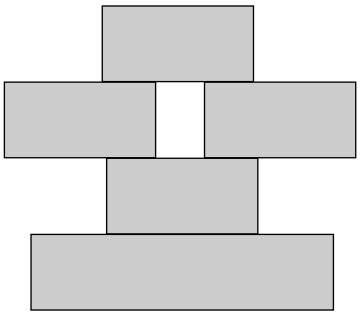
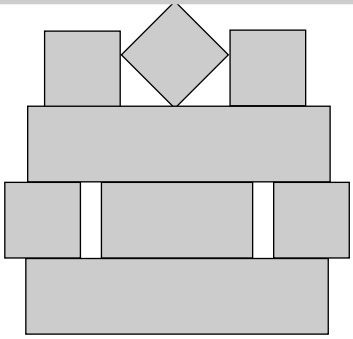
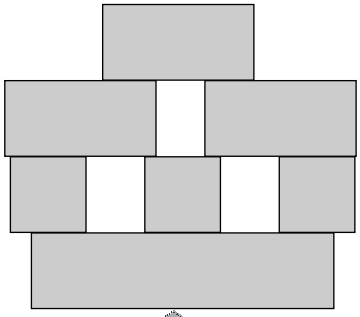
# DESIGN BRIEF - COMBINED CARD & PENCIL HOLDER 

| ES | | | | | |
|---|---|---|---|---|---|
| | **TECHNOLOGY** | **Knowledge & understanding** | **Needs** | **Resources** | **Processes** |
| | **TECHNOLOGY** | **Skills in designing & making** | **Preparing** | **Carrying out** | **Reviewing** |
| | SCIENCE | K & U - Energy and forces | Properties of energy | Conversion of energy | Forces |





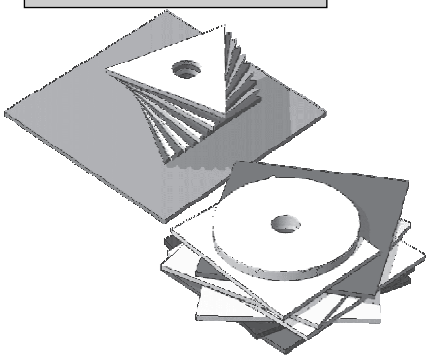


Using the experience of building or looking at the design solutions on the left, the children produce their own design for a combined card/pencil holder.

STAGE ONE
what is it going to be like?
One card and one pencil or more? What patterns can you create with small blocks of wood stacked just four high? Or should it be higher? Three examples are shown full-size at the top of the page.

STAGE TWO
Decide on the arrangement and build your desk 'furniture'.

STAGE THREE
When the glue is dry, put the pencils and cards in to see if everything stands up. How big a card will it hold? Does it matter how far apart the 'walls' are?



You don't need to drill wood to make a pencil holder. The ones above are stacks of small cards with a hole punched in each. Put a straw through the holes when gluing to keep them in line. You could even leave the straw in place if it's short enough.

# DESIGN BRIEF - MAGNETIC 'PICKING-UP' GAME

| ES | | | | | |
|---|---|---|---|---|---|
| | **TECHNOLOGY** | **Knowledge & understanding** | **Needs** | **Resources** | **Processes** |
| | **TECHNOLOGY** | **Skills in designing & making** | **Preparing** | **Carrying out** | **Reviewing** |
| | **SCIENCE** | **K & U - Energy and forces** | Properties of energy | Conversion of energy | **Forces** |
| | | | | | *magnetism, attraction/repulsion* |

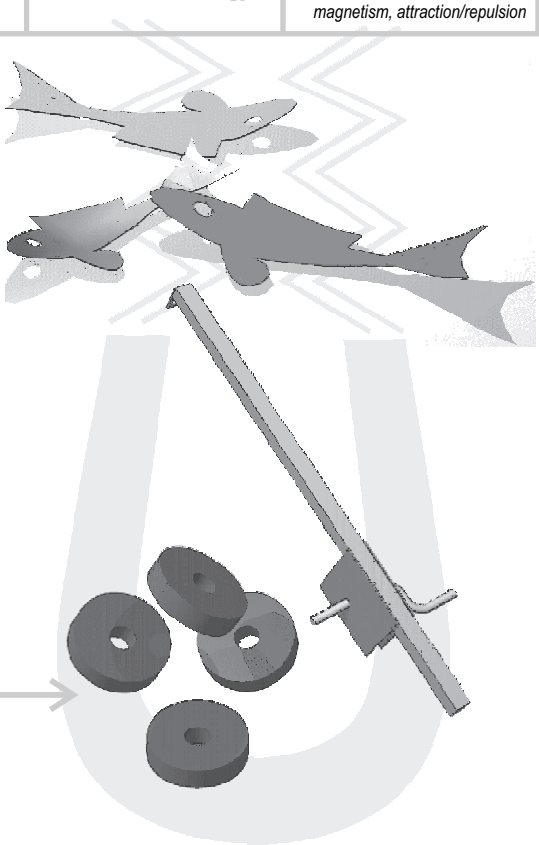
The tweezers pick things up that are very near, and the grab picks up things a little further away. They both need to close over an object to hold it. A magnet will pick up some things without any parts moving at all, though it won't be able to pick up as many different things as the tweezers. Why not?

Design a simple game that relies on the attraction of a magnet to pick up some things but not others. Shown alongside is a fishing game. That would be alright, but can you think of a different game?

STAGE ONE
Decide what your game is and how you play.
Find out what a magnet will pick up and what it can't.
What components will you need? The fishing game uses a fishing rod (it looks a bit like a crane, doesn't it?)

STAGE TWO
Make your decisions and make the game. (Make up the rules of the game too).

STAGE THREE
Play the game. Does it work?
Ask others to play the game - can they?
Is it fun to play?



These are small ring magnets. They are easy to tie a thread to. Are they strong enough? Would two be a stronger force?