

# Math Mysteries - General Information

## Whole Class Activity

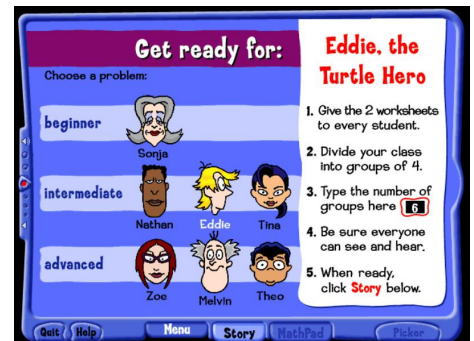
Divide the class into groups of 4 students. The groups will work together during the activity, so be sure to balance the groups by ability. Give each group a number so you can call on groups to answer questions. Since this is a teacher-led activity, arrange the class so that everyone can see and hear the television monitor.

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### Walk-through

#### Choose a Problem

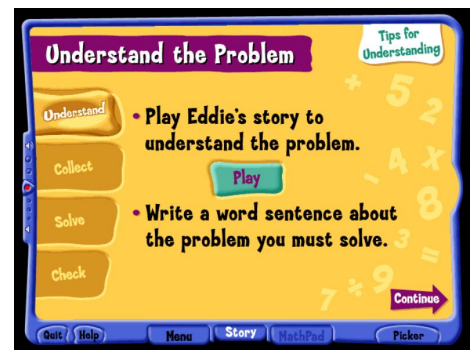
- Click one of the characters on the screen
- Follow the instructions on the screen to get the class ready for this problem.
- Type the number of groups you have in your class, for later use in a feature called the Picker.
- When everyone is ready, click **Story**.



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#### Understand the Problem

- Refer to the first section of the problem sheet, titled Understand the Problem. Remind students that they should keep their pencils down and listen closely to the character who will be speaking. They will be able to hear the story again.
- Click **Play** to hear the character's story.
- When the character has finished, instruct the students to write a word sentence on their problem sheets to describe the problem posed by the character.
- Click **Continue** to move to the next step.



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#### Collect Information

- Students are about to hear the character present the problem, phrase by phrase. Prepare the students to raise their hands when they hear important information.
- Click **Continue** when everyone is ready.
- Click **Listen** to hear the character present the story problem, phrase by phrase.
- When students raise their hands, click **Grab a Note** to store this information in the software.



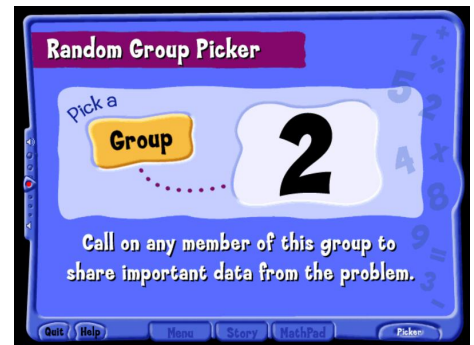
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- Instruct students to record numerical information on their sheets.
- Click **Listen** until the character has finished and students have collected all the information.
- Click **Continue** to move on.

## Group Check-in After Understanding and Collecting

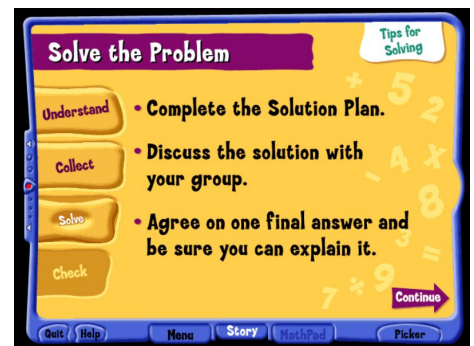
- Students should consult with their groups to make sure that they all have identified the same problem and collected information accurately. They should not solve the problem yet. (It will be hard to prevent students from solving some of the simpler problems, but they still have plenty of work to do.)
- Teacher can check for understanding using a feature called the **Picker**.
- Click **Picker** to call on students, and click it again when you are finished with it.
- Click **Continue** when the class is ready to solve the problem.



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## Solve the Problem

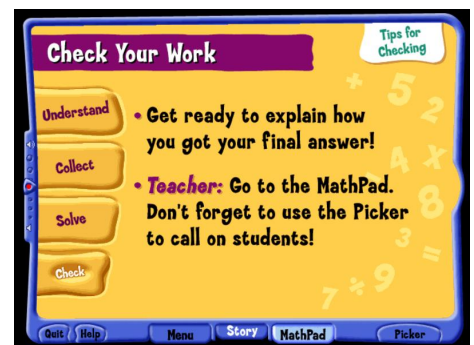
- Now it is time for students to use the Solution Plan to create a step-by-step solution. For each step on the Solution Plan, direct students to:
  - Circle the operation they will use.
  - Write a word sentence to describe the step.
  - Perform the arithmetic.
- Direct students to write their final answer on the problem sheet, including number and label.
- Click **Continue** when all groups have a final answer.



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## Check Your Work

- Click **MathPad** now to let students present solutions and check their work.



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## Using the MathPad

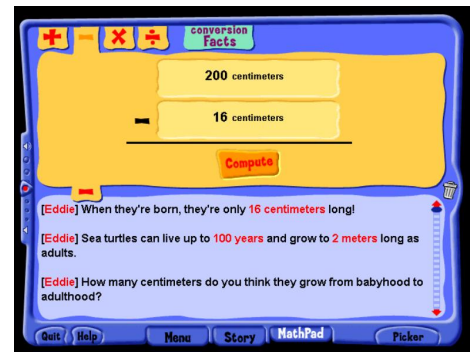
### Identify the Problem

- Notice that all of the information you “grabbed” is now in the lower notes area.
- Locate the line with the problem and click and drag the character’s name to the box above. Click **OK**. The operation tabs at the top of the screen now become available.



### Solve the Problem with Arithmetic Operations

- Click an operation tab at the top of the screen. The operation workspace will drop down.
- Click and drag the numerical information you need for the calculations.
- Click **Compute** to perform the operation. Notice that the results also appear in the notes area below. [Computed]
- Click the tab to close the workspace, or click another tab above to perform a new operation.
- Continue until you have computed the final answer.

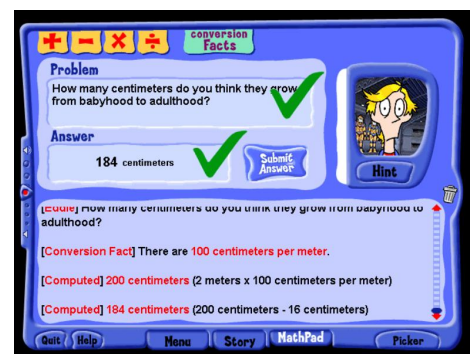


### Use Conversion Facts When Necessary

- Every problem in the Measurement unit requires a conversion from one unit to another. Click the conversion facts tab to see the workspace drop down.
- Click distance, weight, or capacity.
- Highlight the fact you need, then click **Select**. The fact is now in your notes and can be used in your computation.

### Submit Answer

- Click **Submit Answer**. The answer to each problem must be in the units required by the math problem.
- Click and drag the answer from the notes area to the answer box.
- The program evaluates the problem you identified and the final answer you submitted. If it is necessary to submit another answer, reset the **Submit Answer** box by clicking it.
- When you are finished with this problem, click **Menu** for another problem or **Quit** to leave the program.



# Math Mysteries - Whole Numbers

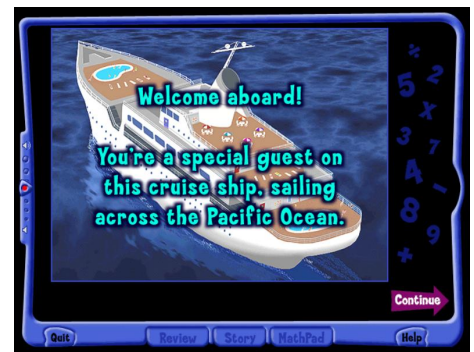
The mystery in this Whole Numbers program revolves around a cruise ship called the Endeavor. The ship is in trouble because the computer chip that controlled the ship's steering, radio, and navigation has been stolen from the helm. The Gruber chip is missing, and the thief is somewhere on board the ship.

## Starting the Program

- To start the mystery, click on **New**. The program automatically saves your progress as you use the program. To resume the mystery, click **Open** and locate the file you previously used.



- Watch the introduction, which explains your role in the mystery.
- Click **Continue** to move into the program.



- Move the cursor around the picture, and notice a hand that points forward, left or right. Click your mouse to advance in any of these directions.

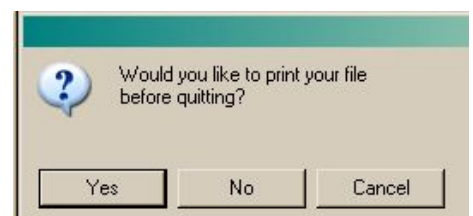
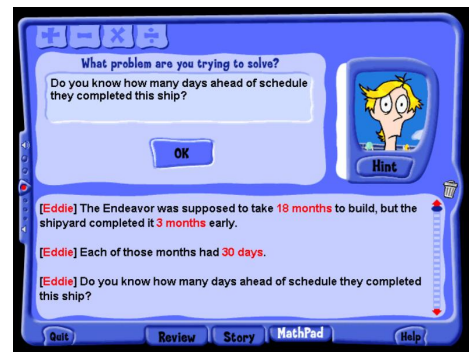


- When you find a character, click the **Listen** button to hear the character speak.
- Continue to click **Listen** until the character begins to repeat lines.
- Click **Grab a Note** when the character tells you numerical information which could be important for a word problem. Also, **Grab a Note** when you hear the word problem.



# Math Mysteries - Whole Numbers

- Click **MathPad** when you have collected all the notes you need and are ready to solve the problem. Follow these steps each time a problem is presented:
  - Identify the problem posed by the character
  - Solve the problem with step-by-step operations
  - Submit the answer
  - Get hints, if needed
- When you have submitted the correct answer in the **MathPad**, click **Story** to continue listening to this character (He or she will always have something more to say).
- Continue moving through the ship to speak with other characters.
- Keep track of the people you have met and any information they might give to you that would lead to solving the mystery.
- Review your progress at any time by clicking the **Review** tab at the bottom of the screen.
- Click **Quit** in the lower left corner to leave the program. You will be asked if you want to print your file. Check with your teacher on procedures for printing.



# Math Mysteries - Measurement

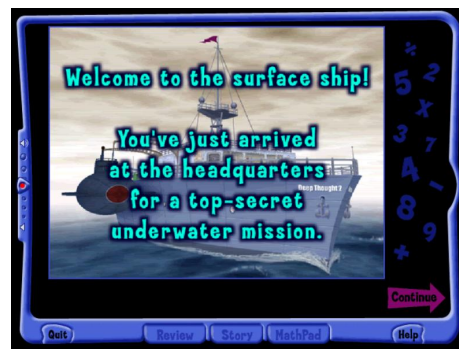
The mystery in this Measurement program revolves around a top-secret underwater mission. All communication has been lost with Outpost Omega, a research station far beneath the surface. You have been enlisted to make contact with the outpost crew. The crews on the surface ship and at the outpost will brief you on the string of mysterious events that leads to a surprising discovery.

## Starting the Program

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