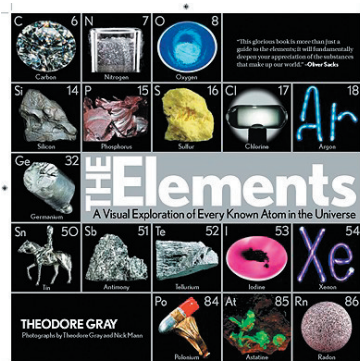


# Elements Game and Elements Quiz



Originally adapted by Eve Levin from the Avon Section 11 team at Fairfield Grammar School in Bristol from Dave Smith's (Hounslow Section 11) game of the same name in 1994. I am mining our archive and, since you can't keep a good activity down, producing an online version. I encountered Theodore Gray's Elements Book at ASE conference this January and am now planning a follow up version soon using less well know elements some of which had not been discovered in 1994.

Essentially, this is a revision activity with a gamelike twist. One team collects the right information for their elements and the other team checks their information and then vice versa and versa vice until 12 elements are checked. The sets of cards are best printed in different colours. You also might want to give teams six matrix cards rather than one.

PS Arsenic is not included in this set!

The webaddress for this activity is

<http://www.collaborativelearning.org/elementsgame.pdf>

Last updated 4th February 2010

## COLLABORATIVE LEARNING PROJECT

Project Director: Stuart Scott

We support a network of teaching professionals to develop and disseminate accessible talk-for-learning activities in all subject areas and for all ages.

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## BRIEF SUMMARY OF BASIC PRINCIPLES BEHIND OUR TEACHING ACTIVITIES:

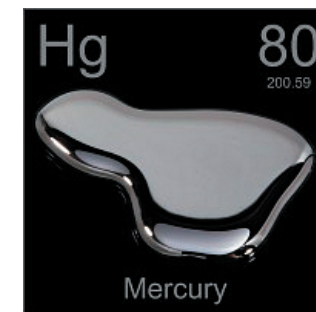
The project is a teacher network, and a non-profit making educational trust. Our main aim is to develop and disseminate classroom tested examples of effective group strategies that promote talk across all phases and subjects. We hope they will inspire you to develop and use similar strategies in other topics and curriculum areas. We want to encourage you to change them and adapt them to your classroom and students. We run teacher workshops, swapshops and conferences throughout the European Union. The project posts online many activities in all subject areas. An online newsletter is also updated regularly.

\*These activities are influenced by current thinking about the role of language in learning. They are designed to help children learn through talk and active learning in small groups. They work best in non selective classes where children in need of language or learning support are integrated. They are well suited for the development of oracy. They provide teachers opportunities for assessment of talk.

\*They support differentiation by placing a high value on what children can offer to each other on a particular topic, and also give children the chance to respect each other's views and formulate shared opinions which they can disseminate to peers. By helping them to take ideas and abstract concepts, discuss, paraphrase and move them about physically, they help to develop thinking skills.

\*They give children the opportunity to participate in their own words and language in their own time without pressure. Many activities can be tried out in pupils' first languages and afterwards in English. A growing number of activities are available in more than one language, not translated, but mixed, so that you may need more than one language to complete the activity.

\*They encourage study skills in context, and should therefore be used with a range of appropriate information books which are preferably within reach in the classroom.



# Elements Game

A game for two teams.  
Each team with two or  
three players



## Instructions

1. Each team takes a matrix card.
2. Shuffle the elements name cards and place them face down.
3. Toss a coin to decide which team goes first - this will be Team "A".
4. Team B holds but does not look at the information check cards or has a copy of Theodore Gray's "The Elements" (ISBN-13 978-1-57912-814-2)
5. All the other cards should be put out in piles on the table.
6. Team A now take the top card from the element pile and place it in the first section of their matrix.
7. They now take each of the other 5 sets of cards in turn and choose one card from each set which best describes their element to fill their matrix.
8. Team B then check the information and if any cards are incorrect they must be returned to their sets. Teams must keep a record of how many blank spaces they have on their matrix.
9. Now it is Team B's turn to take an element card and for Team A to hold the information, and so on in turn until all the elements cards are used up. The team with the fewest blank spaces is the winner.
10. Both teams then work together to place the remaining cards using their information. They might then like to go on to play "Elements Quiz" using their card sets.

# Elements Quiz

A quiz for two teams - each team with two or three players

## Instructions

Each team has information about six elements. They can take turns asking the opposite team for specific information about an element: e.g. Is bromine a liquid or a gas? The results of the quiz can be scored on a grid like the one below. For every correct answer they gain a tick on the grid. If they give two or more uses or properties they gain an extra tick!

Elements	Symbols	Metal/non-metal	Solid, liquid, gas	Properties	Uses

# Elements Game - Matrix


# Elements Game - Matrix


<p><b>HELIUM He</b> Atomic no. 2 Non metal - gas An inert gas with a very low density Used in balloons and airships</p>	<p><b>CARBON C</b> Atomic no. 6 Non metal - solid foundation of life on earth, exists as coal, graphite, diamond. Used for heating, drilling, cutting and jewels</p>	<p><b>OXYGEN O</b> Atomic no. 8 Non metal - gas reacts with every organic compound and is the fuel of life Used for rocket fuel and welding</p>	<p><b>MAGNESIUM Mg</b> Atomic no. 12 Metal - solid strong light metal which burns easily Used in fireworks, racing cars, planes and bicycles</p>
<p><b>ALUMINIUM Al</b> Atomic no. 13 metal - solid light and strong Used in planes, high voltage wires, light bulbs and drinks cans</p>	<p><b>SULPHUR S</b> Atomic no. 16 Non metal - solid Yellow. Used to make sulphuric acid and other compounds, skin ointments and fungicides</p>	<p><b>CHLORINE Cl</b> Atomic no. 17 Non metal - gas Poisonous greenish-yellow gas which dissolves easily in water. Used in disinfectants.</p>	<p><b>COPPER Cu</b> Atomic no. 29 metal - solid conducts electricity well; is soft and malleable and can be drawn into wires. Used for electric wires, saucepans and coins.</p>
<p><b>ZINC Zn</b> Atomic no. 30 metal - solid reacts with oxygen and acids. Used to coat metals such as iron to stop rusting</p>	<p><b>BROMINE Br</b> Atomic no. 35 Non-metal liquid A poisonous brown liquid which boils at a low temperature and turns to brown vapour. Used (silver bromide) in photography</p>	<p><b>MERCURY Hg</b> Atomic no. 80 Metal liquid Expands rapidly on heating. Used in thermometers and to silver mirrors</p>	<p><b>LEAD Pb</b> Atomic no. 82 Metal solid A heavy, soft, malleable metal. Can be beaten into flexible sheets. Used for roofing and water pipes.</p>

# Elements Game - properties

2 Has very low density Elements Game - easier properties	6 Exists as coal Elements Game - easier properties	8 Reacts with lots of compounds Elements Game - easier properties	12 Helps things burn Elements Game - easier properties
13 Is very light Elements Game - easier properties	16 Is yellow Elements Game - easier properties	17 Is poisonous Elements Game - easier properties	29 Conducts electricity well Elements Game - easier properties
30 Reacts with oxygen Elements Game - easier properties	35 Is poisonous Elements Game - easier properties	80 Expands on heating Elements Game - easier properties	82 High density Elements Game - easier properties

# Elements Game - uses

<p>Used in balloons and airships</p> <p>Elements Game - uses</p>	<p>Used as fuel. Used for drilling. Used for pencils. Used for jewellery</p> <p>Elements Game - uses</p>	<p>Used for welding</p> <p>Elements Game - uses</p>	<p>Used in fireworks racing cars, planes and bicycles</p> <p>Elements Game - uses</p>
<p>Used in planes, high voltage wires, light bulbs and drinks cans</p> <p>Elements Game - uses</p>	<p>Used to make sulphuric acid and other compounds, skin ointments and fungicides</p> <p>Elements Game - uses</p>	<p>Used in disinfectants.</p> <p>Elements Game - uses</p>	<p>Used for electric wires, saucepans and coins.</p> <p>Elements Game - uses</p>
<p>Used to coat metals such as iron to stop rusting</p> <p>Elements Game - uses</p>	<p>Used (silver bromide) in photography</p> <p>Elements Game - uses</p>	<p>Used in thermometers and to silver mirrors</p> <p>Elements Game - uses</p>	<p>Used for roofing and water pipes.</p> <p>Elements Game - uses</p>

# Elements Game - symbol/formula cards

<p>2</p> <p>He</p> <p>Elements Game - symbol/formula card</p>	<p>6</p> <p>C</p> <p>Elements Game - symbol/formula card</p>	<p>8</p> <p>O</p> <p>Elements Game - symbol/formula card</p>	<p>12</p> <p>Mg</p> <p>Elements Game - symbol/formula card</p>
<p>13</p> <p>Al</p> <p>Elements Game - symbol/formula card</p>	<p>16</p> <p>S</p> <p>Elements Game - symbol/formula card</p>	<p>17</p> <p>Cl</p> <p>Elements Game - symbol/formula card</p>	<p>29</p> <p>Cu</p> <p>Elements Game - symbol/formula card</p>
<p>30</p> <p>Zn</p> <p>Elements Game - symbol/formula card</p>	<p>35</p> <p>Br</p> <p>Elements Game - symbol/formula card</p>	<p>80</p> <p>Hg</p> <p>Elements Game - symbol/formula card</p>	<p>82</p> <p>Pb</p> <p>Elements Game - symbol/formula card</p>



# Elements Game - metal/nonmetal cards

non metal Elements Game - metal/nonmetal cards	non metal Elements Game - metal/nonmetal cards	non metal Elements Game - metal/nonmetal cards	metal Elements Game - metal/nonmetal cards
metal Elements Game - metal/nonmetal cards	non metal Elements Game - metal/nonmetal cards	non metal Elements Game - metal/nonmetal cards	metal Elements Game - metal/nonmetal cards
metal Elements Game - metal/nonmetal cards	non metal Elements Game - metal/nonmetal cards	metal Elements Game - metal/nonmetal cards	metal Elements Game - metal/nonmetal cards

# Elements Game - solid, liquid, gas cards

gas Elements Game - solid, liquid, gas	solid Elements Game - solid, liquid, gas	gas Elements Game - solid, liquid, gas	solid Elements Game - solid, liquid, gas
solid Elements Game - solid, liquid, gas	solid Elements Game - solid, liquid, gas	gas Elements Game - solid, liquid, gas	solid Elements Game - solid, liquid, gas
solid Elements Game - solid, liquid, gas	liquid Elements Game - solid, liquid, gas	liquid Elements Game - solid, liquid, gas	solid Elements Game - solid, liquid, gas

# Elements Game - Notes for teachers

There is room for further development here and we welcome any suggestions from you and your pupils. We need to increase the number of properties and uses. If we stick to information cards we are limited in the amount of information we can provide. Gray's book is excellent but pricey so you probably may only have one copy. He also produces posters etc and you can find all this on his website [www.periodictable.com](http://www.periodictable.com)