

# DESIGN AND MAKE ACTIVITY



## DESIGN AND MAKE AN ALARM

**Photocopiable pages:** Word list (CD-ROM only), Design criteria for an alarm, Planning how to make the alarm

PAGES 77, 78



This activity asks the children to design and make a model alarm system. Children can choose their own type of alarm, or you might want to set a specific brief such as 'Design and make a model of an alarm system that will alert the owner of Poppy's Pet Shop when a customer enters the store' or 'Considering environmental concerns, design and make a model of an alarm or sensor system that minimises the energy used by an electrical appliance (for example, a door sensor that turns a light on when you enter a room and off when you leave).' Ensure that the children consider the purpose, user, situation and context (for example, how not to disturb the animals in Poppy's shop) when choosing and designing their alarms.

### Activities

- ▶ At this point, encourage the children to decide what they want their alarm to do: it could be a burglar alarm, a car alarm, a security light or a buzzer in a shop. They should also consider what the alarm should look like – should it be visible (for example, to deter a burglar) or hidden (to keep it out of the way in a shop)? Ask the children to note their ideas on photocopiable page 77, which can form part of a process diary.
- ▶ Ask the children to plan what they will need to make their alarm and to begin to plan the different stages of making. Prompt them to refer to the word cards from the CD-ROM for correct vocabulary, and ask them to note their planning thoughts on photocopiable page 78, adding this to their process diary. The sheet will help them to understand how to organise their work and to consider potential problems. Advise the children that they need to consider the tools, equipment, type and quantities of materials and joining methods they will use.
- ▶ Encourage the children to be creative in the designing of their model alarm. Support children who find creative thinking challenging with prompt questions and visual stimulus. Provide them with copies of the switch photographs and existing products that can help to inspire their designing. It may be worth putting children in design partnerships or teams.
- ▶ Remind the children to refer to their design and planning sheet during the making stage.

## EVALUATION

### EVALUATING THE ALARMS

**Photocopiable page:** Evaluating my alarm

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In this final stage, children review their work and evaluate their finished alarm model, assessing how well it meets their criteria they set at the beginning of the project. It is also an opportunity for the children to reflect on what they have learned and how well they went about their designing and making tasks.

### Discussion

- ▶ Display and discuss the different types of alarm that have been made. Ask the children if each alarm fulfils the purpose intended and meets the user's needs.
- ▶ Evaluate the creative process. If the children worked in design teams, did they work well together? How successful was their design process? Did they encounter any difficulties?

### Activities

- ▶ Use a digital camera to take photographs of the final products. These photographs can support the children in their evaluations and be used for display or evidence.
- ▶ Allow the children to test and evaluate their own alarm system using photocopiable page 79 'Evaluating my product'. Look at the rankings the children have given their work and ask them if there is anything about their product that they would change in order to improve it. Ask them to explain how successfully the alarm meets the design criteria. Encourage them to think about anything that could be added to make it more sophisticated.

