

Introducing the Standard Model

Build Knowledge

INTRODUCTION

WHAT STUDENTS DO IN THIS ACTIVITY

In the next several activities, each design team works with the “Standard Model.” The standard model enables students to examine the effects of adjusting the positions of the wings, the stabilizer assembly, and adding weight to the model. In this activity, students become acquainted with the Standard Model. They invent their own ways to arrange the balsa fuselage stick, the wing, and the stabilizer assembly. They test fly the Standard Model in these different configurations, observe its flight path, and discover that some configurations result in better flights than others. Each design team shares its findings with the class.

RATIONALE

In the previous science activities, students have become invested in developing, testing, and redesigning their own models. Now they will put their own models on hold for the next several weeks to investigate the Standard Model, which is not their own design. The Standard Model glider allows students systematically to vary the position of the wing and of the stabilizer assembly along the fuselage stick and to use clay to add weight to any part of the model. Over the next several weeks students will systematically investigate the effects that changing these variables has on the flight of the Standard Model. By assembling it in whatever way they choose, students gain a sense of ownership of the new design. They see that when carefully adjusted and launched, the Standard Model can glide well, which helps motivate them to investigate ways of adjusting it and to understand why those new settings work. This knowledge will help them design their own model for the book for Mobility Press.

SCIENCE

MATHEMATICS

TECHNOLOGY
EDUCATION

SOCIAL STUDIES

LANGUAGE ARTS

INTRODUCTION TO THE STANDARD MODEL

Name _____ Date _____

Design Team _____

Answer these questions about your work with the Standard Model.

- What different configurations did you try?

- How did the model fly with each configuration?

- Which configuration do you think flies best? Why?

- Did you add clay to your model? If so, where? How much? What effect did it have on the flight?

- Do you have any tips to share on using the launcher?