

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

Date: \_\_\_\_\_

## Understanding Sound

### **Part 1 – Directions:**

Your group is responsible for becoming experts about one set of ideas about sound.

### **Become Experts About ...**

*Waves of energy moving through something*

Read the sections of text in your resource packet. Take some notes about the information in the text while you read so that you are prepared to talk with your group in class.

### **Reading Notes**

The Nature of Waves  
p. 288-291 (stop before water waves)

“What is a Wave? What is a Medium?” handout

**Part 2 – Directions:**

Next, you will work with people from other groups and combine your areas of expertise to start explaining three big ideas about sound. When you combine your expertise you should be able to start building answers to the following questions:

<b>Three Big Ideas About Sound</b>		
<b>How things make sound</b>	<b>How sound travels</b>	<b>How sound has different qualities</b>
<ul style="list-style-type: none"><li>• How do things like instruments &amp; tuning forks make sounds?</li><li>• How do they make sounds with different pitches (notes)?</li><li>• How do they make sounds with different intensities (volumes)?</li></ul>	<ul style="list-style-type: none"><li>• How does sound travel from an instrument or a tuning fork to a listener?</li><li>• What is sound?</li><li>• When sound travels, do the qualities of the sound (pitch, intensity) change? How does that work?</li><li>• Does sound travel differently in air vs. water vs. solid? How does that work?</li></ul>	<ul style="list-style-type: none"><li>• What causes a sound to have a particular pitch (note)?</li><li>• What causes a sound to have a particular intensity (volume)?</li><li>• How do people detect sound &amp; qualities of sound?<ul style="list-style-type: none"><li>○ How do ears work?</li><li>○ How could you detect sounds that you cannot hear?</li></ul></li></ul>

As you talk with your group about these ideas, start filling in your group’s chart. If there are some ideas and questions that your group still doesn’t understand at the end of the day, include those on your chart too.

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

Date: \_\_\_\_\_

## Understanding Sound

### **Part 1 – Directions:**

Your group is responsible for becoming experts about one set of ideas about sound.

<b>Become Experts About ...</b>
---------------------------------

<i>Hearing different qualities of sounds</i>
--

Read the sections of text in your resource packet. Take some notes about the information in the text while you read so that you are prepared to talk with your group in class.

<b>Reading Notes</b>
----------------------

Sound p. 320-323
---------------------

“How Hearing Works” handout
-----------------------------

**Part 2 – Directions:**

Next, you will work with people from other groups and combine your areas of expertise to start explaining three big ideas about sound. When you combine your expertise you should be able to start building answers to the following questions:

<b>Three Big Ideas About Sound</b>		
<b>How things make sound</b>	<b>How sound travels</b>	<b>How sound has different qualities</b>
<ul style="list-style-type: none"><li>• How do things like instruments &amp; tuning forks make sounds?</li><li>• How do they make sounds with different pitches (notes)?</li><li>• How do they make sounds with different intensities (volumes)?</li></ul>	<ul style="list-style-type: none"><li>• How does sound travel from an instrument or a tuning fork to a listener?</li><li>• What is sound?</li><li>• When sound travels, do the qualities of the sound (pitch, intensity) change? How does that work?</li><li>• Does sound travel differently in air vs. water vs. solid? How does that work?</li></ul>	<ul style="list-style-type: none"><li>• What causes a sound to have a particular pitch (note)?</li><li>• What causes a sound to have a particular intensity (volume)?</li><li>• How do people detect sound &amp; qualities of sound?<ul style="list-style-type: none"><li>○ How do ears work?</li><li>○ How could you detect sounds that you cannot hear?</li></ul></li></ul>

As you talk with your group about these ideas, start filling in your group’s chart. If there are some ideas and questions that your group still doesn’t understand at the end of the day, include those on your chart too.

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

## Understanding Sound

### **Part 1 – Directions:**

Your group is responsible for becoming experts about one set of ideas about sound.

### **Become Experts About ...**

*Properties of waves create different sounds*

Read the sections of text in your resource packet. Take some notes about the information in the text while you read so that you are prepared to talk with your group in class.

### **Reading Notes**

Wave Properties & Sound Qualities

p. 294-296

p. 298-299

**Part 2 – Directions:**

Next, you will work with people from other groups and combine your areas of expertise to start explaining three big ideas about sound. When you combine your expertise you should be able to start building answers to the following questions:

<b>Three Big Ideas About Sound</b>		
<b>How things make sound</b>	<b>How sound travels</b>	<b>How sound has different qualities</b>
<ul style="list-style-type: none"><li>• How do things like instruments &amp; tuning forks make sounds?</li><li>• How do they make sounds with different pitches (notes)?</li><li>• How do they make sounds with different intensities (volumes)?</li></ul>	<ul style="list-style-type: none"><li>• How does sound travel from an instrument or a tuning fork to a listener?</li><li>• What is sound?</li><li>• When sound travels, do the qualities of the sound (pitch, intensity) change? How does that work?</li><li>• Does sound travel differently in air vs. water vs. solid? How does that work?</li></ul>	<ul style="list-style-type: none"><li>• What causes a sound to have a particular pitch (note)?</li><li>• What causes a sound to have a particular intensity (volume)?</li><li>• How do people detect sound &amp; qualities of sound?<ul style="list-style-type: none"><li>○ How do ears work?</li><li>○ How could you detect sounds that you cannot hear?</li></ul></li></ul>

As you talk with your group about these ideas, start filling in your group’s chart. If there are some ideas and questions that your group still doesn’t understand at the end of the day, include those on your chart too.