



GROWING GARDEN EDUCATORS

Creating a School Garden Program

Nate Northup, School Gardens

Stephen Cantu, Friendly Inclusive Gardening

UC Master Gardener Program of San Diego County



Photo: Heather Holland



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MASTER GARDENER ASSOCIATION
of San Diego County



You Will Learn Today:

Four Takeaways:

- You will need **HELP**
 - You will need to make **DECISIONS**
 - You will need **DONATIONS**
 - You will need **GARDEN LESSON PLANS**

Five Basics of any Garden: **DECISIONS**

- What **PLANTS TO GROW AND WHERE**
- What you can **PLANT IN**
- What your **SOIL** needs
- What **SUNLIGHT** your plants need
- What **WATER** your plants need





Why Start a School Garden?

School gardens provide:

- Higher test scores in science
- Hands-on learning
- Increased attention and focus
- Relief from electronics
- Willingness to try healthy foods
- Lower BMI
- Lower stress levels
- Higher rates of teamwork
- Happy volunteers!



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Four Takeaways for Success

1. You Are Not Alone

1. You Have Options



Photo: Dana Withall



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Four Takeaways for Success

3. Funding Ideas

4. Free Curricula



Credit: Pexels Pixabay



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You Will Need Help. You Won't Be Alone

School gardens need:

- Volunteers (background vetted)
- Work parties - at least annually (ideally 4x year)
- Funding - grants available
- Donated supplies

Contact an MG or school office to connect

MGs CAN HELP!!



Photo: Heather Holland



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Who are the Master Gardeners?



- ❑ 6,328 MG volunteers in California
- ❑ 510,000 hours donated in 2024
- ❑ Trained by University of California Cooperative Extension
- ❑ Supported by County Extension Offices
- ❑ 354 active MGs in SD County
- ❑ 112 MGs consulting 900 SD schools



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The Big Picture:

- **GROW–5 Basic Needs**
- **HARVEST**
- **EAT**
- **COMPOST**
- **REPEAT**



Photo: MGASDC



5 Basic Needs of a Garden

1. **Right Plant/Right Place!**
2. Container or Bed?
3. Nutritious Soil!
4. Sunlight?
5. Water!!



Location! Location! Location!

Where is the “right place”?

Start smart...

- Seek permission
- Expansion plans?
- Policies re:
 - location
 - water
 - power connections for tools?



Credit: Pixabay



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Where to Put Your Garden? Sun v. Shade

Where's the Sun? (Angles are important)

- How many hours of sunlight in fall?
- How many hours in winter?
- How to orient your beds? (north-south?)



Where's the Shade during Fall, Winter, Spring?

(And summer, for year-round schedules)

- Buildings nearby
- Trees



Where to Put Your Garden: Water & Critters



- Where's the water?
 - Hose faucet
 - Olla system
- Open Space?
- Canyon?
= Critters!



Where to Put Your Garden: Add / Expand

Space needs are:

- Grow stuff
- Move around
- Teach
- Expand



What's the Right Plant? What do you Like?

- Vegetables
- Fruit and fruit trees
- Flowers
- Herbs
- Succulents
- Pollinators
- Native Plants
- All the above?



Photos: MGASDC



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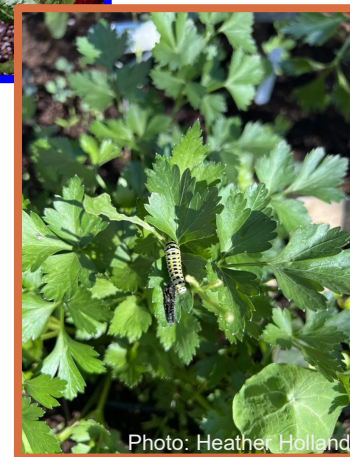
Full Sun

Grow food that flowers and fruits; also natives, succulents and pollinators



Part Sun

Leafy greens, herb and root crops can get by with less sun; some succulents



5 Basic Needs of a Garden

1. Right Plant/Right Place
- 2. Container or Bed**
3. Nutritious Soil
4. Sunlight
5. Water



Container Ideas

Bigger is better



Drainage
holes required

Photo credits: Heather Holland



- Raised bed
- Half wine barrel
- Large nursery pots (5+ gallon)



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5 Basic Needs of a Garden

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Soil: Vegetables Need Nutrition to Grow



Amended soil is dark, earthy and pliable



Photos: MGASDC



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Soil Triangle

To Assess your Soil
Soil Jar Test
Ribbon Test



Photo: MGASDC



Source: nrcs.usda.gov



Photo: MGASDC



Amendments in Containers, Raised Beds



- Soil amendment: 20% organic material
 - Amendments could include compost, worm castings, fertilizer and *composted* chicken manure (preferably all of them)
- Bagged potting soil: 80%



- Mix well and fill soil to top of container
- Water well before planting
- Plan to **amend soil at least annually**



5 Basic Needs of a Garden

1. Right Plant/Right Place
2. Container or Bed
3. Nutritious Soil
4. **Sunlight**
5. Water





Photo: Heather Holland

Sunlight

Edibles
need 6-8
hours of
direct sun to
grow fruit



Photo: Webdam, ANR



Photo: Dagmara Dombrowska, Unsplash



Photo: John Jacobs, SDUSD



Photo: John Jacobs, SDUSD



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5 Basic Needs of a Garden

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Water and Irrigation

- Veggies are not drought tolerant!
- Keep root ball moist but not too wet; water deeply
- Avoid wetting the leaves
- Water in the morning
- Inline drip irrigation provides reliable irrigation to roots



Photo: Markus Spiske, Unsplash



Photo: Webdam, ANR





Inline Irrigation

Inline drip irrigation system best for veggies

Drip system wets only the soil, minimizing disease risk, moderating soil moisture

Mulch on top of 1/2" supply and drip lines to lower soil temperature, slow evaporation and build soil



1/4 inch drip lines emit water every 6 or 12 inches

Use with a battery operated controller



Raised Bed Irrigation Summary

Vegetables thrive when given a consistent, reliable source of water.

In sunny raised beds during growing season,
Water sown seeds twice daily; young plants daily



Most established vegetables need water only every other day

Turn off irrigation in the rain

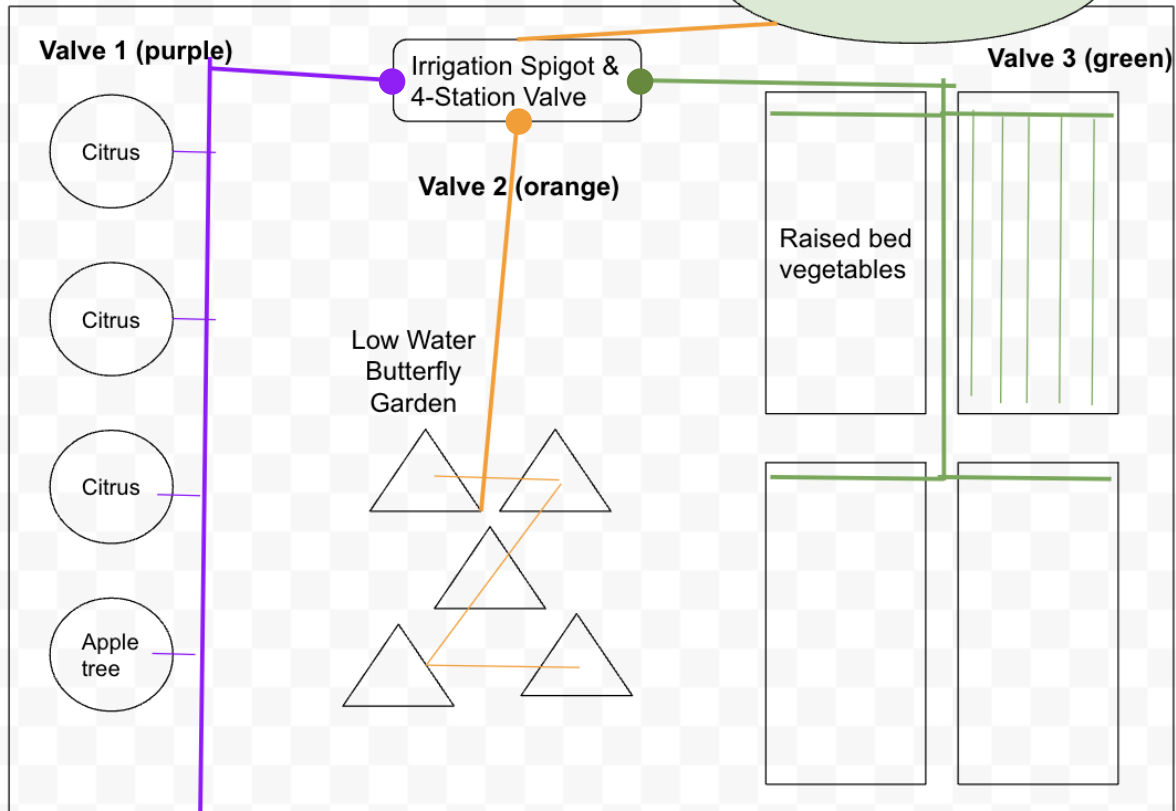
Don't water empty beds; include shut off valves



Photo: Webdam, ANR



Sample Garden Diagram Watering with 3 Valves (one valve saved for future use)



Passionfruit vine on garden fence

Irrigating Raised Beds & More!!

Group plants with similar water needs into a hydrozone

One valve per hydrozone

Several valves on single controller (battery/solar or electric)



Grow, Baby Grow!!

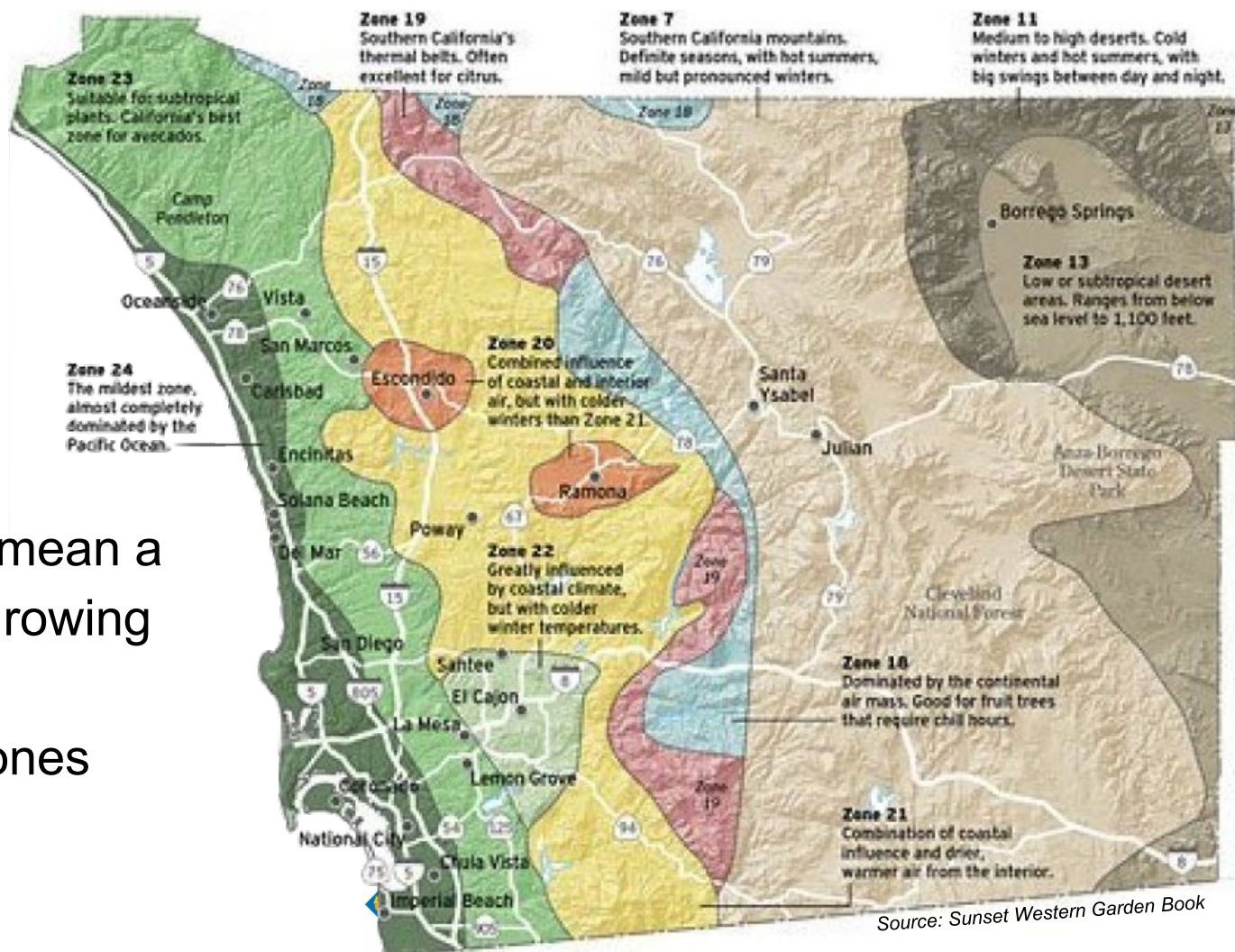
Options:

- What grows in your climate zone?
- What are neighbors growing?
- What do you want to grow?
(Now? Spring?)



Sunset Climate Zones

- 10 local zones mean a wide range of growing conditions
- Zones within zones
- Microclimates



Source: Sunset Western Garden Book

Plants That are Easiest to Grow in Cool Season

Plant in the Fall - Winter

Radishes

Peas

Beets

Chard



Radishes can be grown from seed and harvested in about 40 days!

Less sun: Lettuce

Bok choy



Plant for Success: What is Easiest to Grow in Warm Season?

Plant in the Spring

Radishes

Beans

Sunflowers

Beets



Radishes can be planted by seed and harvested in about 40 days!

Less sun: lettuce

More sun: cherry tomato



Herbs and Flowers to Plant Now

Plant in the Fall:

Parsley
Thyme
Oregano
Sage
Cilantro
Chives



Photo: Chandan Chaurasia, Unsplash

Nasturtium
Sweet Pea
Borage
CA Poppy
Bulbs: tulip, daffodil
Low Water: Rosemary

In a pot ONLY: Mint



Photo: Lisa on Unsplash



Photo: Lucy Kral, Unsplash



Besides Veggies: Herbs and Flowers to Plant Later

Plant in Spring

- Basil (*late spring*)
- Parsley (*early spring*)
- Thyme
- Oregano
- Sage
- Chives (*early spring*)



Photo credit Webdam, ANR



Marigolds, Sunflowers

Low Water: Rosemary

In a pot ONLY: Mint



Fruit Trees Can be Fun

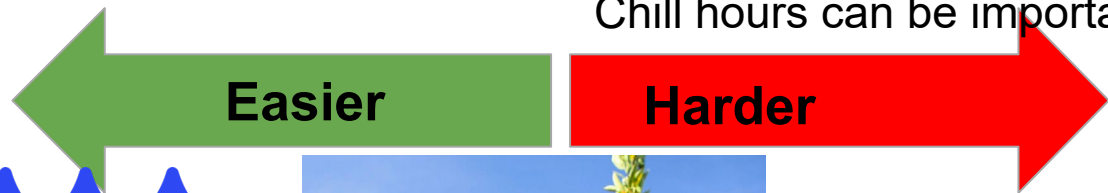
Must fertilize regularly

Shape trees when they're young

Most need annual/seasonal pruning

Some trees need annual spraying for pests

Chill hours can be important to fruit production



- Citrus 
- Persimmon 
- Pomegranate 
- Fig 
- Apples 



- Avocados 
- Stone fruits 
- Banana 

 = water needs



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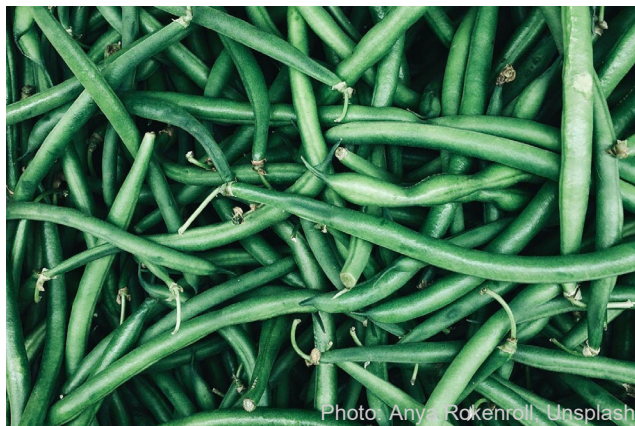


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Don't Hesitate to Harvest

- Harvest frequently to keep the plant producing
- You are racing against critters to gather ripe fruit

Don't Teach
Critters That
Your Garden
is Their
Smorgasbord




Resources: Access Today's Presentation and Review Even More Free Lessons and Activities!

UC Master Gardeners
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SCHOOL GARDENS
Grant information, request a consultant,
educator resources & more



Video lessons,
workshops,
curricula,
gardening
books, guides
to plan,
design,
maintain



UC Master Gardeners
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"Plant a Seed, Watch it Grow"

A QR code is centered on a white background, which is framed by a green border. In the center of the QR code is a black silhouette of a dinosaur. Below the QR code is a blue rectangular box containing the text "UC Master Gardeners of San Diego County" and "Plant a Seed, Watch it Grow" in white.

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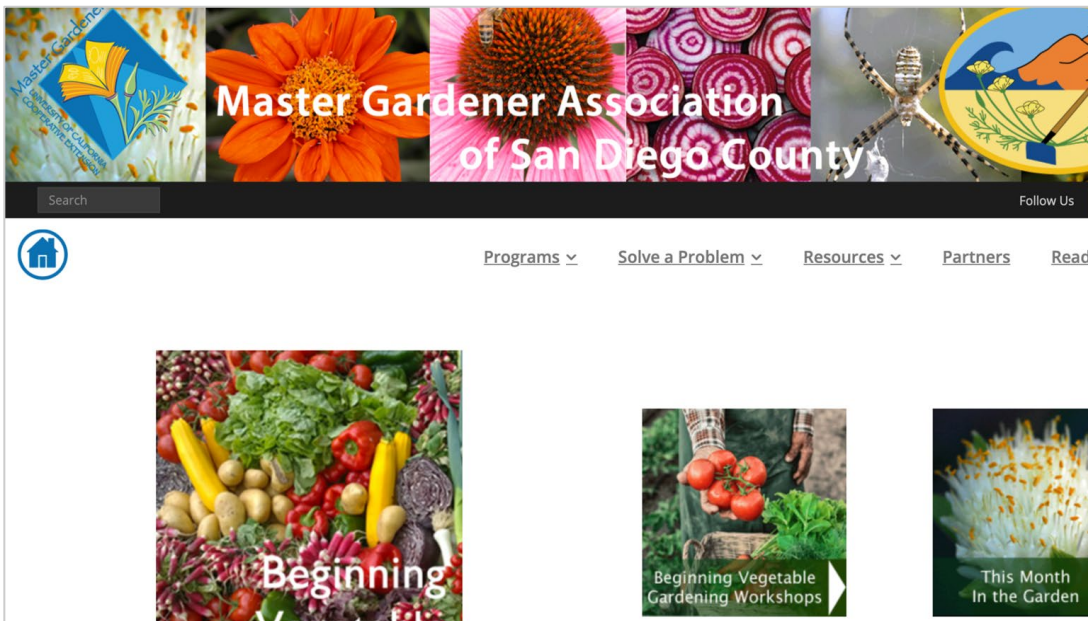
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For Further Free Advice and Instruction

Hotline Help: (858) 822-6910 or
help@mastergardensd.org



Vegetable Planting Guide

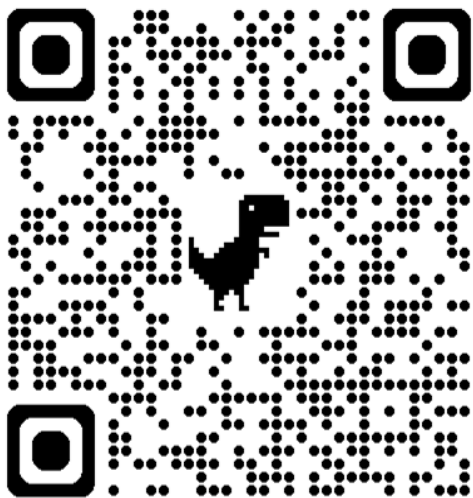


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Even MORE Free Resources...



Soil Texture Tests



Kidsgardening.org



UC MG YouTube
Video Resources



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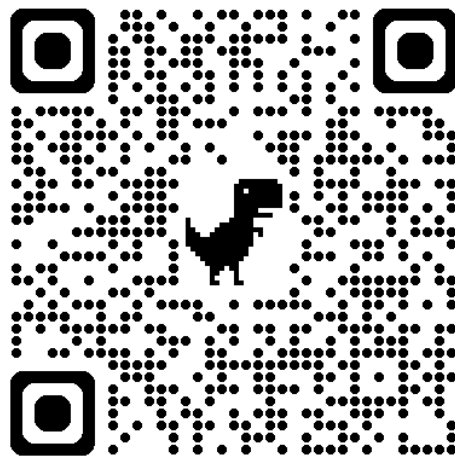


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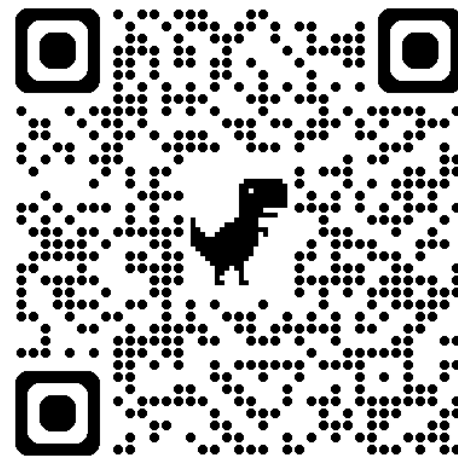
And now...SHOW ME THE MONEY!!

Potential \$\$ Sources

- Parent-Teacher org's
- Donations/sponsorships
- School fundraisers
- School Garden Assn's
- Community Non-Profits
- Master Gardeners (via MG consultant to your school garden)



Kids Gardening External
Funding Opportunities &
Application Support



San Diego Ag in
the Classroom
Grants



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Tips for Getting Funding (or free materials)

- List source ideas
- Scour the internet
- Make contacts



Follow up with Funding

- Application process?
- Hone writing skills
- Attach: site photos, sketch, diagram



Cultivate That Funding / Donation Source!

- Keep receipts
- Follow up with more photos
- Invite them to visit





CARPE DIEM!

DARE TO GROW



Photo: MGASDC



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Designing Friendly Inclusive Garden Spaces FIG

Stephen Cantu

UC Master Gardener of San Diego County



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Video on Friendly Inclusive Gardening (FIG)



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FINALE!!

QUESTIONS AND DISCUSSION!!



Image: Canva

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