

Challenge 1



Kaboom!

Materials

- Cups
- Kaboom game

Challenge

- Pupils **work in groups**, taking turns to select a lolly stick.
- If they answer the numeracy question correctly they keep the stick.
- If they get a stick which says KABOOM! then they lose all their sticks.
- At the end, the winner is the pupil with the most sticks.
- Each set has a different operation so can be rotated.

Benchmarks

NUM 2-05a

Identifies multiples and factors of whole numbers.

LIT 2-02a

Contributes a number of ideas, shows respect for other views and builds and contributions of others.

Challenge 2



Shape Towers

Materials

- Paper
- Sticky Tape
- Objects to test strength

Challenge

- Pupils **work in groups** to build a cylinder, cuboid and triangular prism shape from only one piece of paper.
- Then the pupils can test the strength of each shape to find the strongest, using a variety of items.

Benchmarks

TCH 2-04d

Investigates a challenge/problem.
Identifies and demonstrates ways to solve the challenge//problem.
Identifies and selects appropriate resources to solve the challenge/problem.
Plans and makes the solution.
Assesses solution against own criteria.
Identifies at least one possible improvement.

SCN

Scientific analytical thinking skills

- Demonstrates further development of creative thinking including through engineering processes of design, construction, testing and modification.

Challenge 3



Paper Cups

Materials

- Paper cups (6 per group)
- Elastic bands
- Wool

Challenge

- Pupils **work in groups** to build a paper cup pyramid using 6 cups.
- Pupils are not allowed to touch the cups but can touch the elastic bands and wool.

Benchmarks

TCH 2-04d

Investigates a challenge/problem.
Identifies and demonstrates ways to solve the challenge//problem.
Identifies and selects appropriate resources to solve the challenge/problem.
Plans and makes the solution.
Assesses solution against own criteria.
Identifies at least one possible improvement.

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Challenge 4



Paper Clip Challenge

Materials

- Paper clips
- Elastic bands
- Whiteboards and pens

Challenge

- Pupils **work in pairs** to think of as many uses for a paperclip as possible.
- Pupils share ideas with the class and then try again but with an elastic band.

Benchmarks

TCH 2-04d

Investigates a challenge/problem.
Identifies and demonstrates ways to solve the challenge//problem.
Identifies and selects appropriate resources to solve the challenge/problem.
Plans and makes the solution.
Assesses solution against own criteria.
Identifies at least one possible improvement.

LIT 1-02a

Contributes regularly in group discussion or when working collaboratively, offering relevant ideas, knowledge or opinions with supporting evidence. Responds appropriately to the views of other developing or adapting own thinking.

Challenge 5



Spaghetti Tower

Materials

- Spaghetti (10 per pair)
- Gummy sweets (10 per pair)
- Whiteboards and pens

Challenge

- Pupils **work in pairs** to plan how to build a tall tower using spaghetti and gummy sweets.
- Pupils get 10 pieces of spaghetti and 10 gummy sweets.
- The tallest, free standing tower wins.

Benchmarks

TCH 2-04d

Investigates a challenge/problem.
Identifies and demonstrates ways to solve the challenge/problem.
Identifies and selects appropriate resources to solve the challenge/problem.
Plans and makes the solution.
Assesses solution against own criteria.
Identifies at least one possible improvement.

SCN

Scientific analytical thinking skills

- Demonstrates further development of creative thinking including through engineering processes of design, construction, testing and modification.

LIT 2-09a

Communicate clearly and audibly and with expression in different contexts.

Challenge 6



Newspaper Shoes

Materials

- Newspaper
- Sticky tape
- Coloured pens and pencils

Challenge

- Pupils **work in pairs** to create a pair of shoes using newspaper and sticky tape.
- Pupils then present their shoes to the class in a newspaper shoe catwalk.
- Then explain to the class their design decisions.

Benchmarks

TCH 2-04d

Investigates a challenge/problem.
Identifies and demonstrates ways to solve the challenge//problem.
Identifies and selects appropriate resources to solve the challenge/problem.
Plans and makes the solution.
Assesses solution against own criteria.
Identifies at least one possible improvement.

SCN

Scientific analytical thinking skills

- Demonstrates further development of creative thinking including through engineering processes of design, construction, testing and modification.

LIT 2-09a

Communicate clearly and audibly and with expression in different contexts.