

# CACIS

“Come Add Color In Schools”

Afterschool Program ♦ Indoor Activity ♦ Grades 2-5 ♦ fall, winter, spring, summer

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## PROJECT BACKGROUND & LESSON PLAN

### ☆ *Eat A Rainbow* ☆

*The first part of this document provides background information*

*The actual lesson plan begins on page 5*

## PROJECT BACKGROUND

**Description:** Students learn about the nutrition provided by colorful fruits and vegetables, and then they create a colorful, lasting art project for display in their cafeteria.

### **Overall point of this project:**

1. Offer enhanced nutrition education for young students
2. Get more art activities in schools
3. Decorate the cafeteria, practice *ethical marketing*

### **Learning objectives:**

#### Nutrition

1. Learn health benefits of fruits and vegetables; learn why it is good to “eat a rainbow”
2. Discover the health benefits of root vegetables

#### Visual Arts

1. Explore how to mix colors Understand the concept of contrasting colors
2. Introduction to drawing and painting

### **TOTAL time needed for this project from start to finish:**

1. Call potential donors for art supplies and fresh produce (1 hour)
2. Format letters and distribute to donors (2 hours)
3. Pick up gift cards from stores for art supplies and fresh produce (2 hours)
4. 6 art & nutrition classes with students (3 hours for each class, including prep and clean-up) \*\*
5. Glue 1’x1’ art onto heavy butcher-type paper backing (2-3 hours)

### **Materials needed:**

1. Wheeled cart to carry supplies (you can store the cart in the car or house between lessons)
  - In Ukiah, email Terry D’Selkie to borrow one: [tdselkie@usd.net](mailto:tdselkie@usd.net)
2. Art supplies (Michael’s for local Ukiah in-store shopping – offers educator discount. Blicks for online or Bay Area shopping- [www.dickblick.com](http://www.dickblick.com) -offers in-store educator discount)
  - Paints (tempura or acrylic) in red, orange, yellow, green, blue, purple, white and black
  - ≈ 25 paintbrushes of varied types (packs of 5 are a good deal and fine quality)
  - ≈ 100 sheets of 1’X 1’ white paper (look around the store, some are cheaper than others)
  - Pack of 8½” X 11” white paper; for practice, or painting something else for fun to take home; printer paper is fine
  - ≈ 20 pencils and a few pink/classic erasers to share at each table
  - Foam brushes; to glue paintings onto butcher-type paper backing for mounting on the wall

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### 3. Other miscellaneous items

- Masking tape to hang up 1'x1' paper to demonstrate drawing and painting
- 2-3 dry erase pens
- Color wheel (print one from Google images)
- Lids and containers; lid to mix paint, container to hold water for brushes
- Bulletin board or butcher-type paper; to glue paintings onto (look in staff room )
- Bulk Elmer's glue (@ Staples)
- Tongs; to pass out any cut-up samples of fruits and vegetables
- Large bowl; to hold cut-up samples of fruits and vegetables
- Large flat bag; to carry paintings that are made at each lesson (they dry quickly)
- Old newspapers; to protect the tables during painting
- Paper towels for each student (use brown ones in the classroom at sink)
- A camera; the photos will be great!

### 4. Produce (fruits and vegetables)

- For each class, purchase 15-20 varied fruits and vegetables for that day's color theme (ideas/ examples below, but whatever you want or see in store is fine)
- **Red**; strawberries, raspberries, apples, bell peppers, radishes
- **Orange**; oranges (cut in half), pumpkins, carrots (with tops)
- **Yellow**; lemons (cut in half), bananas, squash, onions
- **Green**; asparagus, limes (cut in half), artichokes, green onions, broccoli
- **Purple**; grapes, beets (with tops), watermelon radish (cut in half), cabbage (cut in half), onions
- Be sure to get a different root vegetable for each day's lesson too!

### **Rules and Regulations:**

1. Ask a trusted employee of the school about the rules and regulations of that specific school. Then, follow those rules!
2. Food allergies- find out if any potential participating students have food allergies; if so, determine whether or not they can participate with school administrator as depending on the severity of the allergy there is potential school liability.
3. Photos- if you plan on taking any photos to post for the public's viewing, make sure to check if you have permission to do so from everyone you photographed.

### **Nutrition background for you to teach in the lessons:**

All plants (fruits and vegetables) contain **phytochemicals**, which literally translates to “plant chemicals”. These chemicals or compounds are unique from each other and perform different positive functions in our bodies. Each color of fruit or vegetable has a specific phytochemical that gives a specific health benefit. (For example, orange fruits and vegetables are good for your eyes and have the phytochemical beta-carotene). That being said, if you eat one fruit or vegetable of each color in the rainbow every day, you will get a range of nutrients, and then you will be in pretty great shape! This leads to the nutrition slogan “**eat a rainbow**”, which is the theme for this project.

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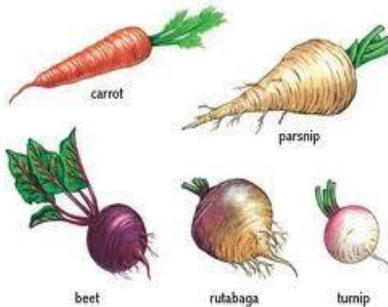
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Below is a list of colors, phytochemical names, and benefits:

color	phytochemical	benefits your
red	lycopene	heart
orange	beta-carotene	Eyes
yellow	lutein	immune system
green	chlorophyll	energy level
purple	anthocyanin	heart

### More Nutrition information to include:

root vegetables



#### **Point #1**

Root vegetables\* (examples at left) are **nutrient dense**, meaning there is a high concentration of nutrients in them. The part we eat grows while touching the soil, so it soaks up the minerals from the soil. During each lesson, feature one root vegetable and draw it on the board.

#### **Point #2**

The tops of root vegetables are green because they see the sun and take in water. This process is called **photosynthesis**.

Do the same explanation for every lesson to drive home that: (point #1) root vegetables are nutrient dense, and (point #2) for something to turn green, it needs sun and water. On the day you paint green fruits and vegetables, there will not be a green root vegetable because roots grow underground and do not see the sun. Point this out!

\*Root vegetable suggestions: radishes (**red**), carrots (**orange**), onions (**yellow**), and beets (**purple**)

### Art Information to Include:

Part of this project is to give the students an opportunity for artistic development. This project focuses a lot on color, and mixing new colors (for example, yellow + blue = green). This might be a challenge for some students. It is suggested to start the series with this exercise on mixing, with results shown at right. It could be given on a day by itself, or you could choose to do it on the first day before any explanation of the project.

<http://www.teachkidsart.net/mixing-100-colors/>



\*\*NOTE: with this added lesson, there will be 6 days; without it, only 5 days (see page 1 for reference)

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### Preparing / getting materials:

1. Use art supplies already in the school
2. Ask friends for donations of art supplies
3. Get funding; ask private businesses to make a tax-deductible donation (more info below)
4. Write letters with the school's Tax ID# to corporate businesses in town (more info below)

Note: However you choose to do it, a materials list is in the first part of this document. Do it how you see fit!

### Tax ID letter for donations:

With almost all donations, a letter with a Tax ID # will need to be delivered to the donor. Your school should have this type of Tax ID letter already written which they can send to you via email. Using the school's letter, type in the name and address of the donor or business, print the new letter and drop it off at the donor's place of work. Often including a specific manager's name is not necessary.

### Funding costs:

If you have no art supplies and want to purchase all of them, expect to spend about \$200 to cover the supplies, as well as some produce. By collecting gift cards from at least two grocery stores, as well as getting donations from art supply stores, the \$200 will give you plenty of money to spend for this project.

If you need to fundraise, think of any business with which you have a good relationship. Call them confidently, explain the project and ask for the total amount of money you need. You never know! This is not a costly project and people will likely be happy to help.

**Leads for produce donations:** the list below is specific to Ukiah, CA. But it can be used as a guideline as most corporate grocery stores follow the same protocol.

1. **Safeway** (gave \$25 to Nokomis Project - Feb. 2014), Gobbi and State St. 467- 2700, Customer Service  
You need: Tax ID letter  
Turnaround: a few days
2. **Food Maxx** (gave \$20 to Nokomis Project - Feb. 2014) 1235 Airport Blvd. 467-9007, Customer Service  
You need: Tax ID letter (does not need a specific manager's name).  
Turnaround: a few days
3. **Ukiah Natural Foods Co-op** - maybe \$25  
You need: Tax ID letter to be addressed to Lori, but do not ask to actually meet her. Give it to another employee and Lori will call you back. Do not call.  
Turnaround: one week
4. **Raley's** - 468- 5178, I talked with Carla who said “I am in your corner”. She is allotted \$100/month to donate within Ukiah  
You need: Tax ID letter.  
Turnaround: two weeks
5. **Grocery Outlet** - I didn't try this one, go for it!
6. **Lucky grocery store** - I didn't try, but you can!

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**Corporate donations - art supplies:** Create a list of the art supplies that you will need but do not have. Then use the phone book and cold-call art supply stores. Be prepared to tell them what you need as many have protocols for contributing to community projects.

1. **Friedman’s** - 707-584-7811, Sue Sarno in Sonoma corporate office; Tuesday – Friday, 10am - 2pm
  - First go to Friedman’s in Ukiah to see what item(s) you want, and write down the “SKU #” as Sue will want this when you call. She may remember the project.
  - Email request and Tax ID# form to [suesarno@friedmanhome.com](mailto:suesarno@friedmanhome.com). Include in letter: which school you are with and what you wish to accomplish. What she might donate varies.

**Tips for buying art supplies:** (if shopping at Michael’s Stores)

1. Print a coupon on the day of shopping. Put “Michael’s” and “Coupon” into Google.
2. Know a teacher? Ask for their discount.
3. Michael’s Stores employees want to help. ALWAYS tell them about CACIS, and you will get more support. They are artsy, creative and will probably know the least expensive options as well.

## CACIS LESSON PLAN

**Overview:** Each day will feature a different color, with five or six days total for red, orange, yellow, green and purple (\*\* see pages 1 & 3 for more information). It will be helpful to have a friend assist you so that students have extra help with painting. To begin, students will sit in tables of four to draw and paint their own piece. Keep each painting to later assemble and hang in the cafeteria. In the end, some might not be used for the large piece, but save them; you might hang them somewhere else in the school or cafeteria!

**Timing:**

1. Set-up in classroom: 30 minutes
  - a. Move desks into groups of 4: cover tables with newspaper
  - b. Distribute painting materials and place them on desks
  - c. Display produce items near the instructor/teacher so as to monitor them
  - d. Keep paint near the instructor/teacher to better supervise their use
2. Nutrition review from previous lesson: 5 minutes
  - a. Review previous day’s phytochemical lesson
3. Nutrition lesson
  - a. Phytochemical and color of the day: 10 minutes
  - b. Root Vegetable of the day: 5 minutes
4. Drawing/painting demo: 5 minutes
  - a. Mix two colors appropriate for that day
5. Students draw and paint: 1 hour
  - a. Verbalize ideas, but do not draw or paint for them
  - b. Keep paint refilled for students
  - c. Encourage feedback from their team of 4; students should not be dependent only on teacher
6. Clean-up alone or with help: 30 minutes

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**Total approximate time per class ----> 2½ - 3 hours**

*Welcome, and introduce yourself. (day 1 only)*

"You have been invited to decorate the cafeteria. You are here because you showed enthusiasm and have demonstrated that you understand how to follow rules"

"I am not as familiar with this school as you are, let's go over the rules at \_\_\_\_\_ school. Can you tell them to me?"

*At this point, no produce is out. For "red days", hold up the radishes. (on other days, start here)*

"What color is this?"

*Now the strawberries*

"What color is this?"

*Do one more*

"And how about this?"

"Great! Today is all about the color RED."

"Did you know that when a fruit or vegetable has a certain color, it is healthy for you in a specific way?"

"By the way, what does 'healthy' really mean?"

*Call on members of the class for student responses*

"What I'm saying is, even though you might not eat a raspberry and a radish at the same time, they have something in common that is very special, and you can tell what that is because of their similar color. Has anyone heard this before?"

*Write out "LYCOPENE" as big and bold as you can.*

"Can you all say ly-co-pene?" (pronounced "lie-co-peen")

"Lycopene is something very healthy for you. It's good for a specific part of you. Does anyone want to guess which part?"

*Let them guess*

- **Management Tip:** Kids love to guess, but it's up to you to orchestrate HOW MANY students get to guess. Say, "I'll take 3 answers". If someone "forgets", just keep moving on. They will get used to your rhythm and it will keep the class interesting. Say, "your heart! It is great for your heart!" "The way that a sign tells you to go right or left, a red fruit or vegetable tells you that you're being nice to your heart." "Today we have all of these red items"

*Show each item and ask where it grows (on a tree, a bush etc.) Save the root vegetable for last and hold it up. "These radishes grow underground. They are root vegetables."*

*Draw a radish growing in the soil on the board. Point out that the red part is under the soil and the green leaves are above ground. Draw a sun as well.*

"As you can see, the part you eat is touching the soil. The soil has lots of minerals in it, which are good for you. Of all the fruits and vegetables I brought in, this root vegetable will be especially good for you. It is **nutrient dense**."

"You can see the tops are green and that's because they absorb sunlight and water. Water plus sunlight makes **photosynthesis**; it gives the top of the plant a green color."

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*It is good to repeat this lesson each day, featuring one root vegetable.*

“Today, we are each going to paint red fruits and vegetables to go in the cafeteria. Your art will be displayed as a large collection. You aren’t going to take this home, but you can look at it in the cafeteria every day. You do not need to write your name on what you make. Over 5 (or 6) days we will make a COLLECTIVE art piece.” (\*\* see pages 1 & 3 for more information).

*Do a drawing and painting demo. Tape a piece of paper to the board. Show them how to quickly sketch, and let them see you mix colors. Use the color wheel to remind them that yellow + red = orange (for example).*

“Now it’s your turn”

- **Management Tip:** Never say, “I can’t draw” or “I can’t paint.” Be confident when you demonstrate and it’s okay if it’s not a masterpiece. The kids’ art won’t be either!

*Distribute fruits and vegetables evenly onto students’ desks.*

“Each of you will draw and paint your fruit or vegetable. Look at it carefully, but please don’t touch it.”

- **Management Tip:** sometimes the children don’t care which produce item they get and sometimes they do; you have to feel it out and divide up appropriately.

*Sketching*

“On your station, you have a pencil each, an eraser to share, a square piece of paper, some water for washing your brush. Paint will be distributed later. You all get one nice piece of square paper, which will go up in the cafeteria. You only get one piece of the square paper per student.”

*Demonstrate sketching using a pencil and a square paper which is taped to the white board. If you see a shape in the model you have, point it out (ex: radishes are a circular shape). In either case, don’t take too much time for sketching.*

*Now on to painting:*

“Does it look like each fruit and vegetable is the same type of red?”

“Look at your model (fruit or vegetable), and mix the paint to try to match the tone of red on the fruit/vegetable. Then fill it in where the pencil sketching is. Mix the color of red that is dominant in your model. Later, add some of the other colors you see in your fruit or vegetable”.

- **Management Tip (paint distribution):** As they draw, distribute red and yellow paint to each student (almost all will need red and yellow and you only have two hands). Then go around with additional colors they might need and explain to them that you (the teacher) decide which colors come around next. You *offer* a color, then they raise their hands for the color they want. Do not let them shout out what they want; you are in charge of the paint. Keep all the bottles of paint out of their reach.

*During painting: walk around, the students will likely want your help! Try not to do it for them. **Encourage all the students to ask neighboring students for feedback as well, so they do not solely rely on you.***

*Common problems and suggestions:*

1. *Sketching; try to point out a shape with them, as in a carrot is like a triangle.*
2. *Mixing paint; do it a little at a time, use less of the darker color. Reference the color wheel.*
3. *If they don’t like their work; let it dry and paint over it again. It’s okay!*
4. *They don’t know if it’s done; have them stand back and look at it from far away. It will be hanging*

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*up and viewed at distance. They make the ultimate call, but outlining the image with a contrasting color (such as black or white) will always look good. Suggest that! Remember, this is a big piece.*

*Introduce the second phase of painting:*

“Now, we can think about the lighter and darker parts and use the shades and tones we mixed to make your art more interesting”.

*Finishing up:* everyone will be done with their painting at different times; they can eat a sample of the fruits or vegetables, and then go play outside once they have done the following things:

1. leave their brush in water
2. check the floor and chair for paint spatter
3. put their painting on the back table
4. wash their hands

➤ **Management Tip:** try to keep them mellow throughout the class period. This is an art class, so no running or shouting. If they fuss over which fruit or vegetable samples they get to eat, remind them to be patient. How you handle this is a personal management thing, and it won't be perfect. If someone wants seconds, they need to wait until all have had firsts, but sometimes if a student asks politely, they may get something extra. The point is, they will all want to eat and take home as much produce as possible. You make the rules and keep them consistent.

**Produce samples:** At the start of each class, you will bring produce items that are used as models for painting and produce items that have been cut up just for tasting. By allowing the kids to eat the produce as part of the lesson, they become more excited about consuming healthy foods. After the children complete their paintings, clean up their workspace and wash their hands, use tongs to pass out the cut up produce for tasting. The remaining produce items that were used as models for painting can be sent home with the children to share with their families. Below are suggested produce items you can use for tasting in class, but you use ones you like!

**Red** (bell pepper slices), **Orange** (tangerine segments, pre-peeled), **Yellow** (yellow apple slices with lemon juice and cinnamon - huge hit), **Green** (sugar snap peas), **Purple** (purple grapes). Wash and cut up everything before you arrive at class and begin the lesson.

### **Final Assembly of piece:**

**Materials:** Elmer's glue, sponge brushes, scissors, comfortable clothing, heavy butcher-type paper, fruit and vegetable paintings, camera.

1. Use cafeteria space after school hours
2. Use heavy butcher-type paper, which most schools have in staff room - ask or don't ask!
3. Get a friend to meet you and help!
4. Use sponge brushes with glue and overlap 2-3 pieces of the paper backing to make it thicker (approximately 12' across - it is better to overshoot the width of the paper backing as you can trim it down later with scissors if you need to)



*Completed piece – 13' x 6'*

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5. The fun part - lay out all the square paintings in a rainbow order by color onto your rectangle
  - You likely won't use all of them (if there are extra paintings, post them at other locations in the school)
6. Glue the 1'x1' pieces down - white space can be overlapped
  - Take loads of photos – this is your last chance for close-up shots
7. Let it dry overnight
8. Hang it!
  - Likely the janitor will hang it because of potential liability with using ladders.
9. Great job!

#### **Contact people for questions about CACIS and carrying out this project:**

1. Hanna Rifkin (415) 299-1693 [hanna@hannarifkin.com](mailto:hanna@hannarifkin.com)
  - Creator of CACIS and a nutritionist. Questions re: nutrition or anything related to this project.
2. Karen Wallaert (707) 462-7370 [cheriamour@comcast.net](mailto:cheriamour@comcast.net)
  - Ukiah artist and art teacher at Nokomis Elementary School. Questions re: art technique, art logistics, best art materials (to buy at Michael's Stores, for example)
3. Cathleen Micheaels (707) 877-3357 [cm@mcn.org](mailto:cm@mcn.org)
  - Poem and Book Arts- Bringing the Literary and Visual Arts Together in Schools and Communities. Artist and arts educator in Mendocino County and Bay Area, with experience carrying out arts integration with K-12th grades including nutrition focused art projects.

#### **Important final request:**

If you use or adapt this project for use in classrooms, schools and/or communities, please send an email to Hanna Rifkin at [hanna@hannarifkin.com](mailto:hanna@hannarifkin.com) as one of the goals of bringing this project together as a resource is to track where and how the project is shared – thanks!