

# CHANGES IN MATTER CARTOON

## INVESTIGATIONS IN SCIENCE 7

### Science Anchors

Science anchors are ongoing engaging tasks that students can work on independently. They are curriculum based, clearly defined and differentiated for students. Students can work on science anchors as they complete work at varying rates, when the teacher is working with small groups of students, at the beginning or end of the school day, or when they are waiting for teacher assistance. Sample science anchor tasks include: reading and responding to text, journaling, learning or interest centers, listening or viewing centers, independent research or projects and hands-on minds-on science kit tasks.

#### Purpose

Develop a cartoon to deepen understanding of what happens to a sample of matter when heat is added and of the different characteristics of solids, liquids, and gases.

#### Directions

Choose one of the options below. Create a cartoon that illustrates how the molecules in matter change.

Option 1	Option 2	Option 3	Option 4
Cartoon illustrates: •arrangement of water molecules in an ice cube heated enough to melt  •arrangement of molecules in water that is heated enough to vaporize	Cartoon illustrates: •arrangement of water molecules in an ice cube heated enough to melt  •arrangement of molecules in water cooled enough to freeze	Cartoon illustrates: •arrangement of water molecules in an ice cube heated enough to melt  •arrangement of molecules in water that is heated enough to vaporize  •arrangement of molecules in water cooled enough to freeze	Cartoon illustrates:          Teacher Approval:

## INVESTIGATIONS IN SCIENCE 7

### Changes in Matter Cartoon

#### Anchor Task 1

#### Overview

This anchor task is to be used by students in science as they are learning about states of matter.

#### Goals

##### *Students should know*

matter is neither created nor destroyed, but can undergo change.

##### *Students should understand*

matter exists in three states.

atoms and molecules are in constant motion and that an increase in temperature will increase that motion.

##### *Students should be able to*

explain that atoms and molecules are in constant motion and that an increase in temperature will increase that motion.

#### Required Resources

- One Changes in Matter Cartoon prompt resource page per student
- One Changes in Matter Cartoon Rubric per student
- Blank paper for student cartoons
- Colored pencils and markers

## INVESTIGATIONS IN SCIENCE 7

Name: \_\_\_\_\_

### Changes in Matter Cartoon

#### Anchor Task 1

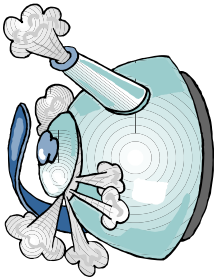
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Changes in Matter Cartoon

Rubric

		<p>4</p>	<p>3</p>	<p>2</p>	<p>1</p>
<p><b>Text</b></p>	<ul style="list-style-type: none"> <li>Explains the concepts of molecule speed, attraction and distance between accurately</li> </ul>	<ul style="list-style-type: none"> <li>Explains the concepts of molecule speed, attraction and distance between with 1-2 mistakes</li> </ul>	<ul style="list-style-type: none"> <li>Explains the concepts of molecule speed, attraction and distance between with 3-4 mistakes</li> </ul>	<ul style="list-style-type: none"> <li>Explains the concepts of molecule speed, attraction and distance between with more than 4 mistakes</li> </ul>	
<p><b>Illustrations</b></p>	<ul style="list-style-type: none"> <li>Presents the concepts of molecule speed, attraction and distance between accurately</li> <li>Helps reader understand text</li> </ul>	<ul style="list-style-type: none"> <li>Presents the concepts of molecule speed, attraction and distance between with 1-2 mistakes</li> <li>Helps reader understand text</li> </ul>	<ul style="list-style-type: none"> <li>Presents the concepts of molecule speed, attraction and distance between with 3-4 mistakes</li> <li>Helps reader understand text</li> </ul>	<ul style="list-style-type: none"> <li>Presents the concepts of molecule speed, attraction and distance between with more than 4 mistakes</li> <li>May or may not support the text</li> </ul>	