

Stroke

THE NUMBER THREE KILLER IN NORTH CAROLINA

Your tribe must survive stroke by using the tools of education and action.

Your challenge is to draw picture stories on stroke.

Survival Plan: Pictures Worth a Thousand Words

By Ann Perry
Alamance Community College

Background

Level: My class is a lower level mixed group, primarily Hispanic in background. An instructor can adjust this project for higher levels of English competence.

Objective: Students will

- use repetitive activities to become familiar with words associated with stroke and understand their meanings
- demonstrate their learning about stroke by drawing picture stories

Time: My class meets Monday through Friday, for three hours a day. We spent approximately three weeks on this challenge, using one to two and a half hours each day.

Approach: Repetition, repetition, repetition. We used many similar materials. Handouts, exercises, and samples of student work are **noted in bold within the project plan** and included after each day of the plan. Materials from the internet are listed with their website addresses.

Education and Action

Day One

Introduction

I introduced this Survivor challenge to my students on the day before Thanksgiving break. I told them that we had been given a special challenge, and I would need their help in completing it.

I wrote on the board

S ymptoms

T reatment

R ecovery

O erview

K ills

E xercises

I went over the word stroke and each of the words making up the acrostic for STROKE. I told them we would be learning about all of these things, but not necessarily in the order shown. They seemed eager to return and to participate in this challenge.

Day Two

Guest Health Educator – What is a Stroke?

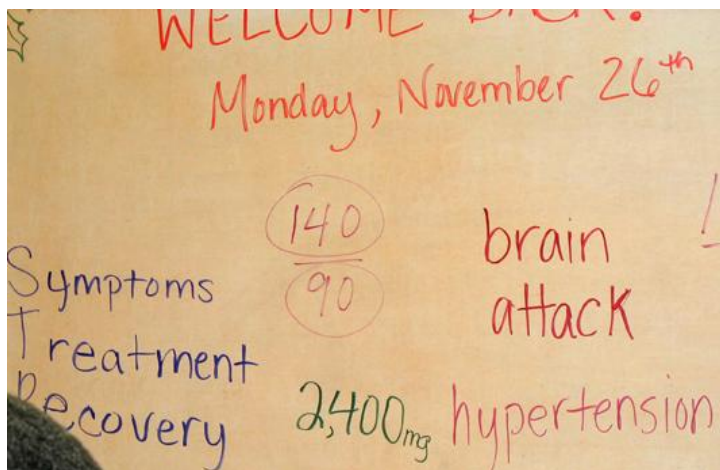
I rewrote the word STROKE on the board. As the students returned from vacation, I introduced them to Vicki Perry. Vicki is pursuing a double major, Nursing and Health and Exercise Science, at Lenoir Rhyne College.



Vicki began by asking students if they remembered what each letter stood for. As they remembered, she gave them a small prize.

Then she explained what causes a stroke, using the **attached handout** entitled *What is a Stroke*, which the class read together.

Ms. Perry explained what happens when a



person has a stroke by showing two rubber bands, one thin and very stretchable, the other very thick and hard. She explained that, when the inside of the blood vessels become clogged, the vessels begin to harden and the blood flow is interrupted.

Then, by inflating a balloon, Ms. Perry demonstrated what happens when a blood vessel clogs and the blood continues to flow into it: the vessel bursts and there is a hemorrhage, i.e., the blood flows freely into the part of the body where the vessel burst.

When a blood vessel is only partially clogged, the blood supply is limited, causing a lack of oxygen to the brain and often some type of paralysis. To illustrate this concept, Ms. Perry used a handout from <http://www.nc-net.info/>. (To



locate the handout, click on *Teaching Resources* in the menu on the left side of the screen at <http://www.nc-net.info/>. Then click on *ESL* in the drop-down menu that appears. Scroll down and click on *SALSA* under Alamance County Partners. Click on *Heart Disease* in the list of lesson plans and scroll to page 8, *The Progression of*

Heart Disease, for a Spanish/English explanation and a good illustration.)

NAME _____
My Blood Pressure on 11/26/07 _____

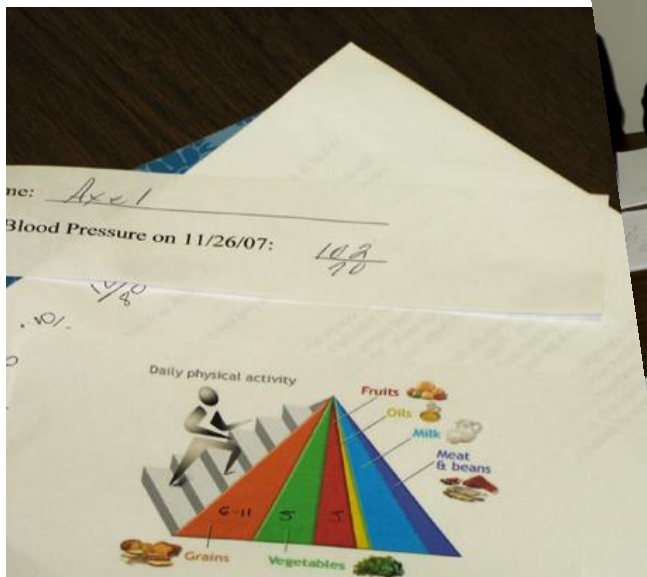
Next she took everyone's blood pressure. After giving examples of healthy blood pressure, which is always below 140/90 (some recent research recommends lower), she gave each student a card with his/her own blood pressure written on it. She further

explained to the students that they can chart their own blood pressure by using the cuffs found in pharmacies around town.

As the students were having their pressures checked, she answered their questions concerning stroke. She explained that another word for high blood pressure is hypertension, and another word for stroke is "brain attack." We repeated this many times so students would not forget. These were new words for many of them.



Ms. Perry then gave each of the students a copy of the U.S. Department of Agriculture food pyramid (http://www.ifpa-fitness.com/Fitness-Resources/Charts/Food_Guide_Pyramid.htm). She explained the good foods and the bad foods, stressing a proper balance of all foods to ensure healthy bodies.





We concluded this lesson by identifying “stroke words” in a word search (**copy included**).

What is a Stroke?

- **Stroke is the third leading cause of death in America and the number one cause of adult disabilities.**
- **80% of strokes can be prevented.**

A **stroke** or “**brain attack**” occurs when

- a blood clot blocks an artery (a blood vessel that carries blood from the heart to the body)
- a blood vessel (a tube through which the blood moves through the body) breaks. This interrupts the blood flow to an area of the brain.

When either of these things happens, cells begin to die and brain damage occurs.

When brain cells die during a stroke, abilities controlled by that area of the brain are lost. These abilities include

- speech
- movement
- memory

How much a stroke patient is affected depends on where the stroke occurs in the brain and how much the brain is damaged. For example, someone who has a small stroke may have only minor problems such as weakness of an arm or leg. People who have larger strokes may be paralyzed on one side or lose their ability to speak.

Some people recover completely from strokes, but more than 2/3 of stroke victims will have some type of permanent disability.

Stroke Word Search

Words

t	b	l	o	o	d	x	d	m	z	blood
r	s	x	e	r	a	c	n	s	s	brain
e	e	y	d	r	i	s	k	m	m	care
a	d	h	m	x	r	d	i	o	r	criteria
t	l	i	a	p	e	i	l	t	d	diet
m	x	p	m	b	t	n	l	p	i	disabled
e	d	c	c	a	i	o	s	m	s	exercise
n	n	n	i	a	r	b	b	y	a	heart
t	v	d	r	r	c	y	u	s	b	kills
x	h	h	i	v	e	p	p	k	l	nutrition
u	v	e	x	e	r	c	i	s	e	paralysis
n	u	t	r	i	t	i	o	n	d	pyramid
l	o	t	r	a	e	h	n	v	a	rehab
s	n	i	e	v	p	q	d	x	q	risk
q	p	a	r	a	l	y	s	i	s	symptoms

Day Three

Stroke Prevention

We began this day by discussing stroke prevention measures. (Note: The National Stroke Prevention Association gives stroke prevention guidelines at their website <http://www.stroke.org>. Click on *Prevention* in the bar across the top of the screen.) We talked about diet, exercise, and good health habits.

- We discussed in detail the Food Pyramid, which was introduced the day before. Today we used an exercise on food choices (**copy included**) and worked on determining which foods are good for you and how many of each you should eat.
- We also talked about the dangers of excessive drinking and of smoking.
- As a group, we did some light exercises and talked about other exercises that are helpful.
- As a summary, students drew pictures of types of “stroke prevention.” **Two examples are included on the following pages.**

Stroke Risk Factors

Finally, I gave the students a handout about stroke risk factors (**copy included**), which we read aloud and discussed.

Good choices

Food Choices

Bad Choices



Ice cream

fried eggs

hamburgers

Boiled eggs

buttered rolls

grilled steaks

Candy bar

coolies

unsweet tea

Buttered rolls

mayonnaise

salads

Wheat bread

ham biscuits

hot dogs

Spinach

doughnuts

grilled onions

Rice with gravy

celery

sausages

Sweet potatoes

water

apples

Bananas

fried pork chops

broccoli

Mashed potatoes

sodas

carrots

Baked squash

grilled chicken

orange juice

Baked potatoes

sweet tea

cabbage

Milk

salt

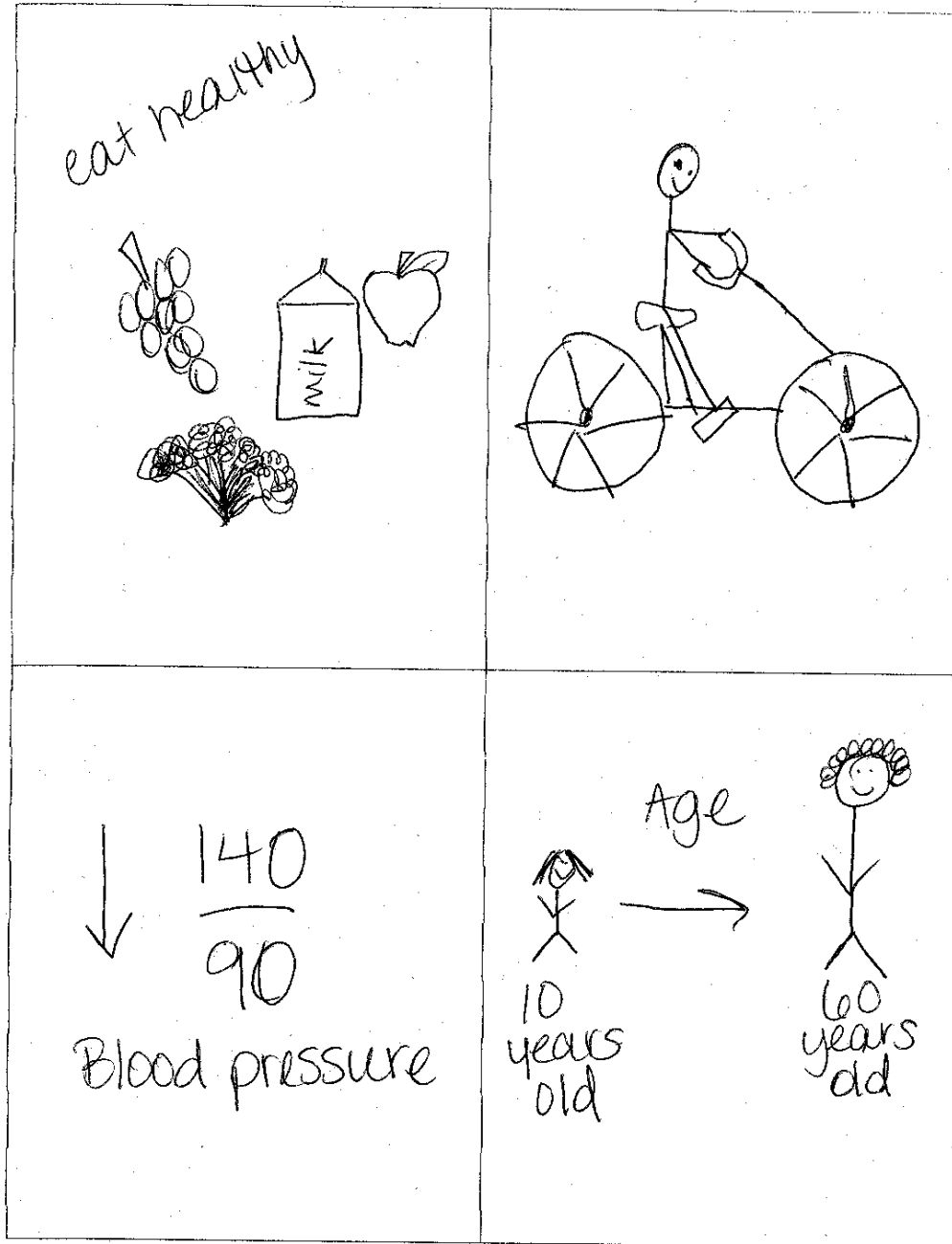
bacon

pecan pie

chocolate cake

fat free salad dressings

Stroke Prevention



Axel

Stroke Prevention



STROKE RISK FACTORS

Am I at risk for a stroke? Anyone can have a stroke, but your chances for having a stroke increase if you meet certain criteria.

Some of these criteria, called risk factors, are beyond your control:

- being over 55
- being male
- being African American, Hispanic or an Asian/Pacific Islander
- having a family history of stroke

Other stroke risk factors are controllable:

- diet
- weight
- exercise
- alcohol consumption
- smoking

Day 4

Review

To review yesterday's lesson, I gave students a list of foods and asked them to put the foods under the proper headings of vegetables, grains, or fruits (**copy included**).

We also did an activity on making choices (**copy included**). Students had to decide which items listed were good and which were bad choices.

Stroke Recognition

We entered into a discussion about how to recognize when a person was having a stroke. The stroke victim might

- have slurred speech
- have severe headaches
- pass out
- drop an item they are holding
- have blurred vision
- stumble and fall

As we named each of these reactions, I demonstrated what this might look like in reality.

We concluded this discussion by talking about what to do if we think someone is having a stroke, i.e., call 911 to get EMT's to come and check the person's vital signs.

Summary Activities

Students drew pictures of persons who might be having a stroke, thereby depicting what they had learned about stroke, calling 911, going to the hospital (**sample included**).

On this same day, we had a short quiz of stroke words (**copy included**) to recap the things we had discussed thus far.

What Is It?

Place the foods listed below in the proper categories

Vegetables

Grains

Fruits

lettuce
rice
bread
apples
oranges
tomatoes
onions

radishes
bananas
corn
rolls
strawberries
cabbage
cauliflower

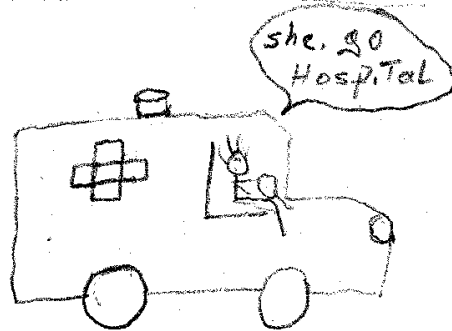
cereal
cherries
bagels
pears
broccoli
oatmeal
cherries

Making Choices

Write the good choices in the blanks on the left side of the paper and the bad choices on the right side of the paper.

	Good Choices	Bad Choices
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____

1. have an ice cream for a snack
2. watch TV for two hours
3. take a walk in the park
4. eat an apple for dessert
5. have a Whopper burger for lunch
6. drink sodas for breakfast
7. drink milk with a sandwich for lunch
8. choose a baked potato instead of French fries
9. don't go to the doctor for check-ups
10. eat a salad for lunch instead of a steak



McGee 11/27/07

Stroke Words

Choose the correct answer from this list and write it in the blank.

- | | |
|-------------------|------------------------------|
| a. tingling | i. salt |
| b. death | j. oils |
| c. vegetables | k. fish |
| d. "brain attack" | l. a tube that carries blood |
| e. burst | m. five |
| f. stroke | n. lower |
| g. exercise | o. grains |
| h. hypertension | |

1. The third leading cause of death in adults in the United States is _____.
2. Another name for a stroke is _____.
3. What is another word for high blood pressure? _____
4. What can you do rather than watch TV to prevent a stroke? _____
5. In the food pyramid, you should have the most servings of _____.
6. Which food should you have the least amount of servings? _____
7. Green and leafy _____ are a good diet choice.
8. Leave off most of the _____ that is used in seasoning when you cook.
9. When the blood vessels are blocked, they often _____.
10. How many servings of fruit should you have each day? _____
11. One symptom of a stroke is _____ in the hands or feet.
12. Stroke is the number one cause of _____ in adults in the U.S.
13. What is a blood vessel? _____
14. Good blood pressure should be _____ than 140/90.
15. _____ are the better health meats to eat.

Day 5

Review Day

Exercise 1

To help students become more familiar with the words related to a stroke, I wrote some “stroke spelling words” on the board with the vowels missing. The words I used are shown below on the left, some old and a few rather new ones. (The answers are on the right.)

1. h _ gh bl _ _ d pr _ ss _ re high blood pressure
2. br _ _ n _ tt _ ck brain attack
3. hyp _ rt _ ns _ _ n hypertension
4. p _ r _ lys _ s paralysis
5. pyr _ m _ d pyramid
6. n _ tr _ t _ _ n nutrition
7. d _ _ t diet
8. d _ _ th death
9. bl _ _ d v _ ss _ ls blood vessels
10. v _ _ ns veins
11. t _ ngl _ ng tingling
12. _ mb _ l _ nce ambulance
13. h _ sp _ t _ l hospital
14. r _ c _ v _ ry recovery
15. th _ r _ py therapy

Exercise 2

We also did an oral review, answering some questions related to the areas we had covered. The questions were:

1. What is another name for a stroke?
2. What is another word for high blood pressure?
3. What is a good blood pressure?
4. How many grains from the food pyramid should you eat each day?
5. How many milk products from the food pyramid should you consume each day?
6. What happens if a blood vessel is clogged and bursts?
7. What are three signs of a stroke?
8. Name three things you can do to help prevent a stroke.
9. Name three symptoms you can recognize when a person is having a stroke.
10. What should you do if you think a person is having a stroke?

Exercise 3

Finally, students completed the short exercise shown on the next page (**copy included**).

Select the correct answers for the following statements.

1. (Smoking, Smiling) is a contributing factor to having a stroke.
2. Strokes are caused by interrupted (blood, balloon) flow.
3. Another name for the stroke is (heart, brain) attack.
4. Blood (vessels, violins) carry blood through the body.
5. When a blood vessel is clogged the vessel will (bounce, burst).
6. One symptom of a stroke is a (tingling, tempting) sensation in the fingers.
7. If you think a person is having a stroke, you should call (their mother, 911).
8. Proper (noodles, nutrition) is a good stroke preventative.
9. Eating lots of fruits and (vegetables, vitamins) will also help prevent strokes.
10. (Soap, salt) should be used in very small quantities as a seasoning.

Use some of the information you have learned to write 3 sentences about strokes.

1. _____

2. _____

3. _____

Day 6

Right Brain Stroke

Today we talked about the consequences of a “right brain” stroke, guided by a handout (**copy included**) that gives the possible results of a “right brain” stroke. The students asked many questions, particularly about the things we should do/should not do with a person who has had a right brain stroke, and the reasons why we should do them.

Right Brain Stroke

A. The right side of the brain controls the left side of the body. The right side of the brain also helps the person with thinking. The person with a right brain stroke often speaks fine – language is not usually a problem – but there are many changes in

1. decisions
2. judgment
3. planning
4. emotion
5. visual perception of surroundings
6. reasoning and problem solving
7. memory

B. A person who has a stroke on the right side of the brain may have problems with the following:

1. Communication

- starting a conversation
- taking turns in conversation
- rambling speech
- staying on the topic
- writing and spelling

2. Movement

- paralysis or weakness on the left side of the body
- poor balance
- loss of ability to plan how to move
- poor coordination
- eye coordination
- too much or too little muscle tone (flexibility of muscles)
- tires more easily
- swallowing
- cannot move very fast

3. Vision and touch

- increased or decreased sensitivity to touch
- tendency to ignore items on the left side
- vision changes such as tunnel vision, double or blurred vision
- trouble judging distance

4. Thinking behavior

- short attention span; easily distracted
- problems finishing long tasks (concentration)
- difficulty remembering
- difficulty learning new information
- trouble with time – 5 minutes might seem like an hour
- continually repeat things
- trouble adjusting to change
- cannot use money or make change
- cannot do simple math problems or dial a telephone

5. Denial of disability

- may think they can live alone, or shop alone; however, they need help with grooming habits (brushing teeth, dressing, bathing, etc.).
- may think they are just as they were before the stroke happened. This is a safety risk, and the patient should not be left alone because they can hurt themselves or someone else.

6. Impulse control

- spends an excessive amount of money on trivial things
- tries to give money away
- does not realize the value of personal belongings

7. Rambling speech

- words make no sense
- words are in the wrong sequence in a sentence

8. Trouble paying attention

- has short attention span
- jumps from one topic to another

9. Poor memory

- cannot remember birthdays, anniversaries, home address, or telephone number--things that were ordinary before the stroke

10. Awareness of surroundings

- not aware of where he/she is. Often a patient in a rehab home will beg to return home, but they are thinking about places they lived in the past, like during their childhood.

11. Dispositions change

- often irritable
- shows lack of interest in things they once enjoyed
- often gets confused
- has repeated temper flare-ups
- makes sudden or quick movements

Things to do or not to do with a right brain stroke:

DO

Reason

Approach from the left side

This makes the person more aware of the left side

Slow the person down if they are moving too fast.

Moving too fast could cause harm

Sit next to the person. Place a hand arm to silence or limit the behavior.

Helps stop or limit on the on inappropriate behavior

Keep a day-to-day routine.

Repetition will help memory.

Give reminders and simple directions to finish a task.

Needs reminders to finish task (short attention span)

Point out effects of the stroke

Reminds the person of problems and increases awareness

Give instructions in simple terms and repeat as often as necessary.

Repetition will help poor memory

Provide distraction when the person cries and laughs easily or continues to repeat the same word or expression.

This will help refocus the person to limit their emotional inability and perseverance

Allow enough time for the person to talk.

The person may need time to gather thoughts

DON'T DO

Reason

Argue with the stroke survivor

Reasoning is impaired

Talk about the person

The person is an adult

Yell at the person.

The person is not hard of hearing

Day 7

Cooking and Eating Habits

Although I had originally planned to discuss the consequences of a “left brain” stroke on this day, the students were asking questions about diet and cooking habits, so we took a day for a discussion of cooking and eating habits.

I listed the following food items on the board and asked students to decide which ones were good choices and which were bad choices. They took turns in going to the board and circling either a good or bad choice.

ice cream	fried eggs	hamburgers	boiled eggs
buttered rolls	grilled steaks	candy bars	cookies
unsweet tea	salads	ham biscuits	hot dogs
wheat bread	mayonnaise	spinach	doughnuts
grilled onions	celery	sausages	bananas
rice with gravy	sweet potatoes	water	apples
fried pork chops	broccoli	mashed potatoes	sodas
carrots	baked squash	grilled chicken	orange juice
baked potatoes	sweet tea	cabbage	milk
salt	bacon	pecan pie	chocolate cake
fat free salad dressing		rice with gravy	

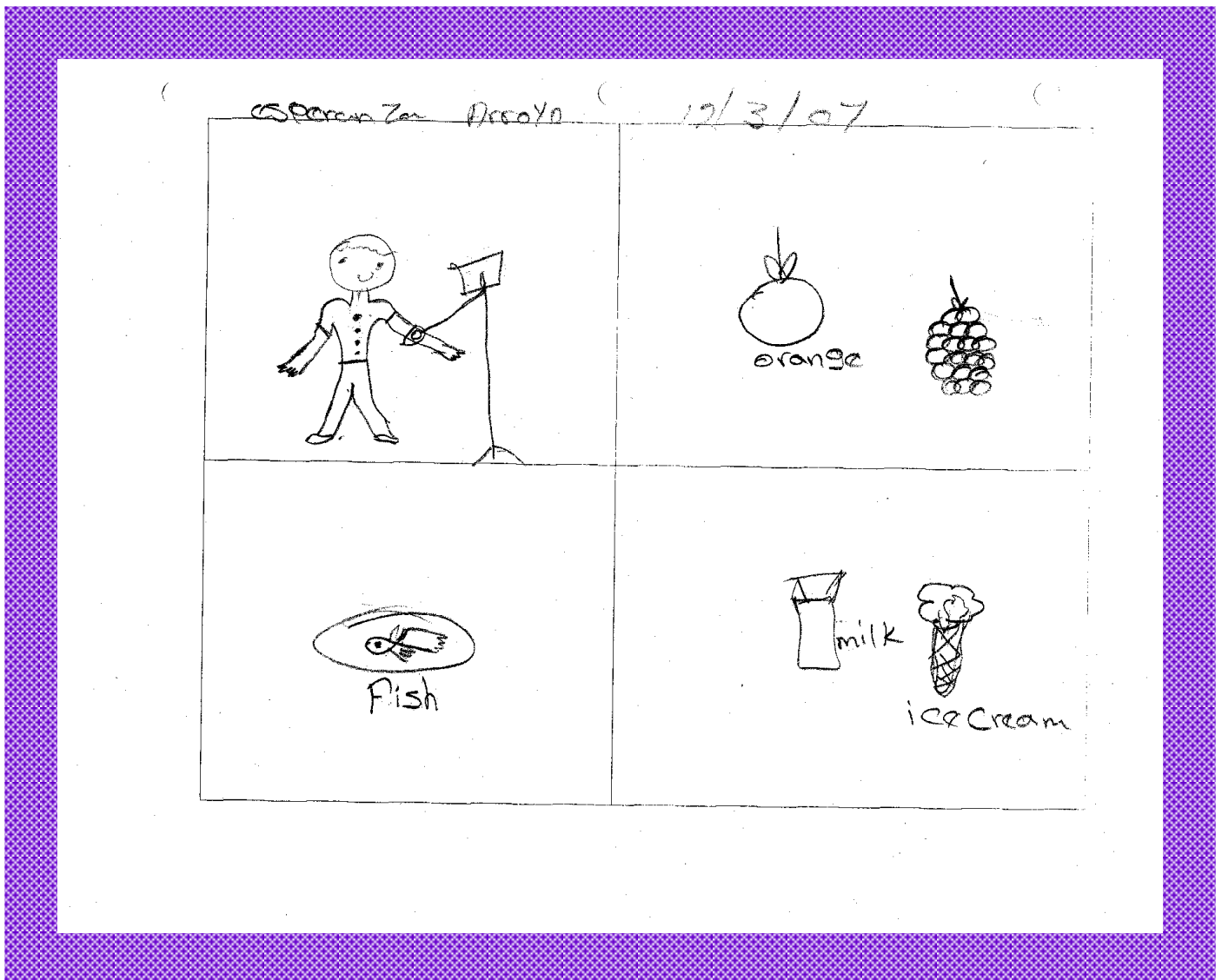
We discussed how we should shop for our foods and how to cook them. Spanish/English handouts helped students as we discussed shopping, cooking, and eating habits. (To locate these handouts, click on *Teaching Resources* in the menu on the left side of the screen at <http://www.nc-net.info/>, and then click on *ESL* in the drop-down menu that appears. Scroll down and click on *SALSA* under Alamance County Partners. Click on *Hypertension* in the list of lesson plans and scroll to pages 13 and 14 for Spanish/English handouts on eating less salt/sodium to help prevent high blood pressure and on using salt in cooking and at the table.)

Next our class took an oral salt and sodium IQ test. I asked aloud some true/false questions from the National Heart, Blood, and Lung Institute (<http://www.nhlbi.nih.gov/hbp/index.html>) and allowed time for class discussion between questions. Specifically, I used

- Test Your Salt and Sodium IQ at <http://www.nhlbi.nih.gov/hbp/prevent/sodium/test.htm> and
- Quiz on Finding Sodium in Your Diet at <http://www.nhlbi.nih.gov/hbp/prevent/sodium/quiz.htm>.

We then went through the alphabet, listing the ABC's of Stroke Words. I asked students to name words associated with stroke that they could remember. As someone named a word, we discussed it to be sure everyone knew the meaning. Finally, we put all the words in alphabetical order to help these beginning students with their ABCs.

Students also drew pictures of things they had learned thus far during this project. The student sample below concentrates on blood pressure and good diet.



Day 8

We began the day by referring to the “right brain” stroke lesson we had on Day 6. We moved on to talk about the “left brain” stroke, which is similar; however, the different sides of the brain control different parts of the body.

We did some demonstrations about how a stroke on the left side of the brain affects the right side of the body. We used the **handout** on Left Brain Stroke to guide our discussion.

We reviewed spelling words once again to maintain familiarity with the words related to stroke.

Left Brain Stroke

A. The left side of the brain controls the right side of the body.

It also controls language and helps a person to:

1. think
2. do math
3. analyze
4. solve problems
5. plan
6. organize

B. A person who has a stroke on the left side of the brain may have changes in the following:

I. Communication

- hears but does not understand the message
- cannot identify letters or understand written words
- has trouble expressing self through speech, writing, and gestures
- knows what they want to say, but cannot get the word out
- often chooses the wrong answer to “yes” or “no” questions
- is difficult to understand
- has trouble pronouncing words correctly: words often come out as jargon (made up words)

2. Voice

- might sound weak or very hoarse

3. Repeating

- repeats over and over in a conversation
- forgets they have already made that statement

4. Movement

- possible paralysis or weakness on the right side
- poor balance or no ability to plan how to move
- possible poor coordination or trouble with hand-eye coordination
- tires more easily
- swallowing might be difficult

5. Vision and touch (sensation)

- increased sensitivity to touch or decreased feeling on the right side of the body
- sees better on the left side because some of the vision on the right side might be lost
- tends to ignore things on their right; sometimes has tunnel vision (can only see straight ahead) or double or blurred vision and cannot determine how far away something is (depth)

6. Thinking

- has trouble with math
- has problems telling left from right
- has disorganized thoughts
- has trouble recognizing objects and faces
- has problems planning or beginning a new task

7. Behavior

- is easily frustrated
- laughs or cries at the wrong times
- seems depressed or shows lack of interest in something that was most important to them
- has very little or no motivation to begin a task
- tends to be slower and more cautious than they were before

Helpful Suggestions

Do

Give the person time to think (form thoughts)

Keep questions and comments simple.

Divide jobs into simple steps.

Don't

Rush the person

Give hand directions

Over/underestimate the person's ability to understand and communicate

Give lots of feedback and encouragement

Point out progress

Treat the person as an adult.

Remember the person may act as if they know what's going on to avoid embarrassment. Find out if the person really understands.

How to talk with a person with left brain stroke

Do

Decrease background noises (TV, radio)

Speak one person at a time

Assume a person can hear

Talk in a normal voice

Speak slowly

Allow enough time to respond

Use visual aids (pictures, objects, communication charts) while speaking

Use short sentences. Get to the point.

Be honest. Tell the person, "I'm sorry. I don't understand. Let's try again."

Remember the person is an adult

Don't

Ask about the person in their presence as if they were not in the same room, even if they do not respond

Pretend to understand if you do not

Shout

Day 9

Oral Review

Today was an oral review of what we had learned. We discussed the following questions:

1. What is a stroke?
(cut off or limited blood supply to brain)
2. What are symptoms of a stroke?
(headaches, confusion, stumbling, slurred speech, poor vision, inability to move arms or legs, tingling in arms and legs)
3. What can I do to prevent a stroke?
(proper diet, exercise, low sodium intake, no smoking, limited drinking, no stress, weight control)
4. What should a bystander do if he/she sees someone suspected of having a stroke?
(call 911)
5. What disabilities can occur as a result of a stroke?
(slurred speech, poor vision, paralysis)
6. How many strokes happen in the United States each year?
(750,000 – reports vary from 600,000 to 750,000).

Day Ten

Recovery

Today we discussed recovery for the patient who has been hospitalized and who needs specialized care to recover from a stroke. (Note: For information on stroke recovery from The National Stroke Prevention Association go to <http://www.stroke.org> and click on *Recovery* in the bar across the top of the screen.)

In most instances persons with a stroke will be hospitalized. There they will be examined, perhaps put on medication, and will begin a recovery process.

We talked about possible conditions, such as paralysis, drooling, confusion, etc. Our recovery discussion will be continued tomorrow and will conclude the learning part of this Stroke Project.

We then did a set of short written activities (**copies included**) just to reinforce simple stroke words and facts.

Stroke Words

Put the following “stroke” words in alphabetical order.

- | | |
|------------------|-----------|
| 1. symptom | 1. _____ |
| 2. brain attack | 2. _____ |
| 3. blood clot | 3. _____ |
| 4. vessel | 4. _____ |
| 5. Hemorrhage | 5. _____ |
| 6. numbness | 6. _____ |
| 7. paralysis | 7. _____ |
| 8. pain | 8. _____ |
| 9. vision | 9. _____ |
| 10. artery | 10. _____ |
| 11. blockage | 11. _____ |
| 12. disabled | 12. _____ |
| 13. therapy | 13. _____ |
| 14. treatment | 14. _____ |
| 15. brain attack | 15. _____ |
| 16. recovery | 16. _____ |
| 17. death | 17. _____ |

Write sentences using 3 of the above words.

1. _____
2. _____
3. _____

Strokes

Fill in the blanks with the words from the list below.

- | | |
|---------------|-------------------|
| a. exercising | g. "brain attack" |
| b. inherited | h. 911 |
| c. third | i. vision |
| d. numbness | j. below |
| e. hospital | k. vessel |
| f. salt | l. smoking |

1. Strokes are the _____ leading killer in the United States.
2. Another name for strokes is _____.
3. One symptom of a stroke is _____.
4. _____ can sometimes cause a person to have a stroke.
5. A person's blood pressure should remain _____ 140/90.
6. When a blood _____ becomes clogged is often bursts,
7. Many times a stroke victim will have blurred _____.
8. When you see a person having a stroke, you should call _____,
9. Stroke victims are treated more successfully if they come to the _____ immediately.
10. Stroke factors are sometimes _____.
11. _____ every day is a good way to help prevent strokes.
12. Leaving _____ out of your diet with help prevent strokes.

Day Eleven

Guest Speaker – Recovery/Rehabilitation

Today we had as our guest Kari Purdy, a new graduate in occupational therapy, whose talk on Cerebral Vascular Accident provided a good review and helpful summary of our study. In addition, she demonstrated some therapy exercises used when stroke patients are in recovery.



Day Twelve

Windup

This morning, we concluded the “Stroke Project” with a short summary quiz (**copy included**) and a couple of not-so-strenuous physical exercises.

Results

We Met Our Challenge!

Student work is shown within this project plan.

Teacher Observation

The students worked hard and were an interested group.

Final Stroke Test

Fill in the blanks with vowels to make a word we have talked about during these sessions. Vowels are a, e, i, o, and u.

1. v __ s __ __ n

7. d __ __ t

2. p __ r __ lys __ s

8. n __ tr __ t __ __ n

3. h __ m __ rrh __ ge

9. r __ c __ v __ ry

4. bl __ __ d v __ ss __ l

10. __ mb __ l __ nce

5. br __ __ n

11. sp __ __ ch

6. __ x __ rc __ s __

12. hyp __ rt __ ns __ __ n

Put the following STROKE words in alphabetical order

1. symptom

a. _____

2. blood flow

b. _____

3. vision

c. _____

4. recovery

d. _____

5. hypertension

e. _____

6. paralysis

f. _____

7. nutrition

g. _____

8. prevention

h. _____

9. exercise

i. _____

10. diet

j. _____

Fill in the blanks.

1. On the first day—when I introduced this project—I wrote on the board

S _____

T _____

R _____

O _____

K _____

E _____

Fill in the blanks of each word.

2. List three things that are good stroke preventatives.

a. _____

b. _____

c. _____

3. List three things we should not do.

a. _____

b. _____

c. _____

4. List at least five healthy foods

a. _____

b. _____

c. _____

d. _____

e. _____

5. What is the third leading cause of death in the United States?

6. What is another word for hypertension? _____

7. What happens when a blood vessel becomes clogged?

8. What is another name for a stroke? _____

9. Which is better for you? (circle one)

a walk around the block watching TV

10. Name two symptoms of strokes

a. _____

b. _____

11. When you think someone is having a stroke, what should you do? _____