

1. Design Research

You will need to carry out some research before you can design your own toy.

Look at these pictures below to see what is already available.

Choose one of the wind powered toys to explore, using the questions below to help focus your research.

Decide which toy you would buy (if you were able to) or make and why?



Would you be more likely to buy this toy because it is powered by wind and not a battery? If so, why?

How are the moving pieces attached to each other?

How does the toy move? Spin? Drive?

Where is the wind turbine/ windmill placed?

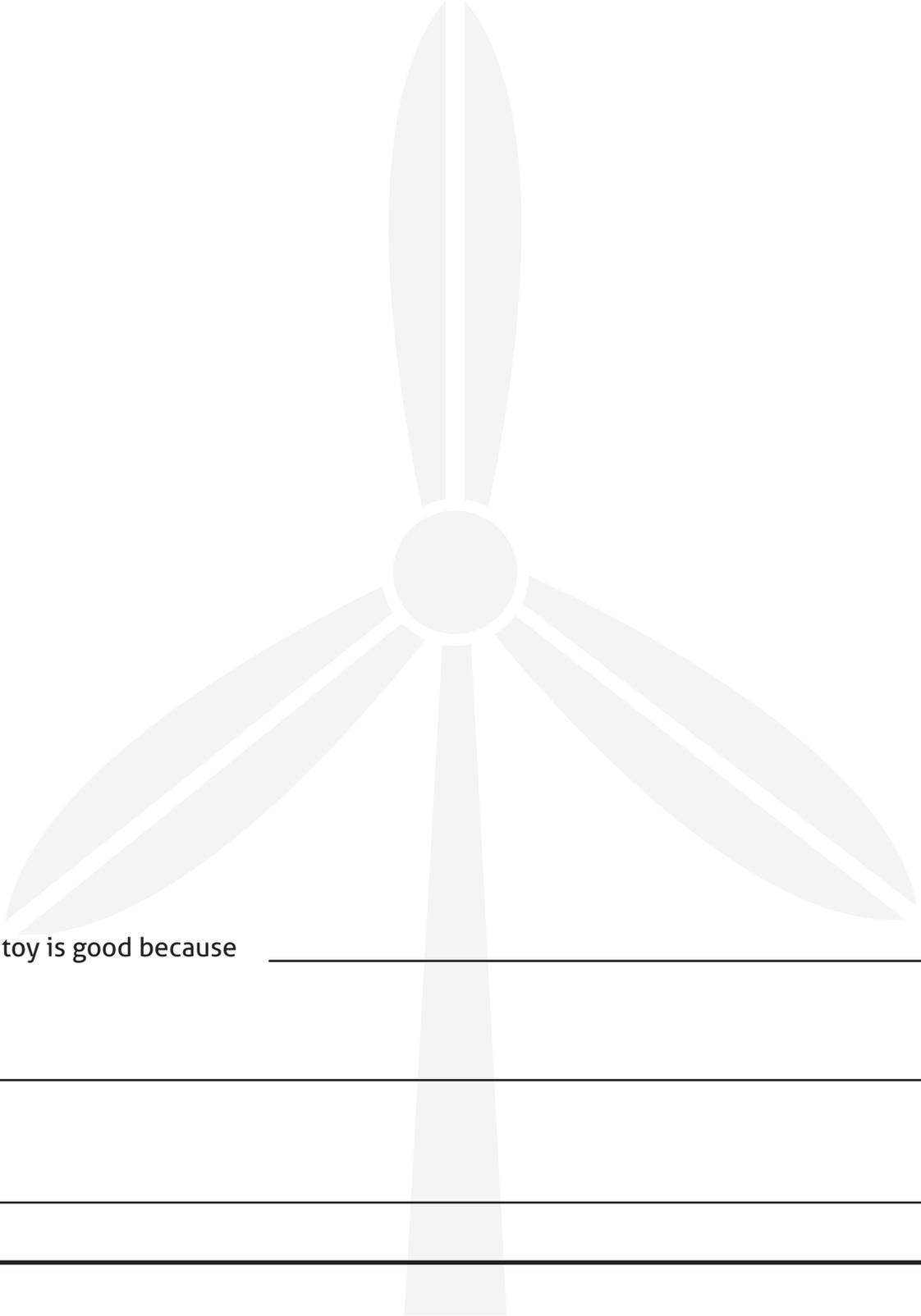
How would you improve this toy?

What materials is it made from?

How does the power get to the moving parts?

2. Evaluate a Wind powered Toy

Draw and label a picture of your chosen toy (from the pictures above). On your diagram can you show which parts turn, which parts move, how the parts are attached, where is the wind power coming from? Can you also label the materials the toy is made from and its 'finish' e.g. painted, polished, stickers.



This toy is good because _____

3. Design & Make a 'Junk Model' Wind powered Toy

Now it's time to make your own 'junk model' wind powered toy (have you collected cardboard boxes, cartons, plastic milk cartons, plastic drink bottles, plastic bottle tops etc.?)

We recommend that you **design** your 'junk' wind powered toy first. 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.

Once you have finished please send a picture to your teacher and/or share your toy on our Solar Power Education Facebook page.

4. Evaluate your 'Junk Model' Toy

Explain what you are pleased with and what you can improve. Refer back to the design research questions in 1 to help you.

I am particularly pleased with _____

because _____

If I could, I would improve _____

because _____