleontology books, encyclopedias	per class	
Solar System Business Guide	Astronomy resource books	per class	
	Construction paper (large piece)	1 per group	
	Markers	per group	
	Discovery File "Charting the Planets" *	1 per student	
Orbit Logo	Paper (large piece - at least 60cm x 100cm)	1 per group	
	Straight pins	2 per group	
	String (3 meters)	1 per group	
	Pencil	1 per student	
	Cardboard (at least the size of the paper above)	1 per group	
	Meter stick	1 per group	
	Scissors	1 per group	
	Compass	1 per group	
	* denotes something is found in the student book		

To return to the lesson, select Exit from the File pull-down menu.