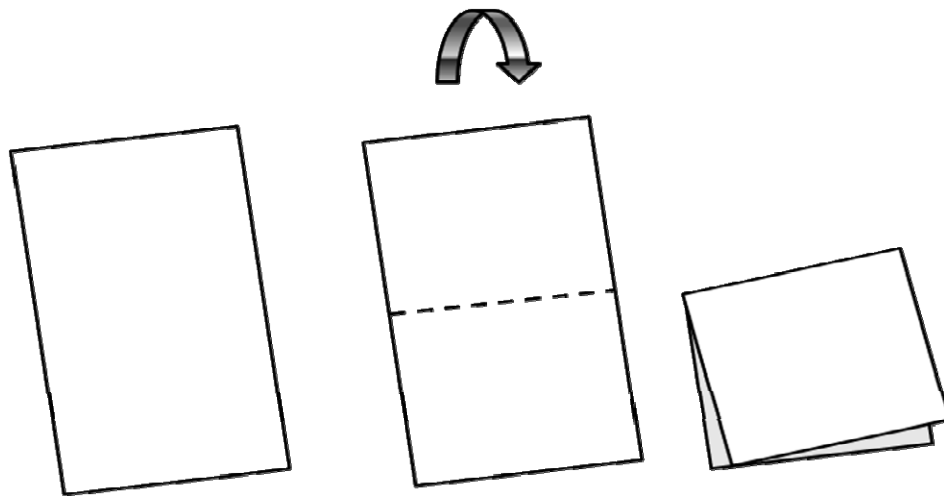
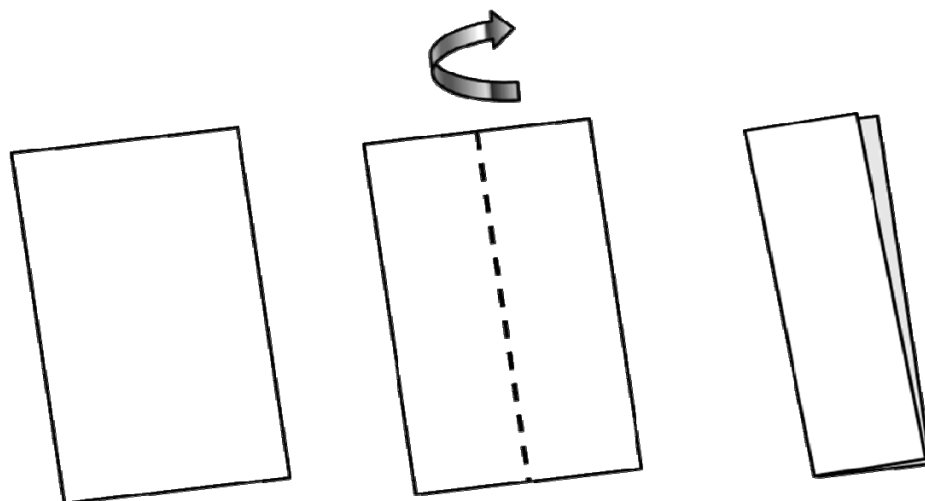


## Strategy: FOLDABLES

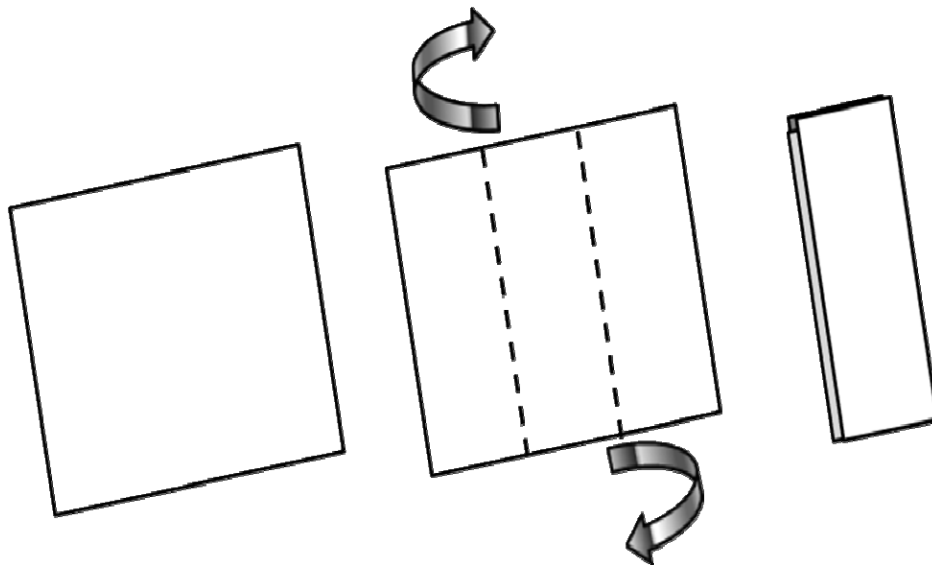
Foldables are a great strategy to use with students. They can be used in many ways, and students enjoy making foldables. There are several types of foldables, including the “Hamburger Fold,” the “Hot Dog Fold,” and the “Burrito Fold.”



**“Hamburger Fold”** – Students align paper “portrait” style and fold in half at the horizontal mid-point of the paper.



**“Hotdog Fold”** – Students align paper “portrait” style and fold in half at the vertical mid-point of the paper.



**“Burrito Fold”** – Students align paper “landscape” style and fold in overlapping thirds.

### Overview:

Foldables are a quick, easy way to turn almost any lesson into a fun student project. This strategy conveys learning targets to visual, tactile and kinesthetic learners. At times, you might even desire to have students complete a foldable project in groups to add in a social/peer-assisted learning dimension. The activities below are strategies for utilizing “foldables.”

### Instructional Strategies:

First, it is a good idea to demonstrate these folds to your students and keep an example on display. “Foldables” are excellent way to encourage critical thinking skills in that creases that divide the folded sections of the paper can also be used to divide concepts. Students can use a “Hotdog Fold” or “Hamburger Fold” to compare and contrast two different ideas by writing ideas, drawing pictures or creating collages depicting what they know about one key concept on one side of the fold and repeating the process for another key concept on the opposite side of the fold. The “Burrito Fold” opens this up to a potential compare and contrast of three distinct concepts. Additionally, these three sections are perfect for having students create a quick K-W-L. [What do you KNOW about the learning target? (K) What do you WANT to know about the learning target? (W) What did you LEARN about the learning target? (L) See the K-W-L TeachItNow for more information about K-W-L Charts.

***You are ready to TeachItNow! Here's how you can use "Foldables" to teach the states of matter. A learning target, instructional activity, and assessment technique are provided.***

**Learning Target:**

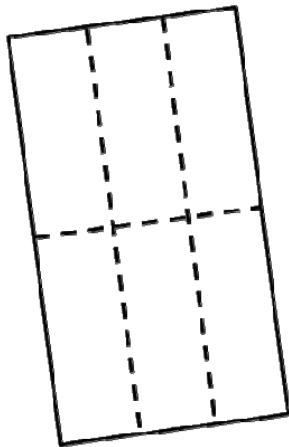
Students will identify the characteristics of and be able to provide examples of solids, liquids and gases. Students will explain how adding enough energy (heat) can change a solid to a liquid (melting) or a liquid to a gas (evaporation). Students will explain how removing energy can change a gas to a liquid (condensation) or a liquid to a solid (freezing).

**Instructional Activity:**

**Teach States of Matter with the "FOLDABLE" Strategy**

Activate prior knowledge by leading your class in a discussion of solids, liquids and gases. Ask students to provide examples of each of these states of matter and record them on the board. Ask students to guess how an ice cube can turn into a puddle of water and discuss. Ask students how the puddle of water can turn into steam and discuss. Now ask them to think about how to reverse the process. Allow your students to brainstorm (individually or in groups), then write their ideas on the board and discuss.

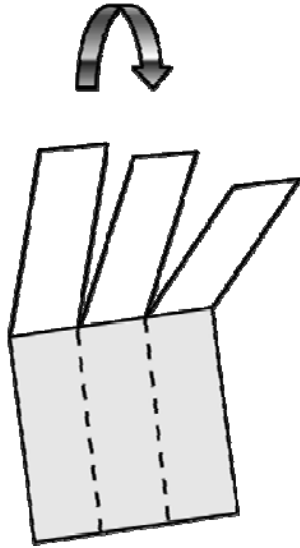
Inform students that they will be completing a fun project to show they understand what they have just learned. Instruct each student to complete a "Hamburger Fold" and a "Burrito Fold" using a single piece of paper (for a sturdier project, cardstock or construction paper may be used). Show students a sample that you have pre-folded. When the paper is unfolded, the creases should divide it into six sections as seen below.



**"Hamburger & Burrito Folded Paper"**

Now for the tricky part. Starting at the top with scissors, have your students cut along the "Burrito Fold" creases and stop when they reach the horizontal "Hamburger Fold" crease at the center of the paper.

Demonstrate this for your students. When refolded along the “Hamburger Fold” crease, the completed cuts will make three “doors” that the students can open and close (as seen below).



Ask your students to fold the doors down and decorate the front of each door. One door should have a drawing, writing, or collage of a solid and should be labeled “solid.” Another door should be labeled as “liquid” and the final door should be labeled as “gas,” and students will complete these two sections as they did the “solid” section.

Students will open the doors. Have them choose a solid and draw, write or create a collage about how it changes to a liquid and then to a gas on the opposite side of the door flaps they just decorated.

Next, using the three uncut sections on the bottom, ask students to start with the gas from the previous step and draw, write or create a collage about how it changes to a liquid and then to a solid.

#### **Assessment:**

Allow students (individually or in groups) to “share” their “foldable” projects with the class. Along with your observations of the class discussion, collect the completed “foldables” to determine if your learning targets were successfully met.

#### **Just For Fun:**

Since we are talking about gases anyway, your students would enjoy *Walter the Farting Dog* by William Kotzwinkle and Glen Murray (illustrated by Audrey Colman)!