

SECONDARY TOPIC WEB

Ideas

Harnessing wind power from the wind

The variable, renewable energy:

- Turns the millstone to grind flour.
- Lifts sacks of wheat to the grain bin 60 ft above ground level.
- Keeps the sails facing the wind direction.

Simple and effective designs

- to keep a constant flow of grain per revolution of the stones regardless of wind speed.
- to close and reopen the gap between the stones as the flow of grain increases and then decreases.
- to be able to warn the miller when the grain is about to run out.
- to automatically spill the wind during a strong gust of wind.
- to maximise efficiency in variable winds by having two different pairs of sail.
- to be able to close and open the patent sails by pulling on a simple chain.

Food miles

- In 1821 wheat sheaves grown in neighbouring fields were brought by horse-drawn trailers to the Windmill.
- In 2012 wheat grown in neighbouring fields is brought by tractor-drawn trailers to the Windmill.

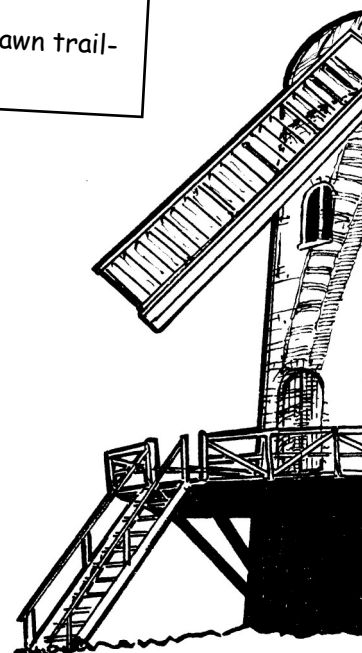
Life in Wilton in 1821

- Queen Victoria was only two years old when the Windmill was built in 1821.
- The Wilton workhouse at Church Cottages next to the pond was still being used in 1821. It was owned by St Mary's Church in Great Bedwyn.
- Mr Carter who lived at The Malt House is likely to have brewed the beer in Wilton.
- The Doddsdown brickworks was fully operational.
- James Watt's beam engine at Crofton pumped water from Wilton pond into the Kennet and Avon Canal.
- There was no electricity or cars, trains or aeroplanes, computers or telephones.
- There were no oranges or bananas, coffee or sugar, cornflakes or rice crispies
- Everything was moved or carried by horses.
- BUT at that time things were changing and Britain's Industrial Revolution was fully under way.

Why was the Windmill built

- The Kennet and Avon Canal was constructed to link Bristol with the London so that imported goods from the West Indies could be moved more quickly by horse drawn barges to the capital rather than by horse and cart over rough and difficult tracks.
 - Once the canal was in use the spring fed water from Wilton pond was used for the canal and therefore unavailable to 5 local watermills on the river Dun.
- The Windmill was therefore built in 1821 so that the local farmers, Mr Batt and Mr Edwards, could mill their cereals to provide Mr Barnes in Wilton, and the baker in Bedwyn with flour to make bread as well as food for local cattle, pigs, chickens and horses.

Continued
Overleaf

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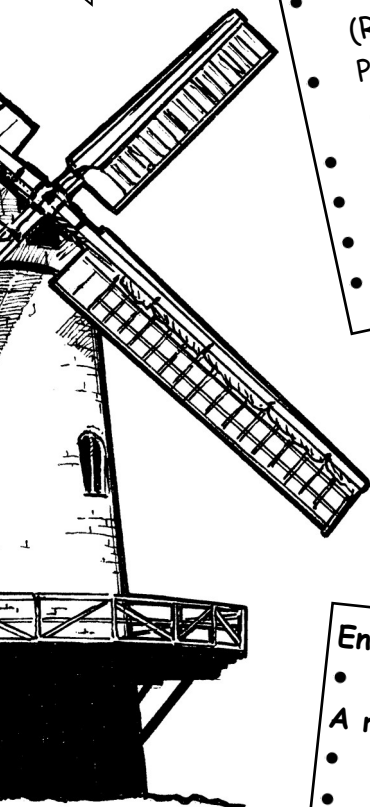
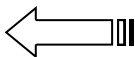
Hands-on learning opportunities at or near Wilton Windmill

- Feel and taste the wheat.
- Where does it come from?
- How is it grown?
- What is it used for?
- What does it look like when growing?

Windmill flour

- Grind your own flour.
- Run your hands through the whole meal Flour.
- Take some home and make your own bread. (Recipes available at the Windmill)
- Phrases in the English language from Wind Mills.
- Grist to the Mill.
- Grind to a Halt.
- Set the Thames on Fire.
- Rule of thumb.

Continued
Overleaf



Geography

- The Windmill windows set at North, South, East and West.
- Look for the wind direction and position of the sun.
- Chalk hills looking down towards Wilton and then onto the green sand of the Pewsey Vale.
- Spring fed water filling Wilton pond which can either finish up in the Bristol channel going under the Clifton Suspension Bridge or in the Thames Estuary going past the Houses of Parliament.

History - From the Windmill you can see:

- A Roman road linking Winchester and Cirencester.
~ Roman History
- Jane Seymour's home.
~ Tudor history
- Windmill and Crofton.
~ Victorian History
- Expand the journey of the water going to either Bristol or London.
- People.
- Places.
- Events.

Environment within our Area of Outstanding Natural Beauty.

- Try the circular walk to Crofton and round Wilton Water.
- A recent survey by walkers found:
 - 33 different types of bird.
 - 5 different types of wild animals.
 - 109 different types of plants.
 - 19 different types of insects.
 - 12 different types of butterflies.
- Watch and draw the bird life on Wilton Water.
- Watch the bubbles in Wilton Pond as the spring fed water arrives.
- Keep an eye on the growing crops and see which field supplies the flour.
- Imagine how it would have been in 1821 when the Windmill was built.
- Imagine how it would have been in 1851 at the time of George Barnes.
- The countryside ~ virtually unchanged.
- The people ~ far fewer numbers and very local friends.
- Your food ~ all home grown and no supermarkets.

How you would have lived without any power, cars or phones?