

# DRY ICE Capades

*Manipulate matter in all of its three states! Melt metal in boiling water and freeze water with just a breath of dry ice! Use your Thermocolor Cup to test the temperature of liquid matter in your home!*

## **SUMMARY:**

Children in this class will probe the shifting states of *matter* through a series of engaging demonstrations and inquiry-based activities. The class warms up with a *molecular* movement exercise to learn about the three states of matter. Next, students observe melted and resolidified metal—a shift of states from solid to liquid right before their eyes. *Dry ice*—the star of the show—used in a series of tests, under the guidance of the instructor, explores the properties of matter at extreme temperatures. Children use balloons to help visualize the *volumetric* difference between matter in solid and gaseous states. The class rolls toward a grand finale that engages the group in *catching a cloud!*

## **EDUCATIONAL VALUE:**

Children will understand the concept of matter in its three states through visual and tactile experiences. They will learn both how and why matter changes between the different states and develop a good understanding of matter's elementary physical principles. Children will be able to relate the concept of matter to their world. They will receive the Take-Home Thermocolor Cup and Home Lab to continue experimenting with the states of matter.

## **TAKE-HOME MESSAGE:**

- 1 There are three states of matter.
- 2 Adding heat can change solid to liquid, and liquid to gas.
- 3 Removing heat can change gas to liquid, and liquid to solid.

## **TAKE-HOME PRODUCT:**

Thermocolor Cup



*Thermocolor Cup*

## **NORTH CAROLINA ESSENTIAL STANDARDS:**

- 2.P.2 Understand properties of solids and liquids and the changes they undergo.
- 3.P.2 Understand the structure and properties of matter before and after they undergo a change.
- 3.P.3 Recognize how energy can be transferred from one object to another.