

# **DC MOTOR PROJECT**

**The challenge:**

To design and construct a DC motor to convert electricity into mechanical energy.

**Options:**

1. Build and construct a DC motor from your own design.
2. Build and construct a DC motor from a design provided.

**Criteria for DC motor evaluation:**

Does it work?

How well does it spin?

Does it look professional?

Is it well constructed?

Are the connections soldered properly?

Is it creative?

Are there new ideas, extra components?

How much effort was applied?

Was time used well (time on task)?

Were instructions properly followed?

Each of the above items is worth 10 points for a total value of 100 points.

**Criteria for DC motor design brief evaluation:**

Is the problem clearly stated?

Does it show the design process?

Does it clearly show the final design?

Does it show the tools, machines and process necessary to recreate the design?

Is the design brief professional (effort, neatness, typed, etc.)?

Each of the above items is worth 10 points for a total value of 50 points.

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

**Criteria for DC motor evaluation:**

|  | PTS | STUDENT | TEACHER |
|--|-----|---------|---------|
| Does it work?                          | 10  | _____   | _____   |
| How well does it spin?                 | 10  | _____   | _____   |
| Does it look professional?             | 10  | _____   | _____   |
| It well constructed?                   | 10  | _____   | _____   |
| Are the connections soldered properly? | 10  | _____   | _____   |
| Is it creative?                        | 10  | _____   | _____   |
| Are there new ideas, extra components? | 10  | _____   | _____   |
| How much effort was applied?           | 10  | _____   | _____   |
| Was time used well (time on task)?     | 10  | _____   | _____   |
| Were instructions properly followed?   | 10  | _____   | _____   |
| EXTRA CREDIT                           |     | _____   | _____   |
| TOTAL POINTS                           |     | _____   | _____   |

**Criteria for DC motor design brief evaluation:**

|  | PTS | STUDENT | TEACHER |
|--|-----|---------|---------|
| Is the problem clearly stated?   | 10  | _____   | _____   |
| Does it show the design process?   | 10  | _____   | _____   |
| Does it clearly show the final design?   | 10  | _____   | _____   |
| Does it show the tools, machines and Processes necessary to recreate the design? | 10  | _____   | _____   |
| Is the design brief professional (effort, neatness, typed, etc.)?                | 10  | _____   | _____   |
| EXTRA CREDIT   |     | _____   | _____   |
| TOTAL POINTS   |     | _____   | _____   |