August 17, 2002

Letter from the Future

by

Miss Camp

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June 14, 2003

Dear Mrs. Donlon,

I'm writing this letter to explain why my third grade class and I might be late getting back from our field trip to the Roberson Museum and Science Center. While we were there, we all went into the Time Machine they had on display. The sign said it was created from an inventor's imagination and that it wasn't real. Well, Lucia pushed the red button and all of a sudden the whole thing started shaking and spinning faster and faster. Little did we know, when it finally stopped, that we had landed on Mars exactly 100 years in the future! All we knew was that we needed to get back to school in time for our Square Dancing Show that evening!

Now that I'm in a spacecraft heading back to Earth (well, actually, now that I'm waiting for our spacecraft to be repaired after our little collision with some flying space junk), I have a few moments to write you this letter and tell you about what happened after the Time Machine lit up and started going berserk! As soon as it stopped moving, and all the lights on the control panel went out, we must have just stood there without making a sound for a whole five minutes! We kept looking to make sure our hands and feet and heads were still in place. Then we looked at Lucia! She smiled, said "Oops!" and tried hitting the red button again. Nothing happened. Next she tried hitting the green button. This time something happened.

The doors opened! We stepped outside and found ourselves in what looked to be a museum. There were all of these glass cases suspended in mid-

air, and each one contained something that looked awfully familiar! A sign said, "*Technology from 100 Years Ago on Planet Earth*!" We saw a calculator, an old Timex watch (still ticking ☺), a microwave oven, a laptop computer, a VCR, a cell phone, a sewing machine, a digital camera, a microscope, a book called *The Hobbit*, a baseball and bat, and even a Toyota Rav-4! Then, thankfully, we saw people!

The people we saw were a group of kids who turned out to be a class of third graders also on a field trip! They had taken the space bus over from their school on the larger of Mars' two moons, Phobos. They were at the *Hammer Exhibit* and couldn't figure it out! They thought it was really *cosmo* (which we found out means "cool") that we were from the time when all these artifacts had been around, and so we could tell them what a hammer was used for. They asked us if we would teach them how to play baseball! We explained that we needed to get back to Earth.

Their teacher thought about our problem and suggested that we go with them back to Phobos. She thought we would have a good chance of finding someone there who could help us. Since we had an hour to wait before their space bus was to leave, we decided to teach these new friends how to play baseball. When the first person hit the ball, it sailed right out into space! So much for baseball without Earth's gravity! Our new friends said we could play one of their games called Micro-Tag instead. We had to put on "micro-goggles." They are goggles fitted with a lens that is more powerful than an electron microscope! All of a sudden we could see the microscopic world being magnified

to the size of people! There were huge, scary looking creatures all around us. Our friends said they were friendly bacteria and viruses that were actually so small we couldn't see them without these special goggles! It turns out that they love to play Micro-Tag! They had a good sense of humor and were a lot of fun to play with. They were impressed with how high we could jump! I think that's because we were used to a different gravity.

At about 1/3 of Earth's gravity, the gravity on Mars wasn't the only new experience for us. We couldn't believe how different everything looked on Mars. Instead of the blues and greens we are used to seeing in Endicott, everything looked red. Red, red, and more red. Even the yellowish-brown sky turns red when the sun is rising or setting. Now that we were outside, all we could see was a red, dusty desert with lots of huge mountains, volcanoes, canyons, and dry riverbeds.

Even though we couldn't see any trees or water, the kids from Phobos told us that the frosted glass domes, the space stations, and even the spacecraft were filled with plants. We were so surprised! We didn't think plants could grow on Mars. You are going to be amazed at how it works! It's like this: Mars' crust is filled with iron. That's why it looks so red. That iron helps the plants to make chlorophyll, which is why plants look green. The chlorophyll uses the sun's energy to change carbon dioxide and water into breathable oxygen. Finding carbon dioxide wasn't a problem. The atmosphere of Mars is filled with it. The biggest problem was finding a source of water for the plants. Mars is so cold,

and there's not much pressure in the atmosphere, so water wants to either freeze into a solid or stay as a vapor in the air. It doesn't want to be a liquid.

The trick to finding liquid water is to look in the crevices to see what is flowing underground, and then to keep the water moving. As long as the water is moving, it is less likely to freeze. Adding salt helps too. Well, their bacteria buddies love swimming in the water, and that keeps the water moving! In fact, they've grown a man-made, or rather bacteria-made, lake of pure water! So water for the plants is provided courtesy of the planet's friendly bacteria. The reason the people on Mars want so many plants is because plants take carbon dioxide out of Mars' atmosphere and turn it into oxygen so people can breathe the air!

If figuring out how to survive the atmosphere on Mars wasn't exciting enough for you, wait until you hear how they survive the temperatures! You're not going to believe it! It can get as low as -220°F on its polar ice caps! We, thankfully, were near its equator, and it was actually about 50°F today. The only problem was that it would drop to -90°F tonight, so we had to get off the planet before then because we didn't have any of their specially-made spacesuits. Their suits are actually made for them by their friendly bacteria. Nothing costs any money there, by the way. They use a barter system. In exchange for the suits and the water, the people take the microscopic life forms on explorations with them throughout the solar system. It turns out they love to travel! But back to these suits, the bacteria make them out of a carbon compound we know as diamonds! That explains why they are such a beautiful, shiny, bluish-silver color.

The carbon compound can keep them warm in temperatures as low as - 220°F! We didn't want to be anywhere near the planet when it got that cold!

As much fun as we had meeting our new friends and playing Micro-Tag, we were glad when the space bus arrived. It only took us 20 minutes to fly over to Phobos. At the Phobos space station, a well-dressed robot came up to us, took one look at our clothes, and asked us what time we were from! When we told it we were from the year 2003 in Endicott, NY of planet Earth, and we needed to go back, it introduced us to someone who could help.

This someone turned out to be a robot named Quom! It was a pilot for Galactic Aviation. It agreed to take us back to our time and place in exchange for a front row seat at our square dancing show! We agreed. After saying good-bye to the class from Phobos, we climbed aboard Quom's spacecraft. We were pretty hungry, but they don't need food in 2103. They get all the nutrients they need from these vitamin pills that are supposed to taste like food. They have the the pizza pill, the potato pill, the corn pill, etc. We weren't quite that hungry! Quom's spacecraft had lots of room, and we loved the view of the stars whizzing by, as well as of other spacecraft coming and going. There was a lot of traffic! We even saw a traffic jam near the other moon, Deimos. At first I was thankful not to be stuck in a traffic jam, but as we accelerated to many times the speed of light, I have to confess that I felt a little envious of those who were in a nice, safe, standstill! But Quom, with his expert piloting and entertaining stories, soon had us settling back to relax and enjoy the ride! By listening to Quom as he shared

his hilarious adventures, we learned a lot about what life is like on Mars in the year 2103.

You better sit down. You are definitely NOT going to believe this! I'm still shaking from what I think must be shock, unless it is from this insane speed at which we're traveling! The kids, meanwhile, think it is SO *cosmo*! Well, I may as well tell you. Reading and Writing are obsolete! Yes, that's what I said. There are NO books, except in museums. In order to get information, or listen to a story, people don't have to read anything. They just access the memory chip implanted in their head! The memory chips were originally invented to increase one's memory capacity, but soon they came pre-loaded with every kind of information you can imagine. Now they are used as an additional source of information within one's own head. Everyone's like a walking encyclopedia!

Okay. So they don't have to read for information. But wouldn't you think they have to read and write in order to communicate with other people? No, that's why they have a transmitter chip, receiver chip, and translator chip also implanted in their brain. The transmitter chip sends thought waves to another person who receives them with his/her receiver chip. Once received, the translator chip can convert the incoming thought waves into sound waves, and listen to the voice of the person who sent the message. On the other hand, it can just receive the thought waves as they are. Yes, that means just what you think it means. It's like they can read each other's minds! To protect their privacy, they have blockers or something like that. The process of sending and receiving thoughts is only supposed to work if both the transmitter and receiver are tuned

to the frequency of the transmitter. Each person has his/her own unique frequency – as unique as a fingerprint. Of course, some mad scientists are working on technology to bypass those blockers, and allow them access to anyone's thoughts. That possibility sounds incredibly scary to me. I can just imagine there being Thought Police or something! So much for privacy!

Quom doesn't think the issue of privacy will ever be a problem. Of course, he, or she, or it, is a robot, and I'm not sure how important the concept of privacy is to a robot! Quom does make a good point, though, about how helpful it is to have the translator chip make it possible to understand what anyone is saying – including the bacteria, viruses, and people of all languages. In fact, no one actually know what language anyone speaks, because the translator chip automatically translates incoming thought waves into those of a frequency you can understand. Even more amazing to me is how one can simply think of a song and hear it played. It's pretty cool, or *cosmo*, how it works. When thinking of a song, the thought waves are transmitted to one's own receptors, translated into sound waves, and heard!

For those who want to hear music in one ear, and messages in the other ear, or to send and receive messages at the same time, or to increase their range of communication, there is a nearly invisible headset available that has a small antenna rise up behind each ear! Now there's a familiar image! ☺

Soon after Quom finished telling us about the time he used one of those headsets himself (which is a funny story so remind me to tell you later), we passed by our moon. *Wow!* It was so breathtaking. I was so caught up in

staring at it that I jumped when a voice came out of nowhere and said, “Welcome to Earth’s Orbits. My name is Mog and I will be your personal Space Traffic Controller. We are experiencing heavy traffic today with excessive amounts of space junk. Will you be requesting a rest stop before arriving at planet Earth?”

Just as we were about to say that we didn’t want a rest stop, we heard a large “Clang” and then something like a “Wump!” We began slowing down. Quom told us that we’d just been hit by a piece of space junk, and we needed to stop at the nearest Space Station for mechanical repairs.

Mog directed us to the Space Station at Orbit 428. So that is how we got to where we are now. While we are waiting for our spacecraft to be repaired, we’re hanging out in the space station’s restaurant because Mog told us it has real food simulators! Since food simulators are supposedly a “thing of the past” in 2103, that’s why it’s called the *Classic Café*. We just asked for hot fudge sundaes and have had our first taste. They aren’t too bad, other than the fact that they accidentally came out blue with purple stripes! Actually, the food simulator is the reason that I can even write this letter! Since writing is obsolete, there are no pens or pencils anywhere – except in museums! Quom, however, was able to modify the food simulator to create a pencil for me! He still can’t believe that I am actually writing to you instead of just transmitting my thought waves! He’s completely mystified as to how all these symbols, which we call letters, can be put together in different ways to sound like words!

Anyway, the mechanic had said it would take an hour or two for the spacecraft to be fixed, so we’ve started telling Quom about what it was like back

on planet Earth in the year 2003. I can't believe we are thinking in the past tense, when it is present tense for us! How confusing! We are so curious to find out if some of the problems in our world, such as world hunger, the common cold, and pollution ever get fixed. I can't listen to Quom and write at the same time, so I will pick this up when we get back on the spacecraft.

2 hours later…

We're back on board the spacecraft and on our way again. I only have a few minutes before it will get too bumpy to write, or so Quom tells me. I don't know what he means by "in a few minutes!" With all the high-speed swerving and maneuvering he has to do around space junk, I can barely write now! Even though the space junk seems to be everywhere, that's one of the problems from the past that Quom told us has pretty much been solved. It turns out that one of the kids in my class grows up to be a rocket scientist, and figures out how to launch spacecraft without using rockets! Since it's the rockets that create most of the space junk, it solved a big problem. If the amount of space junk had kept increasing, it would have become too dangerous for pilots to navigate their spacecraft through all of it! The reason it seems like there is so much space junk to us is because the amount of it kept increasing until this student reached 30 years old and came up with a new invention! Quom didn't want to tell us which one of the students would become this famous inventor, because he knew that affecting the past could affect the future. *Don't mess with the past.* That's his motto.

We are glad, though, that he let us know about how a few of our current problems will be solved at some point in the next hundred years. It gives us hope for the future. I'll tell you about the best solution of them all. Quom said that when the invention of the micro-goggles followed the invention of the translator chip, people were able to see the bacteria and viruses magnified to the size of humans, and understand them. They learned that these microscopic life forms just wanted to be friends. Now that they could communicate with each other, they did just that! The viruses began to help people rather than hurt them! Can you believe it? Communication and friendship was the cure to the common cold! Sorry, I'm speaking in past tense again! I'm still writing from a hundred years in your future, and everything that happened in those hundred years is past tense to the time that we are in now!

The last thing Quom said to us, before we left the Space Station, was rather cryptic. All he said was that Earth is not going to be a pretty picture in the year 2103, if people in our time of 2003 don't start thinking about possible solutions for some of our environmental problems – such as the rainforest depletion, global warming, arctic drilling, and diminishing natural resources. I think he said something about our really needing to come up with a new source of energy for our planet. He didn't want to say anything more than that. He just mumbled something about not messing with the past.

Quom might not want to mess with our past, but now that the spacecraft is starting to spin, and heading toward some sort of hole in space that is forming in front of us, I wonder if he's messing with our future! I hear him shouting that he

just adjusted the knobs on his control panel to the exact date and time that we left Earth, and we…

30 minutes later…

We made it! We're back! Sorry if I left you hanging earlier, but things got pretty hectic all of a sudden as our molecules started to shimmer and shake – doing what I call the *Time Warp Dance*. We just want to let you know, Mrs. Donlon, how much we LOVE being at this school! We hope you'll excuse us for being about an hour late from our field trip!

Sincerely,

Miss Camp and her 3rd grade class of 2003

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2 days later, personal journal:

We arrived back at school about an hour after we had left! We gave our letter to Mrs. Donlon, our school principal, and she thought it was very creative. I don't think she believed us. That night we invited Quom to our Square Dancing Show, and he grabbed a partner and do-ci-do'd right in! I noticed the headlines in the newspaper this morning read, "Mystery of the Vanishing Time Machine has Detectives Stumped." Too bad for them, but good for me, that they can't read my thoughts!

CREDITS

SOURCES for IDEAS used in Letter from the Future:

- Myself
- Phyllis Camp (mother)
- Don Camp (father)
- Doug Camp (brother)
- Brian Camp (brother)

RESOURCES for Letter from the Future:

http://education.jlab.org/itselemental/ele001.html

http://education.jlab.org/itselemental/ele006.html

http://humbabe.arc.nasa.gov/mgcm/faq/sky.html

http://stardate.org/resources/ssguide/mars.html

http://www.marstoday.com/viewpr.html?pid=7591

http://grs.lpl.arizona.edu/results/presscon1/

http://www.ars.usda.gov/is/AR/archive/oct98/crys1098.htm

http://www.cnn.com/2000/TECH/space/03/20/mars.oxygen.machine/

http://science.msfc.nasa.gov/headlines/y2000/ast29jun_1m.htm

http://www.thursdaysclassroom.com/13jul00/article2.html

http://www.chm.bris.ac.uk/motm/chlorophyll/chlorophyll_h.htm

http://scifun.chem.wisc.edu/chemweek/chlrphyl/chlrphyl.html

DIRECTIONS FOR THE PRE-WRITING STEP OF WRITING A LETTER FROM THE FUTURE

Grade Level: Grade 3 to adult

Materials:

- 5 W's Graphic Organizer
- Story Map Graphic Organizer
- Double-T Graphic Organizers (3)
- "My Writing Plan" Graphic Organizer

Pre-Writing Process:

- Choose a Main Idea (who or what are you writing about)
- Map Out the Story (using graphic organizers):

☑ **5 W's Graphic Organizer:**
Map out the Main Idea: Use the 5 W's Graphic Organizer to describe: Who, What, When, Where, Why, How

☑ **STORY MAP Graphic Organizer:**
Map out the Plot: Use a Story Map to describe a problem, events that help solve the problem, and the solution.

☑ **Map out the future!** What is it like in the future, and how does it compare to what it is like today?

A. **DOUBLE – T GRAPHIC ORGANIZER #1: The Setting (what it looks like):**
Compare what it looks like today with what it looks like in your setting for the future (Focus on WHERE we live):

1. **STEP 1:** One a Double T-chart, label the left column with the place and time of the present, and the right column with the place and time of the future setting.

2. **STEP 2:** In the center column, think of categories for what the nature of our world is like. (i.e. colors, landforms, bodies of water, climate, biomes, animals, plants. Add the category: Fun we can have in these Settings.

3. **STEP 3:** Fill out the left column. For each category, brainstorm a descriptive list of what the world has looked like to you (anywhere you have lived or visited). For the category of Fun, list the activities you have done in these settings (i.e. skiing, skating, para-sailing, snorkeling, fishing, camping, rappelling, etc.)

4. **STEP 4:** Where is the your setting for the future going to be? Are you in space? A colony on Mars? A space station? The Arctic Circle? A Rainforest? In a floating city about a mile above Earth? In a city at the bottom of the ocean? Add this location to the label of the column on the right. (NOTE: To tie in our study of the solar system, the location may be required to be somewhere in outer space – such as a colony on Mars, a space station, a colony on the moon, or inside a spaceship.)

5. **STEP 5:** Fill out the right column: Imagine your setting. Think about what you see with your eyes. Are there mountains? What color is the sky? Is there water? What color is it? Is it hot or color or just right? What activities can you do for fun in this setting? Write down everything you brainstorm in the right column.

B. DOUBLE – T GRAPHIC ORGANIZER #2: New Technology:
Compare how we live in today's setting to how we might live in our future's setting (Focus on HOW we live):

1. **STEP 1:** Brainstorm a list of what we need in order to survive (i.e. Shelter, Food, Water, certain range of outside temperature). List these in the middle column.

2. **STEP 2:** Brainstorm of a list of what we use in everyday life (i.e. communication, transportation, information, making food, entertainment & music, language, money, measurement, electricity, health care, education, government, etc.). List these down the middle column of the Double-T graphic organizer. These will be the categories that are compared. Draw lines to separate each category.

3. **STEP 3:** Label the left column with the place and time of the present, and the right column with the place and time of the future setting.

4. **STEP 4:** For each category, give examples of how we provide for it today, and then how it might be in the future. Focus on what technology we use for each category. Use imagination for what technology we might have in the future.

C. DOUBLE – T GRAPHIC ORGANIZER #3: Problems & Solutions: What are problems that we have in the world today, and will any of these be solved in the future? (Focus on the CAUSE and EFFECT between today's problems, solutions, new inventions, and what it's like in the future.)

1. **STEP 1:** Brainstorm list of problems in the world today. (i.e. space junk, rainforest deforestation, global warming, arctic drilling, need for alternate energy sources, terrorism, world hunger, pollution, etc.)
2. **STEP 2:** On a Double-T Graphic Organizer, label the columns, from left to right, ① Problem of Today, ② The Future Solution (if there is one), and ③ Effect on Future.
3. **STEP 3:** List your brainstormed problems down the left hand column. Draw a line under each problem.
4. **STEP 4:** Imagine how some of the problems could be solved. In the middle column, write what happens to solve the problem. If you decide that a problem doesn't get solved, then leave the middle column blank. In the right column, write down how either the unsolved problem, or the solution to a problem, affects the future.
5. **STEP 5:** Things to think about:
   - ✓ Is there any problem that would be humorous if it still remained? (i.e. cough medicine still tastes bad, traffic jams!)
   - ✓ Are there any new problems in the future that we don't have today?

- **Complete a Writing Plan:**
  - ☑ Main Idea: Who or What are your writing about?
  - ☑ Purpose: Why are you writing? To explain? To describe?
  - ☑ Form: What form will you use? (poem, letter, paragraph, etc.)
  - ☑ Audience: Who are your readers going to be? (Or, for a letter: Who are you writing to?)
  - ☑ Voice: How will your writing sound? (Serious, funny, etc.)

- **Make an Outline for the Sequence of Paragraphs** (See next page for an example outline.)

EXAMPLE OUTLINE FOR SEQUENCE OF PARAGRAPHS IN LETTER FROM THE FUTURE

(Categories depend on the story and author!)

SEQUENCE	TOPIC FOR EACH PARAGRAPH	GRAPHIC ORGANIZER
1	Introduction. Write one sentence for each of the 5 W's.	**5 W's**
2	The Problem. Describe what you are doing, and how a problem occurs. Begin the sequence of events that will help solve the problem.	**Story Map**
3	Introduce the setting. Categories on colors, landforms, biomes	**Double – T #1 (setting)**
4	Continue the setting. Categories on plants, air, water	
5	Finish the setting. Category on climate	
6	Return to Story Map and list another event(s) toward solving the problem.	**Story Map**
7	Introduce new ways of living (new technology). Category on information.	**Double-T #2 (new technology)**
8	Continue new ways of living (new technology). Category on communication.	
9	Finish new ways of living (new technology). Categories on language, music.	
10	Return to Story Map and list another event(s) toward solving the problem.	**Story Map**
11	Introduce changes that have solved some old problems. (Pick one.)	**Double – T #3 (problems & solutions)**
12	Continue changes that have solved some old problems. (Pick one.)	
13	Finish changes that have solved some old problems. (Pick one, or describe some problems that haven't been solved, or some new problems.)	
14	Finish the sequence of events that solves the problem (Story Map). Describe the solution.	**Story Map**
15	Conclusion	

Name: _____Miss Camp_____

Date: _____

5 W's GRAPHIC ORGANIZER

WHO?

My third grade class and I (the teacher, Miss Camp)

WHAT?

We Time Travel to the future on Mars. I write a letter to Mrs. Donlon, our principal, explaining why we might be late getting back from our field trip.

WHEN?

From 2003 to 2103

WHERE?

From Binghamton, NY to Mars and back.

WHY?

We were on a field trip at the Roberson Museum & Science Center when we entered what everyone thought was a fake Time Machine, and it worked!

HOW?

Technology from the future.

My Story Map __Miss Camp_____

Title: My Letter from the Future

Characters?

Miss Camp (myself)
My 3rd grade class
A class of 3rd graders on Mars
Quom, The Pilot
Mog, The Space Traffic Controller
The Spacecraft Mechanic
Mrs. Donlon

Setting?

The Robersom Museum & Science Center (Binghamton, NY)
Mars
Phobos
The Spacecraft
The Space Station at Orbit 428
2003, 2103

What is the problem?

Our class went on a field trip to the Roberson Museum & Science Center in 2003, went into a Time Machine on display (that the museum thought was fake), and accidentally ended up on Mars in the year 2103. We needed to get back to our classroom on planet Earth in time for our Square Dancing Show!

What was the solution?

We hired a pilot to take us back (in time for the square dancing) in her spacecraft – in exchange for promising her a front row seat at our square dancing show!

List the EVENTS on the back.

SEQUENCE OF EVENTS

1. After landing on Mars, we walked out of the Time Machine and found ourselves in what looked to be a museum. Glass cases seemed to be hanging in mid-air, and each one contained something that looked familiar. A sign said, "Technology from 100 years ago! We saw a calculator, an old Timex watch (still ticking), a microwave oven, a laptop computer, a VCR, a CD-Rom, a cell phone, a sewing machine, a digital camera, a microscope, a book called *The Hobbit*, a baseball bat and ball, and even a Toyota Rav-4!

2. We saw a group of kids trying to figure out what our hammer was used for, and we went up to them. We found out they were 3rd graders from Phobos who were on a field trip! They thought it was really *cosmo* (which we found out means "cool") that we were from the past, and knew what the hammer was used for! They asked us if we would teach them how to play baseball!

3. We told them we needed to get back to Earth. Their teacher said that they were leaving in an hour to go back to their school on Phobos (one of their moons), and we could probably find someone who could help us there.

4. While we were waiting, we taught them how to play baseball. Unfortunately, as soon as someone hit the ball, the lower gravity had it sailing out into space!

5. Our new friends said we could play one of their games called Micro-Tag instead. We put on goggles fitted with microscope lens. All of a sudden we could see the microscopic world! There were huge, scary looking creatures all around us. Our friends said they were bacteria and viruses that were actually so small we couldn't see them without these special goggles! They love to play micro-tag. It took us a while to get used to running because of the different gravity and the special spacesuits we had to wear outside.

6. After the game, we got on the space-bus with our new friends and their teacher. It only took 20 minutes to fly over to Phobos.

7. At the Phobos space station, a well-dressed robot came up to us, took one look at our clothes, and asked what time we were from! When we told it we were from the year 2003 in Endicott, NY, and we needed to go back, it introduced us to someone who could help us.

8. This someone turned out to be a robot named Quom! It was a pilot for Galactic Aviation. It agreed to take us back to our time and place in exchange for a front row seat at our square dancing show.

9. We agreed, and went with it and boarded its spacecraft.

10. On our return trip, Quom told us all about life on Mars in the year 2103.

11. Shortly after we passed our moon's orbit, we heard a voice that said, "Welcome to Earth's Orbits! My name is Mog and I will be your personal Space Traffic Controller. We are experiencing heavy traffic today with excessive amounts of space junk. Will you be requesting a rest stop before arriving at planet Earth?"

12. Just as were about to say that we didn't want a rest stop, we heard a large "Clang" and then a "Wump!" We began slowing down. Quom told us that we'd just been hit by a piece of Space Junk, and we needed to stop at the nearest Space Station for mechanical repairs.

13. Mog directed us to the Space Station at Orbit 428. While we were waiting for our spacecraft to be fixed, we told Quom about some of the problems our world was facing in our own time, and wondered if they had been solved. Quom told us about what problems had been solved in the last 100 years, and which ones were still the same.

14. When our spacecraft was repaired, Quom took us the rest of the way back to Earth. To get back about the same time we left, Quom entered the time we left Earth and that automatically adjusted our speed to where it would pass through time.

15. We arrived about an hour after we had left! We gave our letter to Mrs. Donlon and she thought it was very creative. I don't think she believed us. That night we invited Quom to our Square Dancing.

Name: _____Miss Camp_____

Double T-Chart
Compare/Contrast

Topic: _____SETTING for Letter from Future_____

Endicott, NY (Earth) 2003	CATEGORIES to COMPARE	Mars colony 2103
Blues and Greens: Blue sky, green grass, blue rivers & lakes. Leaves in fall: Red, yellow, orange. Winter: white snow. Spring: Colorful flowers.	**COLORS**	Red, shades of red, brownish red. Sky is yellowish-brown, at sunset/sunrise: pinkish-red.
Hills and valleys	**LANDFORMS**	Mountains, Volcanoes, Canyons
Rivers, streams, lakes, waterfalls (ocean is a few hours away by car)	**BODIES OF WATER**	None.
Temperate. Usually 70 - 90° in Summer, and 10 - 40° in Winter. Spring/Fall: 40 - 70°. Average annual rainfall 40", snowfall 29"	**CLIMATE**	Sub-Arctic! On the Equator: 70°F during day, -94°F at night. Poles: -220° F. Windy, dust storms, no rain.
Temperate Deciduous Forest	**BIOMES**	Desert
Deer, squirrels, wild turkeys, geese, groundhogs, fox, pet dogs & cats, rabbits…	**ANIMALS**	Microscopic bacteria and viruses (mostly friendly) – some as pets. A few dogs & cats with space helmets.
Lots of trees: Birch, Maple, Oak, etc. A few evergreen trees. Lots of flowers.	**PLANTS**	None that are real. Holograms of trees, plants, and flowers are projected throughout the colony.
Skiing, skating, Camping, Fishing, swimming, canoeing & kayaking, sailing	**FUN WE CAN HAVE**	Crater Hopping, Micro-Tag, Galactic Races, Long Jump

Name: _____Miss Camp_____

Double T-Chart
Compare/Contrast

Topic: ___NEW TECHNOLOGY for Letter from Future___

Endicott, NY (Earth) 2003	CATEGORIES to COMPARE	Mars colony 2103
Oxygen in Earth's atmosphere	**AIR**	See attached sheet.
Fruits & Vegetables, Meat, Dairy products, eggs, Breads & grains	**FOOD**	Food is unnecessary because all nutrients provided by pills: Meat pill, Potato pill, Corn pill, etc.
Houses, apartments, cabins, tents, trailers, hospitals	**SHELTER**	Frosted glass domes filled with plants.
Fresh water from dams, rivers, lakes, springs, faucets	**WATER**	See attached sheet.
Able to accommodate outside temp with proper clothing	**TEMPERATURE**	Special body suits designed to withstand temps up to -240°F.
Made from cotton, silk, leather, synthetics, etc.	**CLOTHING**	Material made from processing carbon crystals (diamonds).
Telephone, e-mail, web page, fax, walkie-talkie, mail, English	**COMMUNICATION & LANGUAGE**	See attached page.
Books, Internet, Newspaper, Magazines, etc.	**INFORMATION**	Books obsolete. No one reads or writes. See attached page.
Dollars, quarters, dimes, nickels, pennies	**MONEY**	Obsolete. Barter system used.
Not metric	**MEASUREMENT**	Metric
Tractors & plows, oven, stove, breadmaker, blender, mixer, microwave oven, refrigerator	**MAKING FOOD**	Obsolete. Although some food simulators still around from their creation 50 years earlier.
TV, radio, movie theater, DVDs, CD-Roms, Nintendo, Video games, stereos, Amusement Parks	**ENTERTAINMENT & MUSIC**	Holograms. Holodecks (similar to those seen in Star Trek NG). For music, see attached page.
Cars, planes, trains, subway, boats, bikes, buses, space shuttle, walking, horse & buggy	**TRANSPORTATION**	Personal spacecraft, Time travel, Space Buses, Solar Rovers
Gas, oil, wind, water, solar, wood, coal	**ENERGY & ELECTRICITY**	Earth: Hydrogen power (Hydrogen from water) Mars: Fusion power, Wind
Democracy, Governor of NY, President of U.S.	**GOVERNMENT**	12 elected *Martians of the Round Table* (including reps from the microscopic life forms & the robots.

ADDITIONAL SPACE FOR NEW TECHNOLOGY IN FUTURE

FINDING OXYGEN, WATER, AND AN ENERGY SOURCE ON MARS

Methods of getting water on Mars:

1) Frozen CO_2 (dry ice) at poles split into C + 0 + 0. Then H from soil combined with 0xygen to make H_20.

2) Parts of planet with high salt concentrations and atmosphere pressure slightly higher than its normal triple point have liquid water under surface. Friendly bacteria swim in the liquid water to keep it moving. As long as it keeps moving, it stays liquid. (like the blue ice seen flowing through crevices in glaciers).

3) Frozen H_20 at polar ice caps are heated by fusion power (iron in soil + acids $\rightarrow$ hydrogen gas) and thawing water piped to manmade lakes where friendly bacteria help out by swimming around to keep it moving.

4) There is water vapor in Mars' atmosphere, ice at the poles, and liquid below the surface. Keeping it liquid on the surface depends on raising the pressure of the atmosphere, keeping the freezing point lowered with salt, and keeping the water moving.

Methods of getting breathable oxygen into Mars' atmosphere:

1) Frozen CO_2 (dry ice) at poles split into C + O_2 , and C used to make the organic food pills.

2) Plants are cultivated for use in both spacecraft, space stations, and the colony. Plants breathe in the CO_2 from Mars' atmosphere, and breathe out O_2 . People breathe in the O_2 , and breathe out CO_2.

3) Humans on Earth developed a machine that will transform the CO_2 from Mars' atmosphere into O_2 . (They had it completed and ready for experimentation by the year 2001.

Method of getting an energy source on Mars:

1) Hydrogen power (Fusion power). (90% of universe composed of Hydrogen).
2) Jet fuel created by combining liquid hydrogen and liquid oxygen.

COMMUNICATION, LANGUAGE, AND INFORMATION IN THE YEAR 2103 (EARTH & MARS)

Communication:

- ✓ Transmitter chip implanted behind ear sends thought waves and converts to sound waves on other end.
- ✓ Receiver chip implanted behind ear converts incoming thought waves to sound waves using translator chip, or simply receives thought waves.
- ✓ For those who want to hear music in one ear, and messages in the other ear, or to send and receive communication simultaneously, or to increase their range of communication, there is a headset available that has a small antenna rise up behind each ear.

Language:

Different languages are not noticed because the translator chip automatically changes all thought waves to the same pattern.

Information:

Memory chip implants are available to increase one's memory, and to provide an additional source of information within one's head. People can carry extended memory chips with them.

Music:

Thought waves are converted to sound waves using the transmitter, translator, and receiver chips. Thinking of a song transmits thought waves which are translated into sound waves which are received.

Name: _____Miss Camp_____

Topic: _PROBLEMS & SOLUTIONS for Letter from Future___

Double T-Chart
Cause/Effect

"BEFORE" → PROBLEM OR SOLUTION CAUSES THE FUTURE TO BE… → "AFTER"

PROBLEM OF TODAY (ON EARTH, 2003) →	THE FUTURE SOLUTION →	THE EFFECT (ON EARTH, 2103)
SPACE JUNK making for hazardous flights through Earth's orbits.	Third grader from Miss Camp's class of 2003 grew up to become a rocket scientist, and figured out how to launch spacecraft without rockets, thus minimizing the amount of space junk. Because the amount of space junk continued to escalate prior to this invention, Space Traffic Control (based at a Space Station) was established to provide assistance to spacecraft pilots in navigating through Earth's orbits.	Traffic jams can still be a problem – now in space. Space junk is a problem but a manageable one with new ways of launching spacecraft, and with Space Traffic Controllers. Space Traffic Controllers are friendly and enjoy their job.
Rainforest Deforestation	Continued with no solution. Eventually caused →	Contributes to Global Warming. Less wood available for energy source and for making paper.
Global Warming	Continued with no solution. Eventually caused →	New York becomes barren, arid desert.
Arctic Drilling	Heavy drilling began in 2010. Continued with no solution. Eventually caused →	Used up the oil supply. No more oil. Many species extinct to destruction of habitat.
Need for Alternate Energy Source	Technology for extracting solar energy improved. →	No more dams (barren, little water), no more oil, natural gas, wood, or coal for energy. Using solar energy only.
World Hunger	Invention of the food pill. →	World hunger obsolete. Obesity obsolete.
Pollution	World ran out of oil, natural gas, and wood as sources of energy. →	Problem of pollution is solved without oil, natural gas, wood, or coal to burn.
Cancer	→	Still a problem.
Common Cold AIDS Flu	With the invention of goggles fitted with lens more powerful than the current electron microscope, people could see bacteria and viruses magnified to the size of humans. With the invention of the translator chip, people communicated with the viruses, found out they just wanted to be friends with us, and the viruses started to help rather than hurt us. →	No more Colds! No more flu! No more AIDS!! Viruses are our friends!

Name: _____Miss Camp_____

Topic: _PROBLEMS & SOLUTIONS for Letter from Future___

POSSIBLE PROBLEMS IN THE FUTURE (CREATED BY NEW TECHNOLOGY):

1) Communication by thought waves works because everyone is on a different frequency. (Like a fingerprint, it is unique to the individual. Some scientists on Earth, some employed by our government and some not, are working on tracking our thought waves, bypassing our blockers, and accessing our thoughts. With this technology, there could be Thought Police who invade our privacy and attempt to control our thoughts.

2)

Name: __Miss Camp _____

Date: _____

My Writing Plan

☑ Main Idea: Who or What are you writing about?

I, a third grade teacher, am writing a letter from the future to our school principal, Mrs. Donlon. I am writing about what it is like on Mars, in space, and on Earth in the year 2103.

☑ Purpose: Why are your writing? To explain? To describe?

I am writing to explain how we accidentally time-traveled to Mars, and why we might be late getting back from our field trip to the local museum. I am writing to describe what it looks like on Mars in the future, what it is like to live there, and how some of Earth's problems in 2003 have been solved.

☑ Form: What form will you use? (poem, letter, paragraph?)

I am using the form of a letter. I made an outline for paragraphs so I will know when to start a new paragraph.

☑ Audience: Who are your readers going to be?

My audience will be the person I am writing to: Mrs. Donlon, our school principal.

☑ Voice: How will your writing sound? (Serious, funny, etc.)

Some of the parts about what we are doing will sound funny. When I am describing what it is like on Mars in the future, it will probably sound serious.

BLANK GRAPHIC ORGANIZERS

TO USE FOR PRE-WRITING

A LETTER FROM THE FUTURE

(FOCUS ON CONTENT/IDEAS & ORGANIZATION)

Name: _____

Date: _____

5 W's GRAPHIC ORGANIZER

WHO?

WHAT?

WHEN?

WHERE?

WHY?

HOW?

My Story Map by _____

Title:

Characters?

Setting?

What is the problem?

What was the solution?

List the EVENTS on the back.

Name: _____

Double T-Chart
Compare/Contrast

Topic: _____SETTING for Letter from Future_____

WHERE & WHEN in FUTURE

Endicott, NY (Earth) 2003	**CATEGORIES to COMPARE**	
Blues and Greens: Blue sky, green grass, blue rivers & lakes. Leaves in fall: Red, yellow, orange. Winter: white snow. Spring: Colorful flowers.	**COLORS**	
Hills and valleys	**LANDFORMS**	
Rivers, streams, lakes, waterfalls (ocean is a few hours away by car)	**BODIES OF WATER**	
Temperate. Usually 70 - 90° in Summer, and 10 - 40° in Winter. Spring/Fall: 40 - 70°. Average annual rainfall 40", snowfall 29"	**CLIMATE**	
Temperate Deciduous Forest	**BIOMES**	
Deer, squirrels, wild turkeys, geese, groundhogs, fox, pet dogs & cats, rabbits…	**ANIMALS**	
Lots of trees: Birch, Maple, Oak, etc. A few evergreen trees. Lots of flowers.	**PLANTS**	
Skiing, skating, Camping, Fishing, swimming, canoeing & kayaking, sailing	**FUN WE CAN HAVE**	

Name: _____

Double T-Chart
Compare/Contrast

Topic: _____SETTING for Letter from Future_____

WHERE & WHEN in PRESENT	CATEGORIES to COMPARE	WHERE & WHEN in FUTURE
	COLORS	
	LANDFORMS	
	BODIES OF WATER	
	CLIMATE	
	BIOMES	
	ANIMALS	
	PLANTS	
	FUN WE CAN HAVE	

Name: _____

Double T-Chart
Compare/Contrast

Topic: ___NEW TECHNOLOGY for Letter from Future___

Endicott, NY (Earth) 2003	CATEGORIES to COMPARE	WHERE & WHEN in FUTURE
Oxygen in Earth's atmosphere	**AIR**	
Fruits & Vegetables, Meat, Dairy products, eggs, Breads & grains	**FOOD**	
Houses, apartments, cabins, tents, trailers, hospitals	**SHELTER**	
Fresh water from dams, rivers, lakes, springs, faucets	**WATER**	
Able to accommodate outside temp with proper clothing	**TEMPERATURE**	
Made from cotton, silk, leather, synthetics, etc.	**CLOTHING**	
Telephone, e-mail, web page, fax, walkie-talkie, mail, English	**COMMUNICATION & LANGUAGE**	
Books, Internet, Newspaper	**INFORMATION**	
Dollars, quarters, dimes, nickels, pennies	**MONEY**	
Not metric	**MEASUREMENT**	
Tractors & plows, oven, stove, breadmaker, blender, mixer, microwave oven, refrigerator	**MAKING FOOD**	
TV, radio, movie theater, DVDs, CD-Roms, Nintendo, Video games, stereos, Amusement Parks	**ENTERTAINMENT & MUSIC**	
Cars, planes, trains, subway, boats, bikes, buses, space shuttle, walking, horse & buggy	**TRANSPORTATION**	
Gas, oil, wind, water, solar, wood, coal	**ENERGY & ELECTRICITY**	
Democracy, Governor of NY, President of U.S.	**GOVERNMENT**	

ADDITIONAL SPACE FOR DESCRIBING HOW

PEOPLE LIVE IN THE FUTURE

Name: _____

Double T-Chart
Compare/Contrast

Topic: ___NEW TECHNOLOGY for Letter from Future___

WHERE & WHEN in PRESENT	CATEGORIES to COMPARE	WHERE & WHEN in FUTURE
	AIR	
	FOOD	
	SHELTER	
	WATER	
	TEMPERATURE	
	CLOTHING	
	COMMUNICATION & LANGUAGE	
	INFORMATION	
	MONEY	
	MEASUREMENT	
	MAKING FOOD	
	ENTERTAINMENT & MUSIC	
	TRANSPORTATION	
	ENERGY & ELECTRICITY	
	GOVERNMENT	

Name: _____

Topic: _**PROBLEMS & SOLUTIONS** for Letter from Future___

Double T-Chart
Cause/Effect

"BEFORE" → PROBLEM OR SOLUTION CAUSES THE FUTURE TO BE… → "AFTER"

PROBLEM OF TODAY (ON EARTH, 2003) →	**THE FUTURE SOLUTION** →	**THE EFFECT (ON EARTH, 2103)**
SPACE JUNK making for hazardous flights through Earth's orbits.		
Rainforest Deforestation		
Arctic Drilling		
Need another energy source		
World Hunger		
Pollution		
Common Cold		

Name: _____

Topic: _**PROBLEMS & SOLUTIONS** for Letter from Future___

ADDITIONAL SPACE

POSSIBLE PROBLEMS IN THE FUTURE (CREATED BY NEW TECHNOLOGY):

1)

Name: _____

Topic: _**PROBLEMS & SOLUTIONS** for Letter from Future___

Double T-Chart
Cause/Effect

"BEFORE" → PROBLEM OR SOLUTION CAUSES THE FUTURE TO BE… → "AFTER"

PROBLEM OF TODAY (ON EARTH, 2003) →	**THE FUTURE SOLUTION** →	**THE EFFECT (ON EARTH, _____)**

Name: _____

Date: _____

My Writing Plan

☑ Main Idea: Who or What are you writing about?

☑ Purpose: Why are your writing? To explain? To describe?

☑ Form: What form will you use? (poem, letter, paragraph?)

☑ Audience: Who are your readers going to be?

☑ Voice: How will your writing sound? (Serious, funny, etc.)

STUDENTS HELP TO CREATE RUBRIC

Name: _____ Date: _____

Content/Organization Score: _____

RUBRIC FOR LETTER FROM THE FUTURE: CONTENT/IDEAS & ORGANIZATION

	EXEMPLARY "4"	PROFICIENT "3"	DEVELOPING "2"	BEGINNING "1"
CONTENT & IDEAS				
ORGANIZATION				

Name: _____ Date: _____

Word Choice/Conventions Score: _____

RUBRIC FOR LETTER FROM THE FUTURE: WORD CHOICE, CONVENTIONS, & PRESENTATION

	EXEMPLARY "4"	PROFICIENT "3"	DEVELOPING "2"	BEGINNING "1"
WORD CHOICE	A variety of "transitional words" are used. All are used effectively. (so, also, therefore, in addition, now, instead, however, even though, first, next, then, after that, last, finally)	A few "transitional words" are used. All are used effectively.	Some "transitional words" are used. Not all are used effectively.	No attempt at using "transitional words."
	Uses many juicy words. All are used correctly.	A small number of juicy words are used. All are used correctly.	Some juicy words are used correctly.	No attempt at juicy words.
CONVENTIONS	All capitals are used correctly.	Most capitals are used correctly.	Some capitals are used correctly.	Lack of capitals makes the writing difficult to read.
	All punctuation is used correctly.	Most punctuation is used correctly.	Some punctuation is used correctly.	Lack of punctuation makes the writing difficult to read.
	All grammar is correct.	Most grammar is correct.	Some grammar is correct.	Lack of correct grammar makes the writing difficult to read.
	All spelling is correct.	Most spelling is correct.	Some spelling is correct.	Lack of correct spelling makes the writing difficult to read.
PRESENTATION	First line is indented, and all other lines make a straight edge.	First line is indented, but other lines do not make a straight edge.	First line is not indented. Other lines make a straight left edge.	First line is not indented. Lines do not make a straight left edge.
	Handwriting is very neat ("best handwriting") and there is space between words.	Handwriting is readable but could be neater. There is space between words.	Handwriting is sloppy. There is space between words.	No space between words. **OR** Handwriting is difficult to read.