

KS4 Science - Physics (Energy)
Sustainability / Energy

Biology crossover)

1 5 2 1 1 2

ON-SITE & POST-VISIT ACTIVITIES

Tapnell Farm Park: A Bid for

Sustainability is at the heart of everything at Tapnell Farm Park. The staff at Tapnell Farm Park would be happy to be totally energy self-sufficient.

<p>Part of Tapnell Farm Park's Sustainable Project</p>	<p>Does this equipment use fossil fuels?</p>
<p>Bore Hole Collects fresh water from underground</p> 	

Sustainability

- Student Introduction**
- ▶ Use your map to visit the different sites that are helping towards sustainability at Tapnell Farm Park.
 - ▶ Study the site and its equipment or crops and complete the tick sheet.
 - ▶ Back at school you will use the information in your tick sheet to help you prepare a bid to increase the sustainability at Tapnell Farm Park.

<p>Will this equipment supply hot water?</p>	<p>Will this equipment supply heating?</p>	<p>Will this equipment provide a supply of water?</p>	<p>Will this equipment be carbon neutral?</p>	<p>Will this procedure allow Tapnell Farm Park to be 'net exporters of electricity'?</p>
				

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Part of Tapnell Farm Park's Sustainable Project

Does this equipment use fossil fuels?

Will this equipment supply electricity?

Will this equipment supply hot water?

Will this equipment supply heating?

Will this equipment provide a supply of water?

Will this equipment be carbon neutral?

Will this procedure allow Tapnell Farm Park to be 'net exporters of electricity'?

Biomass Boiler

Burns wood pellets to create hot water and central heating for the residential dwellings and the Cow Co. restaurant



Solar Panels

Provides electricity for the restaurant and other areas of the farm.



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<p>Crops Grown for Anaerobic Digester Crops grown at Tappnell Farm Park are used in an anaerobic digester to produce biomethane. This gas is then pumped into the national gas grid and used to generate electricity. This is sold to the National Grid, making Tappnell Farm Park net exporters of electricity.</p> 						

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Tapnell Farm Park - A Sustainable Future

BACK AT
SCHOOL

Remember!

- ✓ Sustainability is at the heart of everything at Tapnell Farm Park.
- ✓ The owners are looking to become totally energy self-sufficient.

Your Task:

Working in a small group you will act as a company to produce a bid to Tapnell Farm Park to help them become totally energy self-sufficient.

Your Bid:

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- ▶ Suggest a budget for your company to set up these additional methods and practices.
- ▶ Present your bid to the rest of the class, either as a verbal presentation with the use of posters or as a PowerPoint Presentation.
- ▶ The most successful bid will then be forwarded to Tapnell Farm Park for their consideration.

Time Scale:

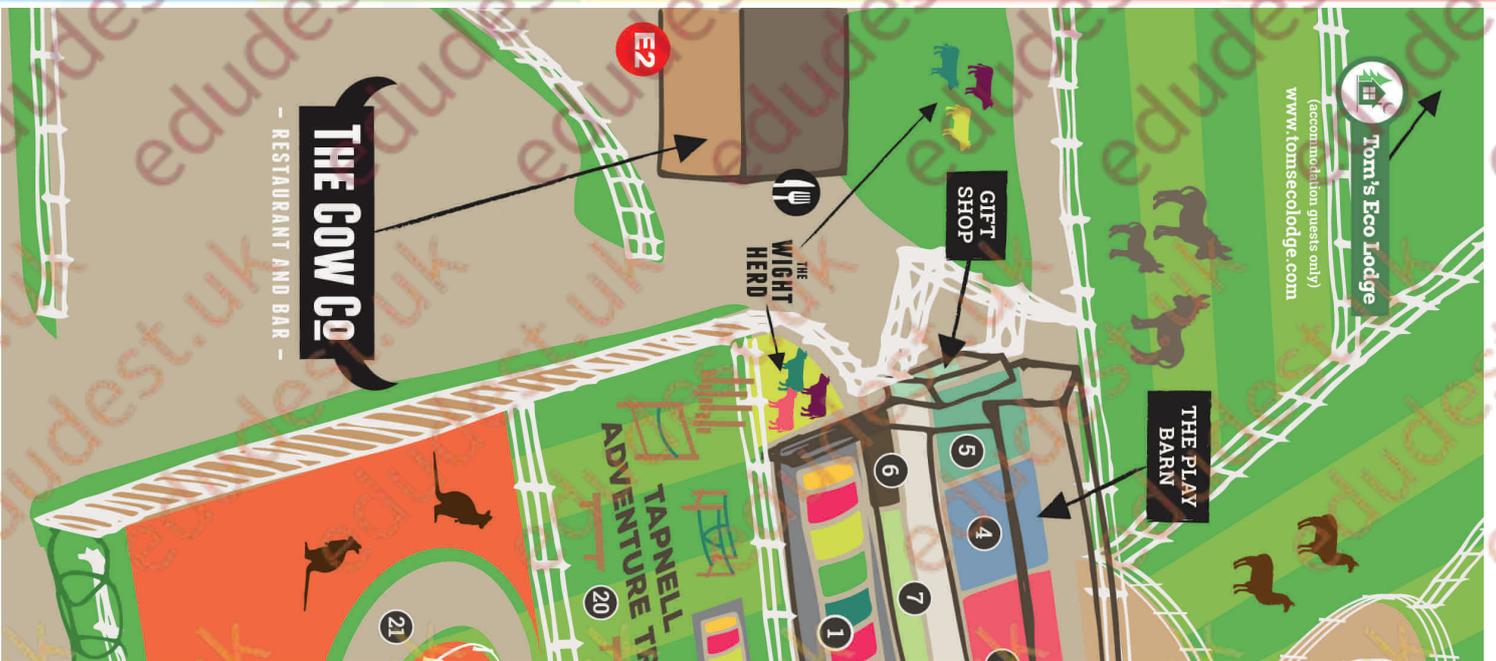
You have two lessons and two homework sessions to produce your bid. You need to ensure that all members of your 'company' are ready for the presentation.

Success Criteria:

Marks will be awarded for:

- ✓ Awareness of the current sustainability of Tapnell Farm Park
- ✓ A range of different ideas for energy self-sufficiency
- ✓ How these ideas have been related to Tapnell Farm Park
- ✓ A list of the various resources used to develop the bid
- ✓ A detailed breakdown of finances
- ✓ Team work
- ✓ A clear and factual presentation.





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What's at Tapnell Farm Park...

- 1 Jumping Pillow
- 2 Mini Pillow - NEW Summer 2017
- 3 Soft Play
- 4 Imagination Play
- 5 Toddler Zone
- 6 Tiny Tapnell Role Play Town
- 7 Little Nippers Tractors
- 8 Bugs and Beesties - NEW Summer 2017
- 9 Animal Theatre
- 10 Meet the Animals
- 11 Party Room
- 12 Pedal Go Karts
- 13 Straw Bale Pyramid
- 14 Zip Wires
- 15 Climbing Wall
- 16 Haven Falconry (seasonal)
- 17 The Paddocks
- 18 The Lookout
- 19 Mini Go Karts
- 20 Tapnell Adventure Trail
- 21 Wallaby Walkabout
- 22 Meerkat Enclosure
- 23 Goat Zone

ECO FEATURES

- E1 Bore Hole
- E2 Biomass Boiler
- E3 Solar Field
- E4 Crops grown for Anaerobic Digestion

