Digital "Who Am I?" --- TEACHER INSTRUCTIONS

Title: Digital "Who Am I?"
Grade Focus: K - 5
Subject: Science, Math and Technology
Integration Activity: Digital Imagery, Journaling, Drawing
OLPC Integration Activity: Journal, Write, Calculate, Paint, Record, Acoustic Tape Measure,
Recommended Time to Completion: Each suggested learning experience may take 45 – 60 minutes.

INTRODUCTION
Students will work with a partner to observe, measure, and record information about themselves.

This information will be used to create a digital "Who Am I? guessing game" to challenge others to identify the student.

Through extension experiences, students will compare their height to the height of several large items.

PREREQUISITE EXPERIENCE:
Students should be able to use a word processor and the drawing program on their computer. They will also need to know how to use digital cameras.

Students using the XO computer need to be able to use these XO applications: Journal, Write, Calculate, Paint, Record, Acoustic Tape Measure

TEACHER PREP TIME: 45 minutes
Review these training videos from **Nortel LearniT**
   • **Imaging,** http://nortellearnit.org/technology/Imaging/

PROJECT:
Students will use software applications on the XO laptop to observe, measure, and record observations about each other. They will create a digital "who am I?" to share with classmates.

ASSESSMENT / GRADING:
Using a rubric, the digital "who am I?" will be evaluated based on completeness, and the students' analytical skills.

TIME MANAGEMENT TIP:
This project is designed for teams of two.

DEVELOPING THE DIGITAL WHO AM I:
Based upon your students' interests and abilities, you may choose a variety of ways to help your students create their own digital Who Am I? challenge. Some options include:
- **Word processing**
- **Drawing**
- **Imaging**
- **PowerPoint Presentations**
- **Audio production**

The picture above was taken using a digital camera. If you have the XO computer, you can use the digital camera built into the XO.

What can you "guess" about this person by looking only at his or her eyes?

Can you tell if these eyes belong to a boy or girl?

How old do you think this person might be? Is this someone your age or an older person?

Is this person happy or sad? What clues help you make your guess?

Using the digital camera in your XO computer, ask one of your classmates to take a close up picture of your eyes.

Help others take close up pictures of their eyes, too.

Your teacher will send you a photo of one of your classmates' eyes.

Carefully observe this photo, recording your observations and inferences about the identity of the person based only on the photo.

Who is looking back at you? What clues help you most when making your guess?

Over the next few classes, you and your partner are going to use your XO computers to record "clues" about your own identity. These clues will create a digital "Who Am I?" to share with others in your class.

Using some of the skills and tools of scientists, let's begin gathering clues that will be analyzed by others.

Explore

A. Measure Me – Acoustic Tape Measure and String

1. You and your partner are going to use the Acoustic Tape Measure tool, found on the XO computer, to measure and record your height. You'll need two XO computers for this activity.
2. Find a space where you can lay down on the floor or ground. Ask your partner to place one XO at your head and the other, facing the first computer, at your feet.
3. Use the journal or writing tools on you XO to create a simple data chart, like the one below, to record your height and other measurements.
4. Measure your partner's height and record this data.
5. Wrap a piece of string around the widest part of your head to measure the circumference of your head.
6. Use the acoustic tape measure on your XO laptops to measure the length of this string.
7. Record this measurement in your data chart.
8. Use string and the acoustic tape measure tool to gather these measurements:
   - length of your foot
   - length from your wrist to your elbow
   - wrist circumference
   - neck circumference
9. Measure, calculate and record this data for your partner

MEASURE ME DATE CHART

	Me (name)	My partner (name)
Height (cm)		
Head circumference (cm)		
Length of foot (cm)		
Length from wrist to elbow (cm)		
Wrist circumference (cm)		
Neck circumference (cm)		

MEASUREMENT RELATIONSHIPS

Use a word processing tool to start a journal to record answers to these questions.

1. Compare your height and your head circumference. Use the calculator to see if there's any relationship between these numbers.
2. Compare your partner's height and head circumference. Do you see any relationship between these numbers?
3. Compare the length of your foot to the measurement between your wrist and elbow.
4. Compare these same measurements for your partner. Do you see any relationships between these numbers?
5. Compare your wrist circumference and neck circumference.
6. Compare these measurements for your partner.
7. Do you see any relationships between these numbers?

Usually, there ARE relationships between the parts that you've measured. For most, your height is two to three times your head circumference.

Many people find that the length of their foot is almost the same as the distance between their wrist and elbow.

Most people find that the circumference of their neck is about twice the circumference of their wrist.

Even though you and your partner may have different measurements, the relationships between these measurements should be similar.

Use the drawing tool to show the comparison between the parts that you've measured.

1. Organize the "clues" that you've gathered about yourself into a digital "Who Am I." Include:
    *   The digital picture of your eyes
    *   Your "Measure Me" measurements
2. Consider including these clues in your "Who Am I."
    *   Use the drawing tool to draw a self portrait.
    *   Use the recording tool to record yourself humming.
    *   Use the writing tool to record answers to these questions.
        *   What's your favorite season?
        *   What's your favorite animal?
        *   What games do you like to play?
        *   What's your favorite subject?
3. Use the collaboration tool to share your clues with another student in your classroom. You may also use the collaboration tool to share your clues with other students around the world.
4. Think like a scientist to carefully observe, analyze and make inferences from the clues.
5. Use the journal tool to write a paragraph describing the person and analyzing the clues. Explain your thinking.

Digital "Who Am I" Rubric

Criteria	Exemplary	Satisfactory	Needs Improvement	Unsatisfactory
Your Digital Who Am I -- Planning	Thorough planning evident	Planning evident	Some planning evident	Limited planning evident
Content	Excellent detail and much variety	Good detail and much variety	Some detail and some variety	Lacks detail and variety
Technology Use to Demonstrate Understanding	Intuitive technology use with specific purpose	Technology use with purpose	Technology use with some purpose	Technology use with little purpose

Analysis Paragraph -- Observations	Thorough observations including many details	Many observations with some details	Few observations with few details	Limited observations with little or no details
Explanations	Thorough explanation of thought behind identifying the person from clues	Many details included in the thought behind identifying the person from clues	Few details included in the thought behind identifying the person from clues	Limited explanation with little or no details

Partner evaluation: What did each of you contribute to the task? How did you share the work?

Self Evaluation: What did you learn? What do you now know about how some body measurements compare with others?

Extend

Consider some of these ideas for extensions:

HOW BIG COMPARED TO ME?

1. In the metric system, 100 centimeters equals one meter. Centimeters and meters are "standard" measurements.
2. Use your height measurement as a standard "you" measurement. For example, if your height is 140 centimeters, we'll call that length one "Michael." Cut a piece of string to equal your height, or the height of one "you."
3. Use this string to measure other items in your room or school. What other items can you find that have the same length as your height?
4. How many "you" lengths of string does it take to measure the length of one wall in your classroom? Is this wall the same length as 10 of "you" placed end to end?
5. What are some benefits to comparing your own height to the length of your classroom?
6. Why isn't this a good way to measure length?

HOW MANY "YOU'S" WOULD FIT?

1. Complete some research to find out the length of some interesting items. For example:
   - The average length of a Blue whale is about 25 meters.
   - Dolphins average between 2.3 and 2.6 meters long.
   - The space shuttle is about 56 meters long
   - Giant Redwood trees may be between 50 – 85 meters long.
2. How many "you's" make up the length of a Blue whale?
3. Use the acoustic tape measure to mark off a distance of 25 meters.
4. Use the string that measures your height to see how many "you" lengths it takes to measure the length of the Blue whale.
5. How does your height compare to the length of the Blue whale?
6. How does your height compare to the length of the other items?
7. What are some benefits to comparing your own height to the length of these items?
8. Why isn't this a good way to measure length?

National Science Education Standards
Science as Inquiry
- Abilities necessary to do scientific inquiry
- Understandings about scientific inquiry

International Society of Technology Educators/National Educational Technology Standards
Basic Operations and Concepts
Technology productivity tools
Technology communications tools
Technology research tools
Technology problem-solving and decision-making tools

National Council of Teachers of Mathematics Standards
Measurement
Data Analysis
Problem Solving
Representation