Creative Science

Kick-Start Creative Thinking



Encouraging creative thinking is easier than you might realise. Here are some simple activities you can use to get the brain going.

Word Connect

Creativity begins with generating ideas, making new connections, and viewing things in a different light. A simple word association game can start the brain thinking in this way. Ask a pupil to come up with a word, e.g. 'science', the next person has to come up with a related word, e.g. 'forces', the next person might say 'push' and so on around the room. Pupils are allowed thinking time and they can be challenged by anyone who questions the connection between their word and the previous one. You can make this game more challenging by having a theme, all the words have to relate to this theme as well as to the previous word.

Mystery Object

Collect a few objects whose purpose may not be immediately clear. For example, kitchen equipment e.g. garlic crusher, tea strainer, corkscrew; electronics e.g. wind-up torch or radio, laser pen; tools e.g. bike pump, pliers; novelty items, compact mirror, eyelash curlers. Working in groups give your pupils one object each to study, their aim is to work out what it is and how it is used. At first pupils are only allowed to look at the object and discuss their initial thoughts. After you feel they have had enough time for this they can be allowed to handle the object and see if this reveals any further insights. You can encourage them to come up with as many potential uses as possible; this can be done through discussion or you could encourage them to draw ideas too. It is up to you whether you want to reveal the objects 'correct' use or just keep them guessing!

What is in the bag?

Fill a bag with random objects, these can just be everyday things e.g. apple, pen, cup, book, watch, etc... Get a pupil to come up and put their hand into the bag and select an object, but not to let anyone see it. They then have to describe the object to the rest of the class and everyone can help to guess what it might be. You could also do this activity in smaller groups or pairs.

101 Uses

This activity is all about encouraging pupils to think beyond the obvious responses. Very simply, the aim is to think of as many different ways of using an object as possible. You can pick anything at all to do this activity and just let imaginations run wild. Encourage pupils to push the boundaries by suggesting various forms of the original object e.g. if you started with a bog-standard paper clip as your object, someone may wish to suggest a use for a paper-clip if it was 10 feet tall and magnetic!

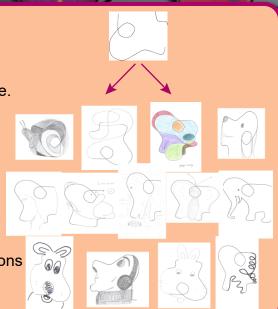
'101 uses' can be a great on-going activity, you could have a place in the classroom where pupils can keep adding ideas as they think of them until you get to 101 or whatever your target may be.

Squiggle Drawing

Get the imagination going with this simple drawing game. The idea is that you start from a random squiggle and get pupils to come up with different ways of finishing the picture.

There are lots of different ways to do this; you could draw a squiggle on the board and pupils take turns to finish the picture while the rest of the class guesses what they are drawing; you can give everyone a piece of paper with the squiggle on; you could get pupils to work in pairs with a different squiggle per pair or any variation you fancy.

However you try this simple activity, it is sure get imaginations going and also demonstrate the variety of responses that occur when you encourage people to think creatively.



Superhero Invention

This is a great way to encourage pupils to come up with creative solutions to problems. The challenge is for pupils to design a superhero that has the powers to solve a certain problem. The 'problem' could be anything from climate change to finding out if there is life on Mars, needing help with maths homework or tackling an erupting volcano!

Crazy Questions

Children have an amazing ability to come up with weird and wonderful questions. Encouraging this inquisitive nature along with the exploration of answers is a great way to get pupils engaged in creative thinking. "What if..." questions are perfect for this, here are some examples to get ideas flowing:

What if dogs could talk? What if trees could walk? What would it be like to travel to the centre of the Earth? Why are spots better than stripes? How would it feel if you turned into a butterfly?

You could get pupils to work in pairs to come up with answers to each others' questions or work in groups to come up with collaborative answers for the same question. It would be interesting to see the many different answers which could arise from the same question. You could even have a 'crazy question of the week'; pupils could take it in turns to put their question to the class to come up with answers over the course of a week.

Experiment Away! Science relies on creat

SCIENTIFIC METHOD

OBSERVATION
& RESEARCH
HYPOTHESIS
PREDICTION
EXPERIMENTATION
CONCLUSION

Science relies on creative thinking to come up new ideas for testing. Whether they are proved right or wrong, ultimately, they lead to a better understanding of our world.

Use the scientific method with your pupils to creatively explore some of the questions they have about the world around them. This could range from the obvious 'What do plants need to grow?' to the more obscure 'How much air does it take to pop a banana?'.

Working in groups, pupils need to decide on a **research question**, come up with some **predictions** of what might happen and then design and carry out an **experiment** to test these. A great way to display the **conclusions** of their investigations is for each group to create a poster showing their scientific journey.