

Name: \_\_\_\_\_



## MacGyver Wind Lift Pre/Post Poll **Answer Key**

Choose the best answer.

A 1. The amount of energy in the universe:

- A. Is always the same but may have changed forms.
- B. Is less because plants, animals and humans use energy every day.
- C. Is more because we can create energy at power plants.

C 2. The uneven heating of the surface of the Earth by the sun causes:

- A. Fossil Fuels
- B. Seasons
- C. Wind

D 3. Advantages of wind energy include:

- A. It is clean with no emissions.
- B. It is one of the lowest priced energy sources.
- C. It is renewable.
- D. All of these are correct.

B 4. To adjust the amount of force produced by the blades you would change the:

- A. Length of string
- B. Pitch
- C. Hub

C 5. To figure out how much work is done by your MacGyver Lift, you need to know the length of the string or distance and:

- A. The number of revolutions of the blades.
- B. The time it took to lift the weights.
- C. The weight or force of the pennies in the cup.

A 6. How fast your turbine does the work or completes the lift is known as power. The unit for power is:

- A. Watts
- B. Joules
- C. Grams

C 7. The top killer of birds is:

- A. Cars
- B. Wind Turbines
- C. Cats

B 8. In a real wind turbine, the blades are connected to a drive shaft, turning a generator which produces:

- A. Light
- B. Electricity
- C. Chemical Energy

D 9. Wind turbines and windmills have been in use form hundreds of years. Some of their uses include:

- A. Grinding wheat
- B. Moving water
- C. Making electricity
- D. All of these have been used

B 10. Which of these blade pitch measurements would create the greatest lift or force?

- A.  $0^\circ$
- B.  $50^\circ$
- C.  $90^\circ$