Physics – Chapter 9 Name

On-line Textbook Resources Exploration Hour

(1) Sign on to your access to our on-line text book.

(2) Click on the “Student Premium” Tab

(3) Search for Chapter 9: Heat; Section 1: Temperature and Thermal Equilibrium

 🡪 Click on GO

(4) Work through the 12 purple boxes one at a time, in any order. Complete your exploration and fill in the information you are seeking. Afterward, “X” out of that particular tab to return to the original with the purple boxes.

INTERVENTION

 🡪 Interactive Reader

 🡪 Section 9.1 Temperature and Thermal Equilibrium

***TASK***: Copy the 6 statements in the Blue boxes, written in blue

AUDIO SUMMARY

 🡪 Chapter 9 Audio Summary

How long is the audio? Listen, list 5 physics vocabulary words you hear.

WORKSHEETS

 🡪 Chapter 9: Section Study Guides

How many pages is the study guide? List the titles for each page?

PROBLEM SOLVING

 🡪 Sample Problems
 🡪 Section 9.1 Sample Problem Set II: Sample Problem A: Temperature Conversion

How many problems are in this set?

 🡪 Interactive Demonstrations

 🡪 Section 9.1 Interactive Demonstration: Temperature Conversion (Sample Problem A)

At the screen that comes up click on START

Choose either SEE IT or TRY IT, work through the whole thing, listening and participating as asked

 Write a short description of what happens in step 5:

 Write a review of the whole thing, do you think this could be helpful to a student or not? TELL WHY.

ANIMATIONS AND SIMULATIONS

 🡪 At the top switch to Section 2: Defining Heat, click on GO

 🡪 Open Animations and Simulations

 🡪 Animated Physics, Section 9.2 Heat

 🡪 Click on START, watch the segment – click on each box to make them animate

Describe the action from one of the boxes:

Box title: Action:

 🡪 Click on FEATURE and explore the simulation by adding and replacing gases, see how they behave

 🡪 Click on UNDERSTANDING – complete the arrangement – remember hotter has more energy – more kinetic energy which had the formula KE = ½ mv2

 What order is correct?

ENGINEERING AND PERFORMANCE TASKS

 🡪 What are the two things featured in this category?

ON THE JOB VIDEOS

 🡪 Choose one and play it

Which did you choose? What do people with this job do all day?

LABS

 🡪 At the top switch to Section 1: Temperature and Thermal Equilibrium, click on GO

 🡪 Click on Section 9.1: Sensing Temperature (Quick Lab)

 🡪 Read the directions, have you tried this before?

Make a prediction about what you think will be the outcome of this lab – Describe what BOTH hadns will feel

MULTIMEDIA LABS AND ACTIVITIES

 🡪 Virtual Labs

 🡪 Choose one of the two labs, click on the title, click on Video, click on “Objectives, Equipment, and Laboratory Setup, Watch the video

Which lab did you choose?

Do you think this lab would be easy to do in our classroom? Why or why not? Do you think you would learn something interesting from the lab? Why or why not?

 🡪 Click on Simulation

Do you think you could do this lab using this simulation? What issues and problems do you think may come up? What solution could you recommend for these?

 🡪 Web Resources

 🡪 Click on Chapter 9 Weblinks

 🡪 Scroll down to Phase Changes, click on the video link or picture –

Why can’t you make a snowball on Mars? Watch the video and describe 2 reasons why:

INTERACTIVE REVIEW

 🡪 Chapter 9 Interactive Concept Map: Heat

 🡪 Click on START

Try to concept map by dragging and dropping words into place – carefully, check and try again until you get it.

Copy your concept map in the space below:

STUDENT MATERIALS

 🡪 Student Edition Pages

 🡪 Section 9.1: Temperature and Thermal Equilibrium

What do you see at the bottom of page 303?

 🡪 Chapter 9 Why it Matters: Climate and Clothing

Read the article, describe the special clothing used to keep people warm OR to keep people cool, your choice:

 🡪 Student Resources

 🡪 Project Resources

What are the three things listed here?

TOOLS

 🡪 Glossary

Our new chapter is on HEAT. Look up heat. What term is above and which is below HEAT in this glossary?

 🡪 Scientific Calculator

 🡪 Graphing Calculator

What do these two calculator functions have in common?

How are these two calculator functions different from each other?

LAST QUESTION –

Consider all 12 features we explored.

Which of these features do you think is the most useful for a student and why?