Set Variations

Supplies: A deck of Set cards, available at finer toy stores, Chapters, etc., for about $15.
Or make your own, perhaps using simpler shapes such as circle, triangle, rectangle.

See www.setgame.com for an electronic version with new puzzles every day, as well as ideas for teachers and other interested people.
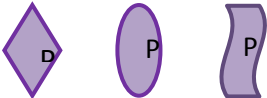
The rules: Every card has four attributes:

<u>Number</u>:   1   2   3

<u>Colour</u>:   red   green   purple

<u>Shading</u>: open   striped   solid

<u>Shape</u>: diamond   oval   squiggle

A Set is three cards such that, for each attribute, they are *all different* or *all the same*.

examples:

number	colour	shading	shape
all same	all same	all same	all different

number	colour	shading	shape
all same	all different	all same	all different

number	colour	shading	shape
all different	all same	all different	all same

number	colour	shading	shape
all different	all different	all same	all different

number	colour	shading	shape
all different	all different	all different	all different

Some games:

1) Lay out all the cards face up. Choose any two cards (or have different audience members choose them), then find the third that makes a Set. This is an excellent way to introduce the game to any audience. You can even start with this and have the audience figure out what the rules are – that's a lot of fun, and you'll be surprised how quickly people figure out what's going on. Start with easier Sets and work up to the more complicated ones.

2) Choose any 12 cards, lay them out, then try to find as many Sets as possible, re-using cards as necessary. You could use 15 cards for this, or more. If you have several teams playing, have each team start with same group of cards. Students will need to figure out a way to record their Sets quickly and accurately.

3) Take all 27 cards of one colour and try to make a crossword puzzle out of them, where each "word" is a Set. Then try it with all 27 cards of a given shape, or a given number, or a single shading. If you have lots of time, try it with the whole deck.

4) Create a 3x3 "magic square": each row, each column, and both diagonals must be Sets. This isn't hard if you start with a Set, or if you restrict yourself to cards that share two or three attributes.

   If you are having a hard time getting going, try putting 2 Sets in this position:
   Then think about what *must* go in the bottom corners, and carry on from there.

x	x	x
	x	
	x	

   Then make it more challenging….
   A variation is to start with three cards which do *not* form a Set.
   You will always be able to create a magic square if you start with
   these three cards in the marked positions

x		x
	x	

5) Original version: slowly deal out the cards face up, one at a time.   Whoever says "Set!" first and correctly identifies a Set, gets to keep it. Count the number of Sets each person has when all of the cards have been dealt. This is a lot of fun for competitive people but isn't much fun if you have people who think at very different speeds.

6) Can you find a collection of 10 cards that <u>doesn't</u> include a Set? What about 12?
   What is the biggest collection of cards you can find that does not include a Set?
   (According to the Set website, the answer is 20, but that takes serious concentration to find!)

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