

# Solar Toy

Design + Make

## The Brief

**Design a toy that fulfils the following criteria:**

- It is a moving toy.
- It is powered by a solar panel with an electric circuit.
- It is designed for children aged between 5 and 7 (this can be flexible).
- It can be used outside.

## Design Questions to think about

- What different mechanisms can a solar panel power?
- How will the electrical circuit work? How do you turn it on and off?
- How will it move? Do you need a motor? A bulb? A buzzer? A magnet and coil?
- How will the moving pieces be attached to each other?
- In what way will it move? Spinning? Lifting? Vibrating? Wobbling?
- What materials will it be made of?
- What will make your toy fun to play with?

# Design Worksheet

**1. Choose a solar toy to explore.**

**2. Draw and label a picture of your toy.**

On your diagram can you show which parts turn, which parts move, how the parts are attached. Can you also label the materials the toy is made of and its 'finish' e.g. painted, polished, stickers. Who do you think this toy is designed for?



**3. Write your design ideas for your solar powered toy.**

I would like my solar powered toy to:

(how do you want it to move – spin, light up, wobble?)

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

#### 4. Rough designs of your 'junk' solar powered toy.

On your diagram can you show which parts turn, which parts move, how the parts are attached. Can you also label the materials the toy is made of and its 'finish' e.g. painted, polished, stickers.



#### 5. Evaluate your solar powered toy.

I am particularly pleased with \_\_\_\_\_

because \_\_\_\_\_


If I could, I would improve \_\_\_\_\_

because \_\_\_\_\_

Name: \_\_\_\_\_ School: \_\_\_\_\_

# My Final Solar Powered Toy Design

Draw and label your final design.



Describe your toy in words.

