



Level 1 Lesson Plan (Primary 2–4)



Focus E&Os:

SCN 1-04a: Explore how wind turbines convert energy from the wind into electricity and identify their role in renewable energy solutions.

SCN 1-15a: Investigate the impact of wind turbines on the local environment and discuss their benefits for the planet.

Lesson Title: Wind Power Wonders

Learning Intentions:

I am learning how wind energy is turned into electricity.

I can describe how wind turbines help the environment.

I can talk about how they might affect nature and people nearby.

Success Criteria:

I can explain simply how wind turbines work.

I can name at least one benefit of wind energy.

I can describe one way wind turbines might affect the local area.

Activities:

Starter – Energy Source Sorting (10 mins)

Group activity: Sort cards with different energy sources (coal, gas, solar, wind, nuclear) into renewable and non-renewable.

Main Input – How Wind Turbines Work (15 mins)

Teacher explanation with diagram/video. Link kinetic energy (moving air) → blade rotation → generator → electricity.

Use real-world examples (e.g., Whitelee Wind Farm).

STEAM Challenge – Build a Turbine (30 mins)

In small groups, learners build mini wind turbines using paper cups, skewers, straws, etc.

Test using a fan: Which spins the best? Why?



Critical Thinking – Ecosystem Impact Debate (20 mins)
Research jigsaw (groups focus on birds, landscape, jobs,
CO₂, noise).

Come together for a role-play council debate: Should a
wind farm be built in our area?

Plenary – Climate Change Connection (10 mins)
Watch short climate crisis video. Learners link how clean
energy like wind helps reduce emissions.

Exit ticket: “One reason wind energy is important for the
Earth is...”

Optional Outdoor Learning Ideas (Both Levels):
Go outside to observe wind in action (flags, trees, etc.).
Visit a local wind turbine or use virtual tours (e.g.
Whitelee’s online visitor centre).

Nature walk to consider what animals or plants live in
places where turbines might be.

