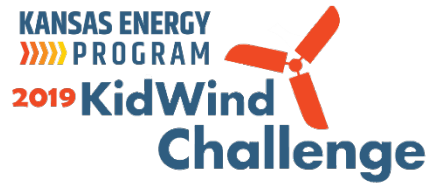


# Judges' Scoresheet

Team presentation/judges' panel is worth 40% of total score. Questions below are intended as talking points for the judges and there will not be sufficient time to go over each question with the team.



School name: \_\_\_\_\_

Team name: \_\_\_\_\_

Division: 4<sup>th</sup>-8<sup>th</sup> or 9<sup>th</sup>-12<sup>th</sup> (circle one)

**Blades** (0-6 points) \_\_\_\_\_

- What was the engineering process for blade design?
- Do the blades appear sturdy? Are blades shaped – airfoils, twisted, flat?
- How did the team determine: pitch of blades, # of blades, length, material, etc?
- Was there a great deal of experimentation? Do they have documentation?

**Drivetrain** (0-6 points) \_\_\_\_\_

- Direct drive, geared or pulley system?
- Why did they choose the system they used?
- What materials did they use to construct drivetrain?
- What were the major challenges with the drivetrain?

**Innovation** (0-6 points) \_\_\_\_\_

- How creative were students in construction and materials used in their turbine?
- Did they try a vertical or horizontal axis? Why?
- Did the students use any CAD or 3D printing?
- Is their turbine design different than others? Is it creative while still functional?
- How many design iterations did they talk about?

**Independence** (0-4 points) \_\_\_\_\_

- Do you feel like students did this work themselves?
- Do you feel like they applied concepts they learned?
- If they did any CAD work or 3D printing, is it clear they did the work and not a coach or parent?

## Judges' Scoresheet (continued)

### Overall Appearance & Material Selection (0-4 points) \_\_\_\_\_

- What types of materials were used to build the turbine? New? Recycled?
- Were they careful not to use any prefabricated kits?
- Were students precise in their turbine building? Is it a "nice-looking" rig?

### Type of Document and/or Presentation (0-6 points) \_\_\_\_\_

- What kind of documents did the students share? Was it a short report, engineering notebook, video, or poster?
- What is your overall feeling about the document or presentation?
- Was it interesting and organized? Was it creative? Does not have to be – we are more interested in looking for evidence of a PROCESS of learning.
- Is the statement thoughtful and show evidence of their work?

### Depth, Complexity & Clarity (0-4 points) \_\_\_\_\_

- Did the document show a progression of discovery?
- Did it provide evidence they made changes based on research or discoveries?

### Delivery (prepared or improvised) (0-4 points) \_\_\_\_\_

- Was the documentation and/or presentation neat and organized?
- Do you feel like the students practiced?
- Did all students take part in the discussion? Or did one student dominate?
- Do you feel like the students "knew their stuff" or were they just reading or making it up?

**Other Notes/comments:**

**TOTAL POINTS (0-40 points) \_\_\_\_\_**