

# Fairground Ride Worksheet – Module 2

Names: \_\_\_\_\_

RENEWABLE ENERGY	
What is renewable energy?	
Explain what is meant by ‘variable’ renewable energy resource.	
Suggest a way to store energy for when you need it.	
How can you reduce the amount of electricity produced by your solar panel?	

## **ELECTRICITY**

Explain what is meant by an electrical conductor and an electrical insulator.

## **FORCES**

Which force acts downwards on the fairground ride passengers?

Which force acts to slow the ride down?

## **LIGHT**

If you were to mix red and blue light, what colour would you see?

## **EXTENSION QUESTION**

Explain why the passengers fly out to the sides as the ride rotates.

## Suggested Answers

ENERGY	
What is renewable energy?	<i>Renewable energy is energy which comes from sources which are not used up, such as the wind or the sun.</i>
Explain what is meant by a 'variable' renewable energy resource.	<i>This is a resource where the amount of energy available can change due to the nature of the energy source, for example wind turbines only produce electricity when the wind blows, and solar panels do not produce electricity at night.</i>
Suggest a way to store energy for when you need it.	<i>Energy can be stored as chemical energy in batteries. There are lots of other ways to store energy, e.g. making hydrogen for use in hydrogen powered vehicles, pumping water uphill, spinning a flywheel.</i>
How can you reduce the amount of electricity produced by your solar panel?	<i>You can cover it, e.g. with your hand, or turn it away from the sun.</i>
ELECTRICITY	
Explain what is meant by an electrical conductor and an electrical insulator.	<i>An electrical conductor allows electricity to pass through it. An electrical insulator does not.</i>
FORCES	
Which force acts downwards on the fairground passengers?	<i>Gravity acts downwards on the passengers.</i>
What force acts to slow the ride down?	<i>Friction, mainly produced by air resistance acting on the passengers.</i>
LIGHT	
If you were to mix red and blue light, what colour would you see?	<i>Mixing red and blue light gives magenta (purple).</i>
Extension Question	
Explain why the passengers fly out to the sides as the ride rotates.	<i>As the ride rotates the passengers need to be pulled inwards to make them go round in a circle – otherwise they would continue travelling in a straight line. The faster the ride goes the more they fly out.</i>