

SEP WIND TURBINE

This apparatus has been developed to support the classroom activities described in the booklet *'Wind Power'* published by the Science Enhancement Programme. For details on how to obtain a copy of the publication, see the information at the end of this leaflet.

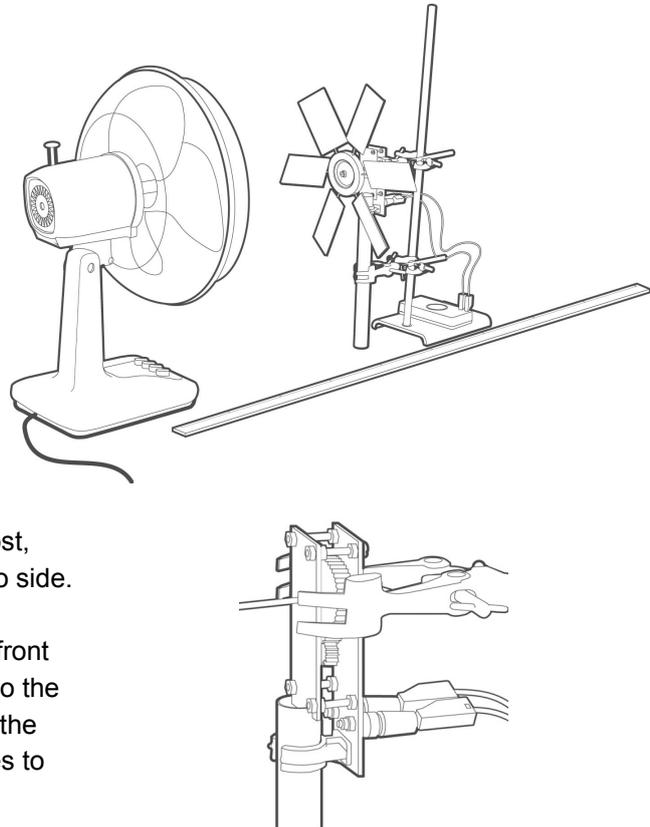
USING THE WIND TURBINE

The SEP wind turbine enables a wide range of investigations to be undertaken into turbine design. These include the effects on turbine output of the size, shape, angle and number of blades.

The blades are made of corriflute. Some blades that are already cut to size are included, but it is also possible to cut new blades of different shapes. The blades can be attached and removed simply by pushing on and off the posts on the turbine hub.

You need to make sure the turbine is clamped securely. Slot the turbine case into the plastic post, and clamp the case to stop it moving from side to side.

Position the turbine so that the hub is directly in front of the centre of the desk fan. Tape a metre rule to the bench so that one end is level with the centre of the desk fan blades; you can then measure distances to the turbine hub.



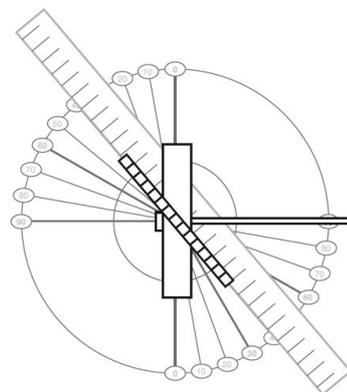
TEMPLATE FOR MEASURING BLADE PITCH

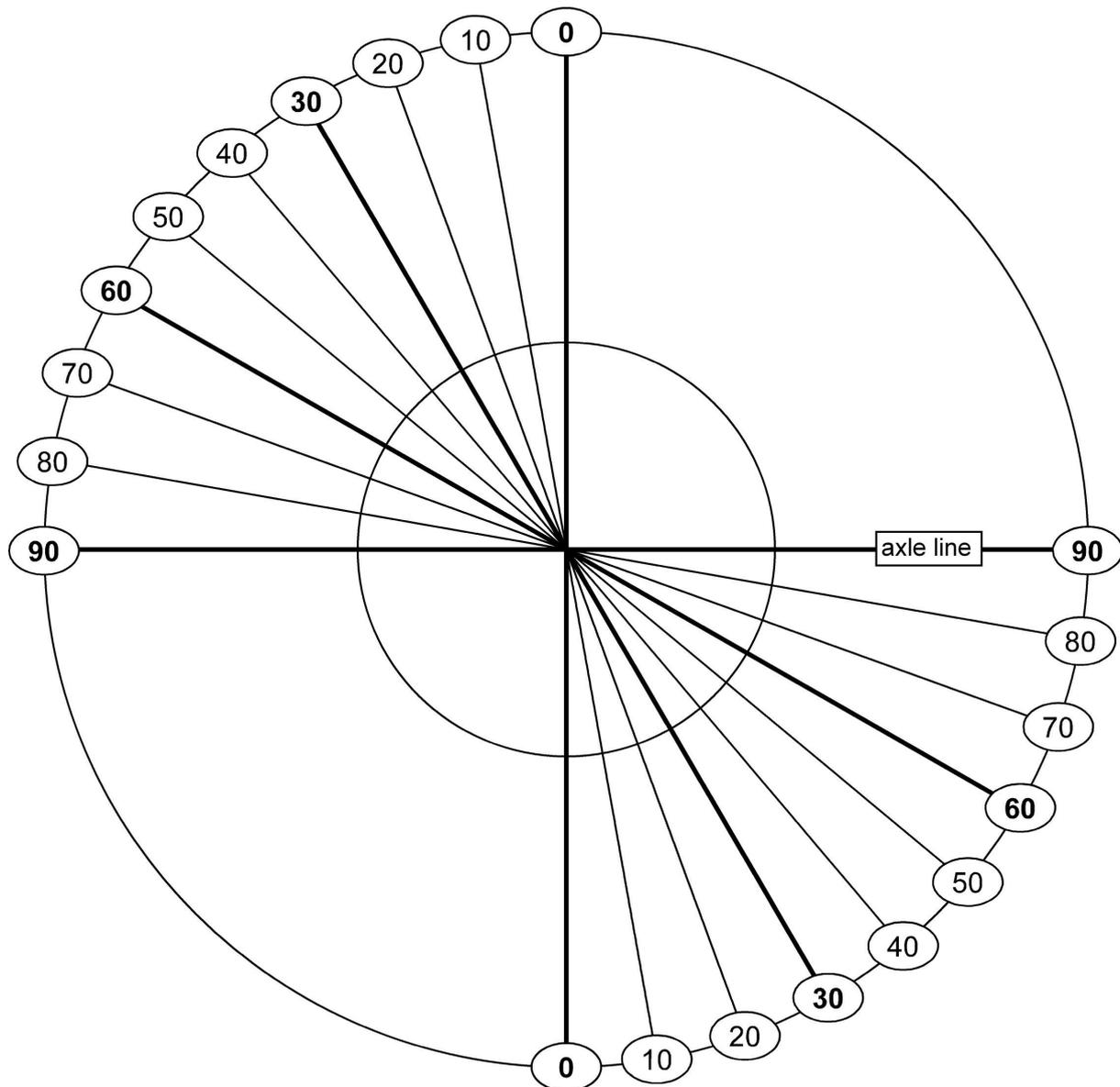
To set the pitch of the blades on the wind turbine, you can use the template on the following page.

Put the template on the floor. On top of it, position a ruler at the desired angle.

Put the turbine and clamp stand over the template, and adjust it so that the axle is over the horizontal line and the centre of the hub is over the centre of the circle.

Turn the turbine hub until the top blade is vertical. Look down and twist the blade until it lies along the ruler's edge. Repeat for the other blades.





HEALTH AND SAFETY

The rotating blades of the wind turbine can cause injury. It is essential that eye protection is used at all times when doing experiments with the turbine. Students should be told to keep their faces away from the blades and to turn off the desk fan when making adjustments to the turbine.

FURTHER INFORMATION



Other related practical resources and copies of the SEP publication *Wind Power* can be purchased from Mindsets (UK) Lt

www.mindsetsonline.co.uk



Visit the SEP website for information on how to become an SEP Associate and how to obtain the downloadable curriculum resources.

www.sep.org.uk