

## Rocketry Guidelines

Youth interested in model rocketry projects are in for great adventures! They will learn how to construct rockets, become familiar with launching a rocket and successfully recovering it. They will also learn what makes a rocket fly and how to predict where it will land. Model rocketry can also be a stepping stone to scientific careers.

**All rockets should be displayed on a stand.**

Exhibit should be smooth, neat and uniform. Make sure balsa and/or plastic are sanded and have no rough edges. Balsa should be sealed for a smooth paint job. Remember that paints should be evenly applied so there are no runs or streaks. Decals, if used, should be mounted straight.

**First year – Make a rocket skill level I rocket**

- Learn correct construction techniques
- Learn about the engine sizes for your rocket
- Learn about recovery systems for your rocket
- Learn launching safety rules
- Learn to check flying conditions
- Learn to check launch site

**Second year – Make a rocket skill level II rocket**

- Try experimenting with a personal paint design. Use of decals is optional; try making your own
- Learn about the properties of the air
- Learn what thrust and drag are
- Learn about weight limits
- Learn about two stage rockets and how they work

**Third year – Make a rocket skill level III rocket** draw up plans and make a rocket of your own design. **(If you draw your own plans please bring them with your rocket at time of judging).**

- Learn how to test for stability
- Learn about launch targets and angle
- Learn about real rockets and their purposes

**Fourth year – Make and display a model rocket of your own personal design.** Rockets should be made from cardboard, plastic and balsa wood pieces. Make personal launch pad. **(Your drawn up plans should be brought with rocket to judging).**

- Know what the rocket can do
- Did it perform as expected
- Did the launch pad work