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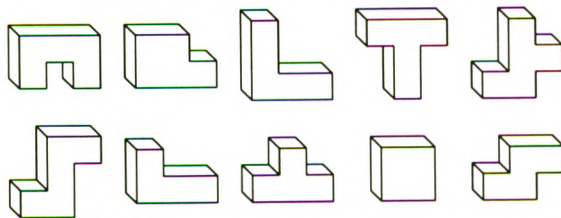
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Mental exercise may be as important to maintaining your mental acuity, as physical exercise is to maintaining your physical fitness. Organized Thinking can provide you with a constant source of problems and challenges to test and build your thinking skill. Two of our Puzzle Systems are presented below.

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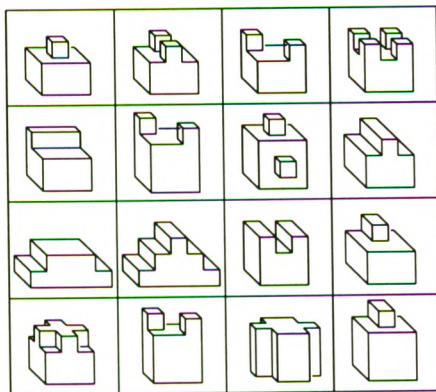
Assemble The 3x3x3 Cube,



and other problem shapes as well.

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## SCRAMBLE-20™

Exchange Letter Pieces in the columns

A	A	A	D	H	A	A	E	E	C	A	A	E
H	E	K	E	R	C	N	G	L	F	E	F	L
S	L	L	L	S	E	O	R	N	G	I	I	R
Y	O	N	Y	Y	O	T	T	T	Y	O	S	T

to find the English words in the rows.

Form words in the rows of the SCRAMBLE-20 puzzles by exchanging Letter Pieces in their columns. Advance through four-, five-, six-, seven- and eight-letter word SCRAMBLE-20 puzzles, with from 3 to 6 words in each Letter Rectangle. The SCRAMBLE-20 Puzzle Booklet contains over two hundred such puzzles. Additional SCRAMBLE-20 Puzzle Booklets are also available. SCRAMBLE-20 comes with 80 plastic letter pieces in four colors. Price: \$20.

The solutions to the three SCRAMBLE-20 Letter Rectangles depicted above are shown here.

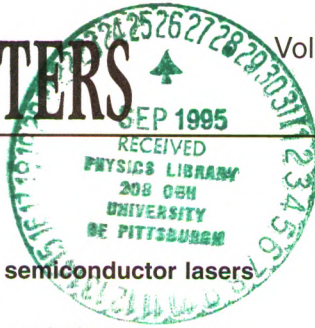
ALLY	HOTEL	CAFE
HAND	RANGE	FOIL
SEAL	SCOUT	GIST
YOKE	YEARN	YEAR

Here are two more SCRAMBLE-20 puzzles for you to try.

F	A	A	A	D	A	A	B	A	E	D
G	I	E	D	E	B	H	C	D	I	E
L	L	I	E	H	C	O	D	E	N	N
R	O	N	N	M	D	S	E	G	R	R
T	R	U	T	N	S	U	M	R	U	Y

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- 1797 **Chirp of passively and actively mode-locked semiconductor lasers**  
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- 1844 **Surface acoustic wave reflections from a proton exchanged dispersive dot array**  
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- 1847 **Evidence of interstitial location of Er atoms implanted into silicon**  
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- 1850 Relationship between self-organization and size of InAs islands on InP(001) grown by gas-source molecular beam epitaxy
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- 1856 High quality InGaN films by atomic layer epitaxy

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- 1862 Near-field optical beam induced current measurements on heterostructures
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1914 Intensity-dependent energy and line shape variation of donor-acceptor-pair bands in ZnSe:N at different compensation levels

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#### SUPERCONDUCTORS

1917 Extended function of a high- $T_c$  transition edge bolometer on a micromachined Si membrane

H. Neff, J. Laukemper, G. Hefle, M. Burnus, T. Heidenblut, W. Michalke, E. Steinbeiss

1920 Deposition of high quality  $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$  films on ultrathin (12  $\mu\text{m}$  thick) sapphire substrates for infrared detector applications

A. Piqué, K. S. Harshavardhan, J. Moses, M. Mathur, T. Venkatesan, J. C. Brasunas, B Lakew

1923 Generation of 24.0 T at 4.2 K and 23.4 T at 27 K with a high-temperature superconductor coil in a 22.54 T background field

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1926 Biomagnetic measurements using low-noise integrated SQUID magnetometers operating in liquid nitrogen

M. S. Dilorio, K-Y. Yang, S. Yoshizumi

1929 Correlation of critical current and resistance fluctuations in bicrystal grain boundary Josephson junctions

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1932 Determination of pinning strength of  $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$  from magnetic stiffness measurements

Beate Lehdorff, Hans-Gerd Kürschner, Bernhard Lücke

1935 Disorder and synchronization in a Josephson junction plaquette

A. S. Landsberg, Y. Braiman, K. Wiesenfeld

#### MAGNETISM

1938 History dependent domain structures in giant-magnetoresistive multilayers

H. T. Hardner, M. B. Weissman, S. S. P. Parkin

#### PAPERS IN OTHER FIELDS

1941 Ferroelectric phase transition temperatures of  $\text{KTiOPO}_4$  crystals grown from self-fluxes

N. Angert, M. Tseitlin, E. Yashchin, M. Roth

#### COMMENTS

1944 Comment on "Phase transformation of cobalt induced by ball milling" [Appl. Phys. Lett. 66, 308 (1995)]

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1945 Response to "Comment on 'Phase transformation of cobalt induced by ball milling'" [Appl. Phys. Lett. 67, 1944 (1995)]

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