

SCIENCE OF TOYS

What makes toys work? Move out of the way for motorized toys. Take a spin with kinetic tops. Balance a bird to reveal its center of gravity. A twist of the wrist sets your Yo-yo spinning!

SUMMARY:

Children test, play, and ponder over what makes toys work. They spin into action with kinetic top toys. One changes color and one flips over, but they all release stored energy. Children balance bugs and birds to reveal their centers of gravity. They learn that opposites attract with magnetic toys and then take a turn at creating a gear train. Don't forget to move out of the way for The String Thing—it's motorized! The class winds down with a Yo-yo Take-Home.

EDUCATIONAL VALUE:

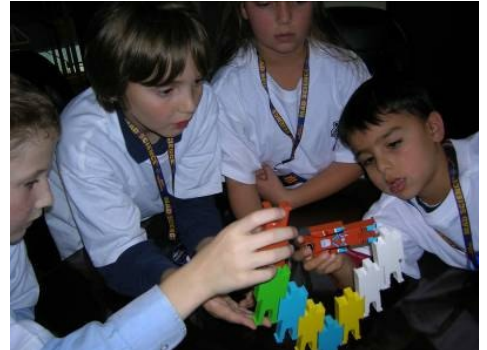
Children are introduced to the science of toys through toy-themed centers. Both familiar and novel gadgets are investigated. They discover how motors make toys move, and play with tops to learn about potential and kinetic energy. Balancing toys are used to familiarize children with the center of gravity. They find out that opposite poles attract each other when experimenting with magnetic toys. Their energy investigation continues at home with the Mad Science Yo-Yo.

TAKE-HOME MESSAGE:

- 1 We can play with toys to find out how they work.
- 2 We can use science to explain how toys work.
- 3 Some toys use stored energy to move.

TAKE-HOME PRODUCT:

Yo-Yo



NORTH CAROLINA ESSENTIAL STANDARDS:

- K.P.1 Understand the positions and motions of objects and organisms observed in the environment.
- 1.P.1 Understand how forces (pushes or pulls) affect the motion of an object.
- 3.P.1 Understand motion and factors that affect motion.
- 4.P.1.1 Explain how magnets interact with all things made of iron and with other magnets to produce motion without touching them.
- 5.P.1.1 Explain how factors such as gravity, friction, and change in mass affect the motion of objects.
- 5.P.1.2 Infer the motion of objects in terms of how far they travel in a certain amount of time and the direction in which they travel. 5.P.1.4 Predict the effect of a given force or a change in mass on the motion of an object.