MODULE

Research & Design

- Understand the relevance of specifications to the design process of a CO_2 dragster.
- Use a multi-view worksheet to design and draw a CO_2 dragster.
- Use a band saw, drill press, sandpaper, and paint to produce and complete a CO_2 dragster.
- Use a roll test ramp and test the performance design of a dragster.

SESSION FOCUS

1 Designing Your Dragster

2 Designing Your Dragster

3 Drilling and Cutting

4 Shaping Your Dragster

5 Smoothing Your Dragster

6 Finishing Your Dragster

7 Testing & Predicting Performance

Dear Parent,

As parents and teachers, we realize it can be hard to get a child to discuss what he or she is learning in school. We hope the information provided on this page will assist you in communicating with your child about what he or she is learning.

Your participation in the learning process is extremely important, as you are your child's best teacher.

For the next few days, your child will be learning about the principles of design that are used in industry to produce a marketable product by completing the *Research & Design* Module.

Words students will learn in this Module include:
- aerodynamics
- CO_2
- drag
- limitations
- pattern
- prototype
- sketch
- streamline
- thumbnail
- tolerance

Questions for Discussion

During the course of this Module, your child will be assessed on key concepts and activities. You might want to discuss these concepts and activities with your child. He or she will be asked to:

- Explain why aerodynamic design is so important in producing a fast dragster. *(In order for the dragster to pass through the air faster, aerodynamic principles must be followed during construction.)*
- Explain the concept of thumbnail sketches, rough sketches, and finished design. *(Thumbnail sketches are small drawings that are visual ideas. Rough sketches are larger sketches that detail the design components. Finished designs are drawn to scale, show complete design, and have specifications labeled.)*

Student: _____

Parent: _____

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