Electricaid UK

York

PO Box A10

Dear Research Team,

If the world were a village of 100 people, "76 have electricity 24 do not. Of the 76 who have electricity, most use it for light at night ... In the village there are: 42 radios, 24 televisions, 30 telephones ... 10 computers" (If the World Were a Village by DJ Smith & S Armstrong, 2002)

As many as 928 million people in the world live in slums. Most of these are in poorer countries. Many of these people still live without an electricity supply. Millions of people still live without a constant supply of clean water.

Electricaid UK aims to help people in this position in the sub-Sahara countries in Africa.

One of our aid projects is to provide them with the technology to bring electricity to more towns and villages, and to be able to lift and carry supplies of water and detect the amount of water they have.

We want you to suggest suitable ways to produce cheap electricity in a hot, dry, windy climate.

We would also like you to design an electronic sensor so that the people we help will know that their wells have sufficient fresh water.

We look forward to hearing from you with your results.

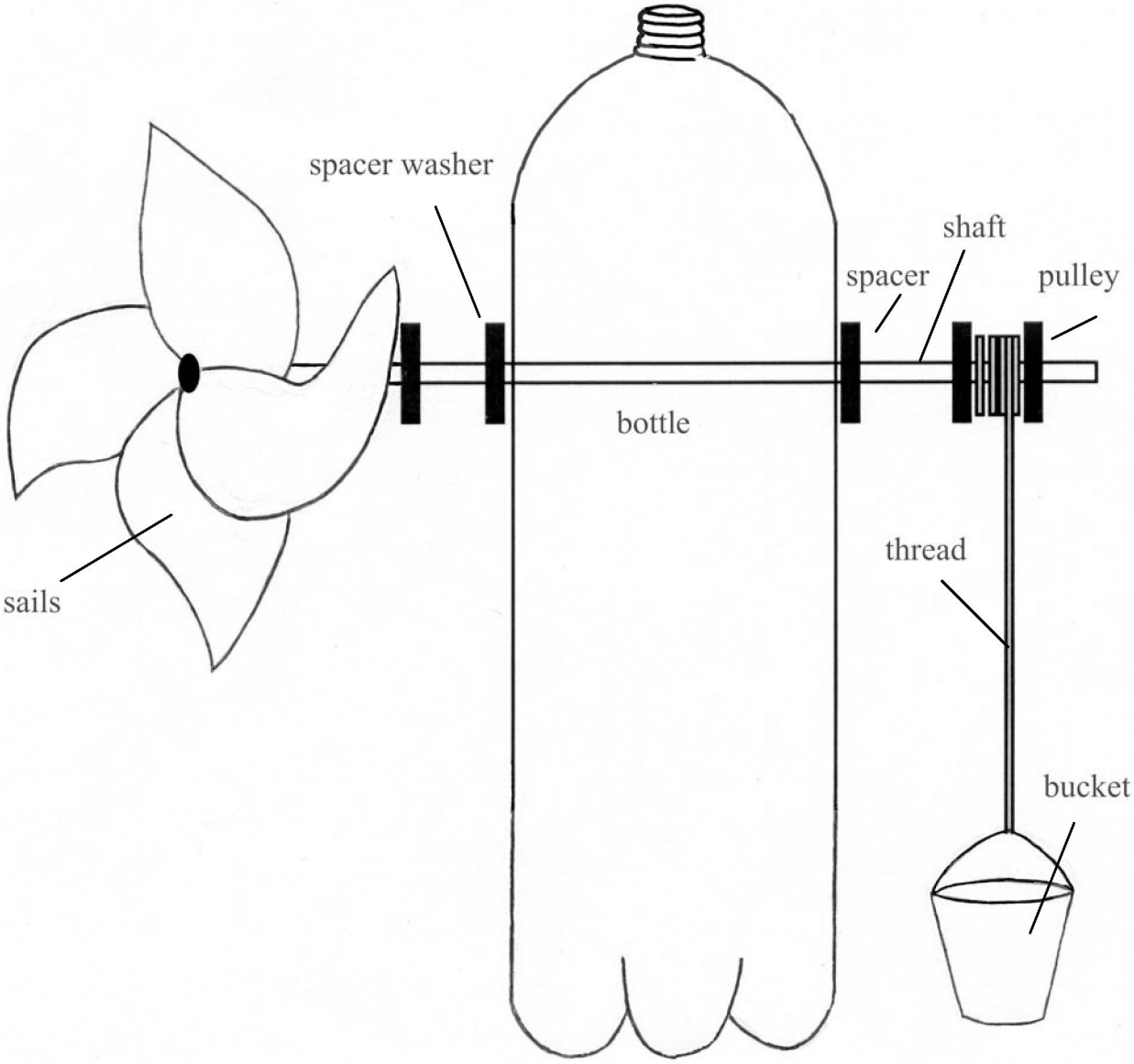
Yours sincerely,

John Simmonds

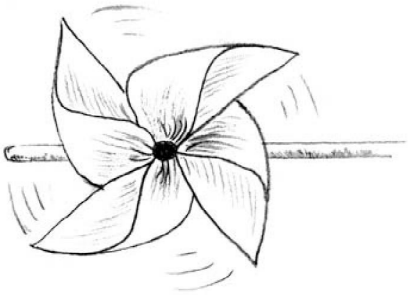
John Simmonds

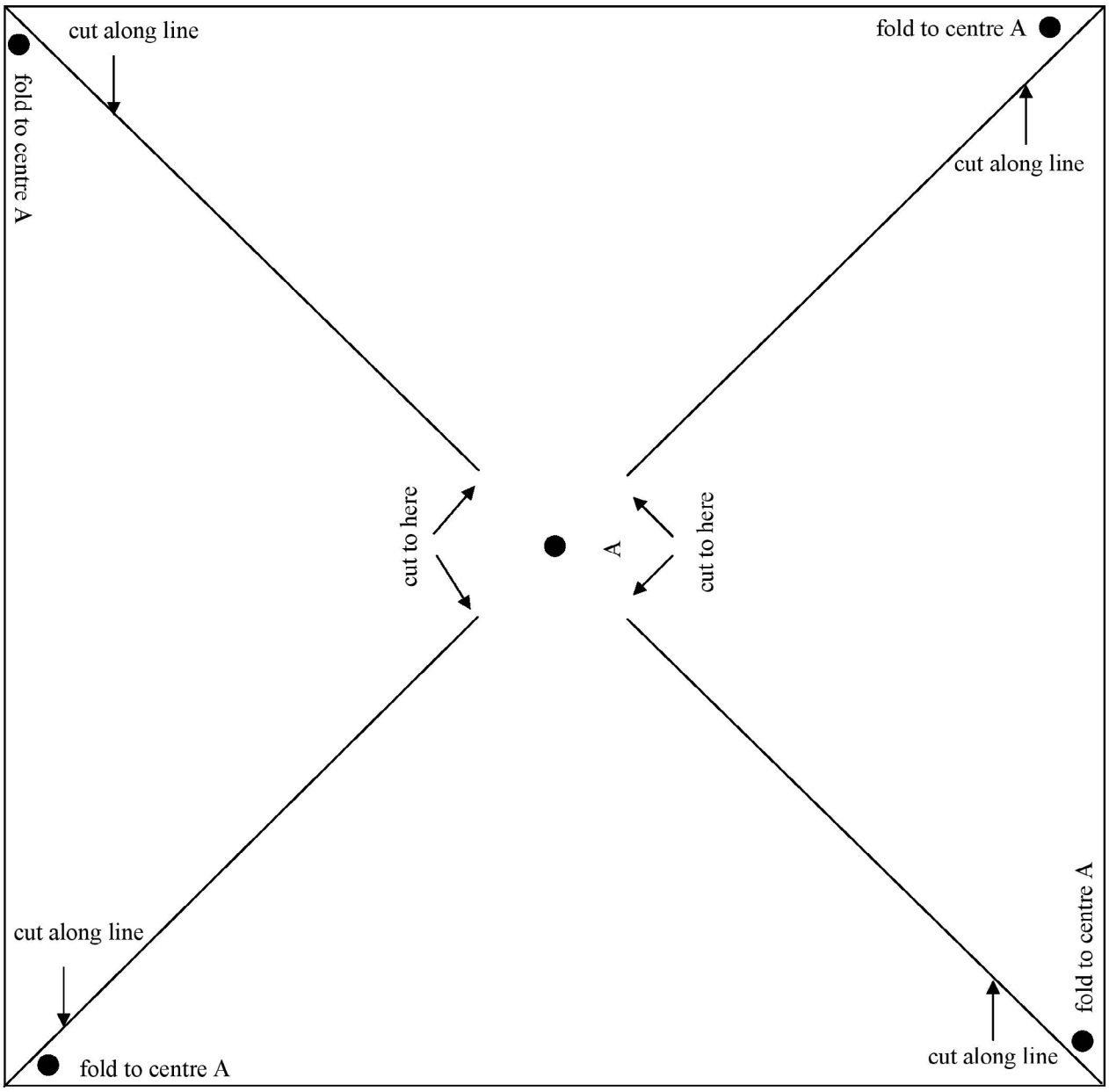
(Director of Electricaid UK)

Activity 6: The Model Windmill

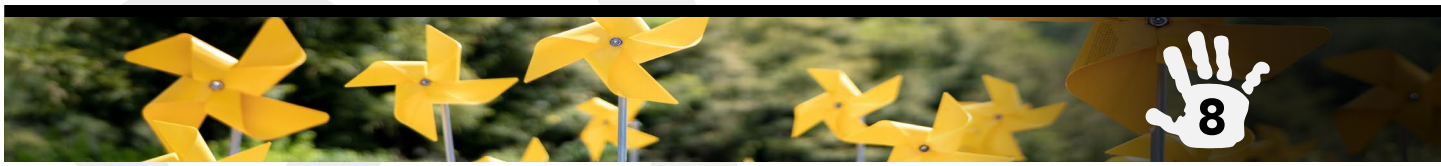


Activity 7: The sail





Activity 8: Windmill investigation



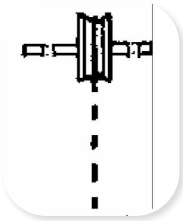
Investigation question

What will make the turbine turn the pulley quicker and generate more energy?

What we will change (circle 1):

Size of the blades

Amount of friction to turn the pulleys



Strength of the wind

Material of the blades

We will measure or observe (circle 1):

The time it takes for the bucket to rise

The number of marbles the bucket will carry

Fair Test:

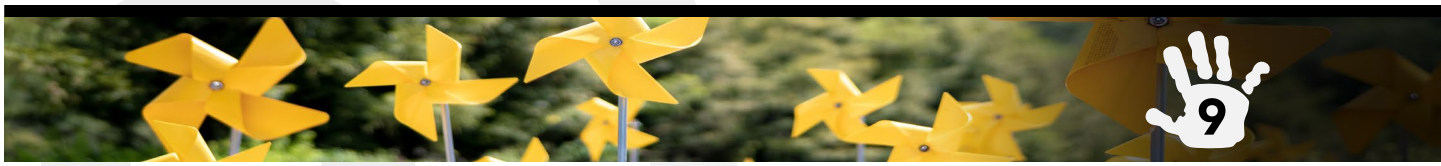
List the things that you will keep the same

Prediction:

I think the turbines will turn quicker when

I think this because

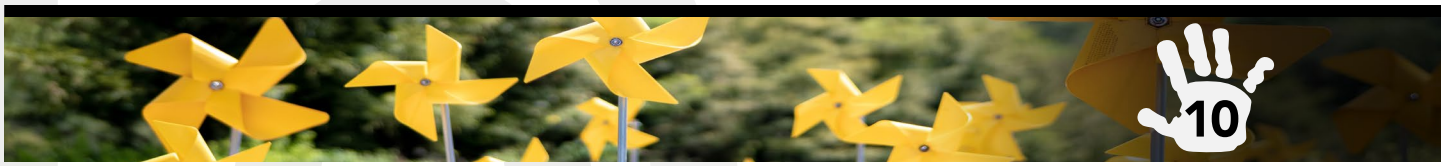
Activity 9: Planning



What will make the turbine generate more energy?

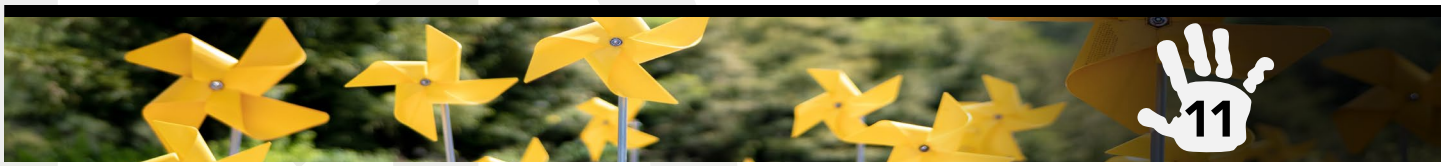
We could change	We could measure/observe
We will change	**We will measure/observe**
We will keep these the same...	
We I change	**What will happen to?**
Why?	

Activity 10: Obtaining evidence



Change	Measure/observe

Activity 11: Considering evidence and evaluating



Measure

Change

When we changed

What happened to?

Was your prediction correct?

How could we improve what we did?