



SOUTH SAN ANTONIO INDEPENDENT SCHOOL DISTRICT

Agenda Item Summary

Meeting Date: November 20, 2019

Purpose: [X] Presentation/Report [] Recognition [] Discussion/ Possible Action

[] Closed/Executive Session [] Work Session [] Discussion Only [] Consent

From: Homer Flores, Board Member

Item Title: Presentation - Price Elementary; Aquaponics Project

Description:

Price Elementary’s World Changers Club has an ongoing Aquaponics project.

Historical:

Price first started the World Changer Club in October 2018

Background:

Aquaponics refers to any system that combines conventional aquaculture (raising aquatic animals such as snails, fish, crayfish or prawns in tanks) with hydroponics (cultivating plants in water without soil) in a symbiotic environment.

World Changer Clubs use the United Nations Sustainable Development Goals as a framework to: Explore global challenges through art, music, team-building activities, literature and media. Experience the excitement of responding to the needs of your community and the world through hands-on service. Emerge as a competent global citizen equipped with the knowledge, experience, and passion to reach out and affect positive change. Engage a lifestyle of servant leadership.

APPROVED BY:

SIGNATURE

DATE

Chief Officer:

Superintendent:

Recommendation:

| |
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| |
|--|

District Goal/Strategy:

| |
|--|
| Strategy 3 We will develop a strong support system which will provide meaningful and innovative instruction that promotes critical thinking and problem solving. |
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Funding Budget Code and Amount:

CFO Approval

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| | |
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APPROVED BY:

SIGNATURE

DATE

Chief Officer:

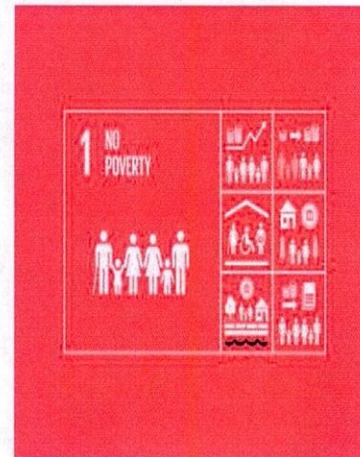
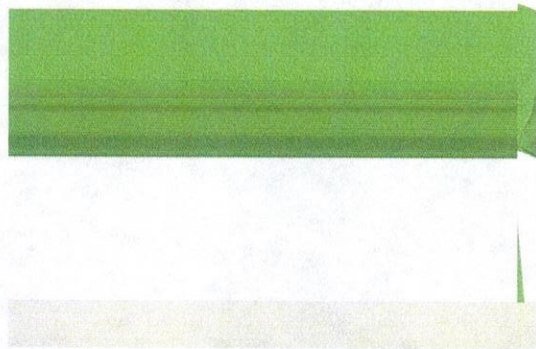
Superintendent:

Price Elementary Aquaponics

November 20, 2019

How it all started...

- Last year, we looked at special ed. students STAAR scores-What can we do to help our kids?
- Former counselor brought in U.N. Sustainable Goals-
- Formed the World Changers Club-went from 30 to 70 student members
- Price staff received training on sustainability
- Continue to enrich our students PBL sustainability



Academic Science Vocabulary

Adaptations and Behaviors

5.10 Organisms and environments. The student knows that organisms have structures and behaviors that help them survive within their environments.

| subcluster | standards | important words for concept development | |
|--|-----------|--|---|
| | | new to grade level | previously introduced |
| Adaptations | 5.10(A) | behavioral adaptation structural adaptation | adapt* ecosystem* environment function organism* species structure* survival* |
| Inherited Traits and Learned Behaviors | 5.10(B) | instinct* | hibernation inherited trait* learned behavior* migration mimicry offspring* parent |
| Life Cycles | 3.10(B) | | complete metamorphosis frog life cycle (egg, tadpole, froglet, frog) insect life cycle* (egg, larva, pupa, nymph, adult) lady beetle life cycle* metamorphosis incomplete metamorphosis plant life cycle* (seed, seedling, adult plant, flower, fruit) stage* |

Academic Science Vocabulary

Organisms and Environments

5.9 Organisms and environments. The student knows that there are relationships, systems, and cycles within environments.

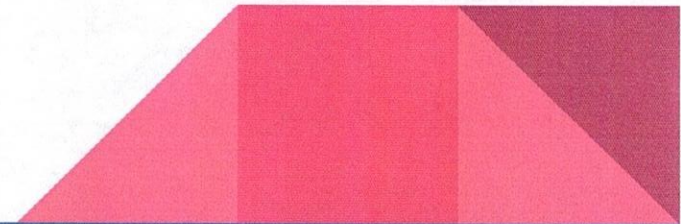
| subcluster | standards | important words for concept development | |
|----------------------------|------------------------|---|------------------------------|
| | | new to grade level | previously introduced |
| Interactions in Ecosystems | 5.9(A), 5.9(C), 5.9(D) | fossil | benefit* |
| | | imprint | community |
| | | interaction | compete* |
| | | niche | consumer |
| | | overpopulation | decay |
| | | role* | ecosystem* |
| | | species | environment* |
| | | | interdependence |
| | | | living (plants and animals)* |
| | 3.9(A) | | community |
| | | | ecosystem |
| | | | environment |
| | | | physical characteristic |
| | | | population |
| | | | species |
| Food Webs | 5.9(B) | | carnivore |
| | | | consumer* |
| | | | decomposer* |
| | | | ecosystem* |
| | | | flow of energy* |
| | | | food chain* |
| | | | food web* |
| | herbivore | | |
| | omnivore | | |
| | organism* | | |
| | producer* | | |
| | Sun* | | |
| | transfer (energy)* | | |

The United Nation Sustainable Goals

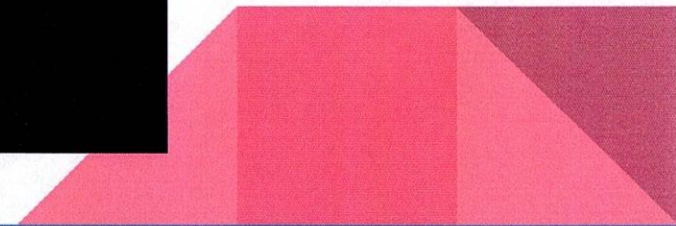
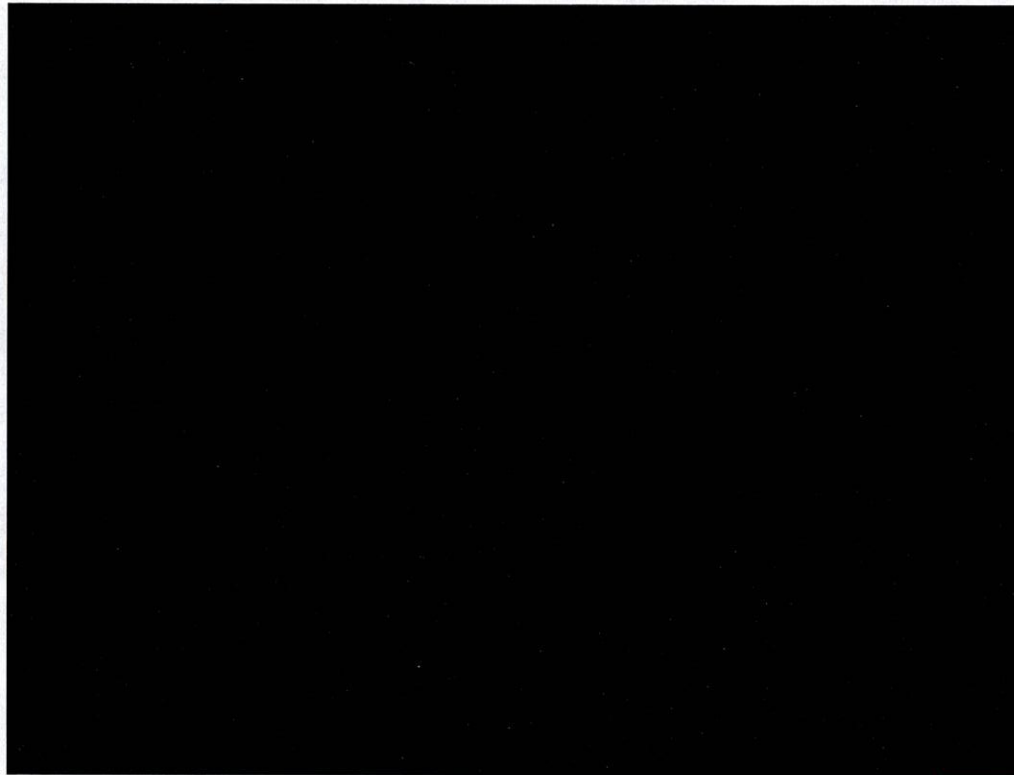


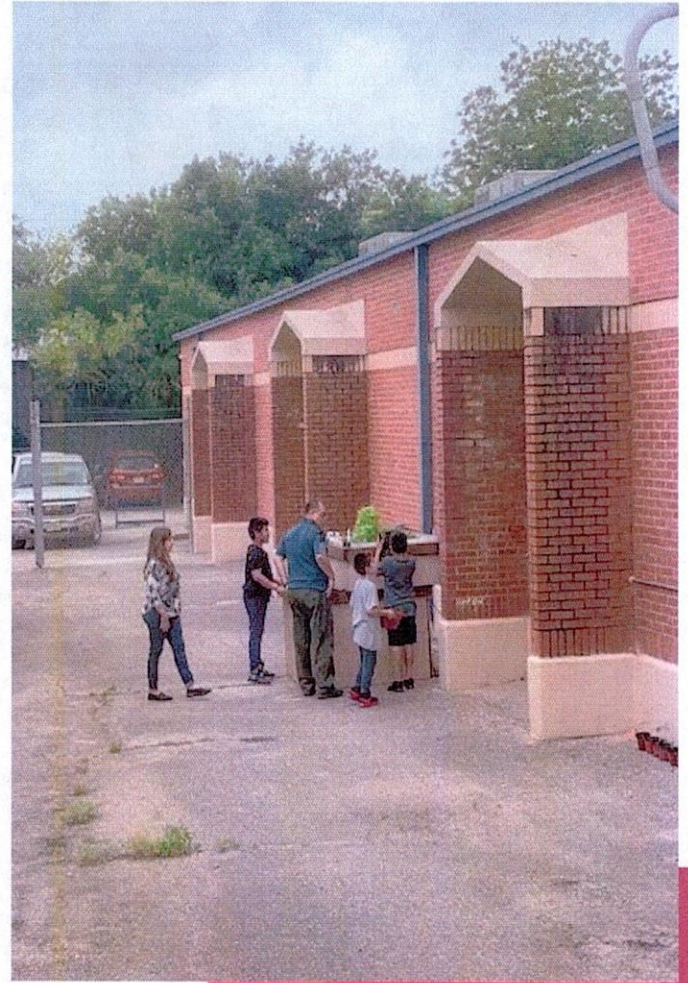
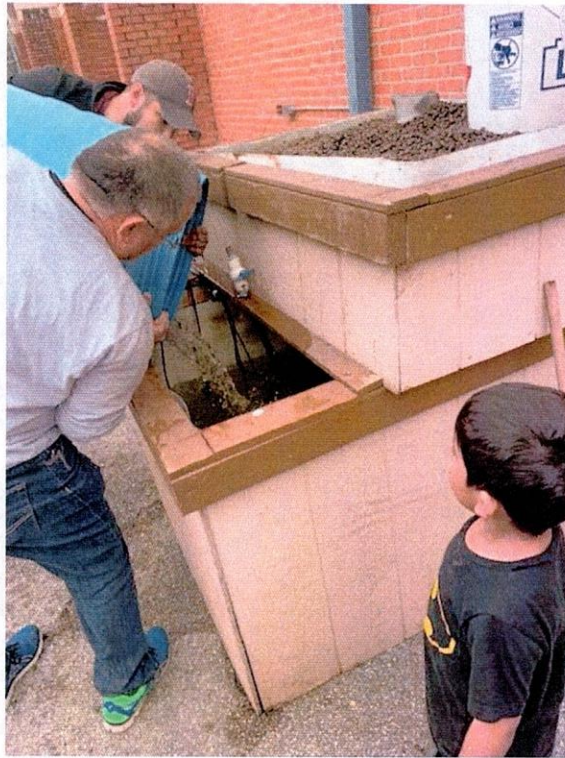
Other areas these projects help with...

- Involves all students
- Helps with behavior
- Contributes to College and Career Readiness-21st Century Learner (Sustainability Goals)
- Hands on learning (PBL)
- Real World Learning-T-TESS
- Brings in parent volunteers and community
- Guest speakers and partnerships (Musical Sprouts, guest speakers...)

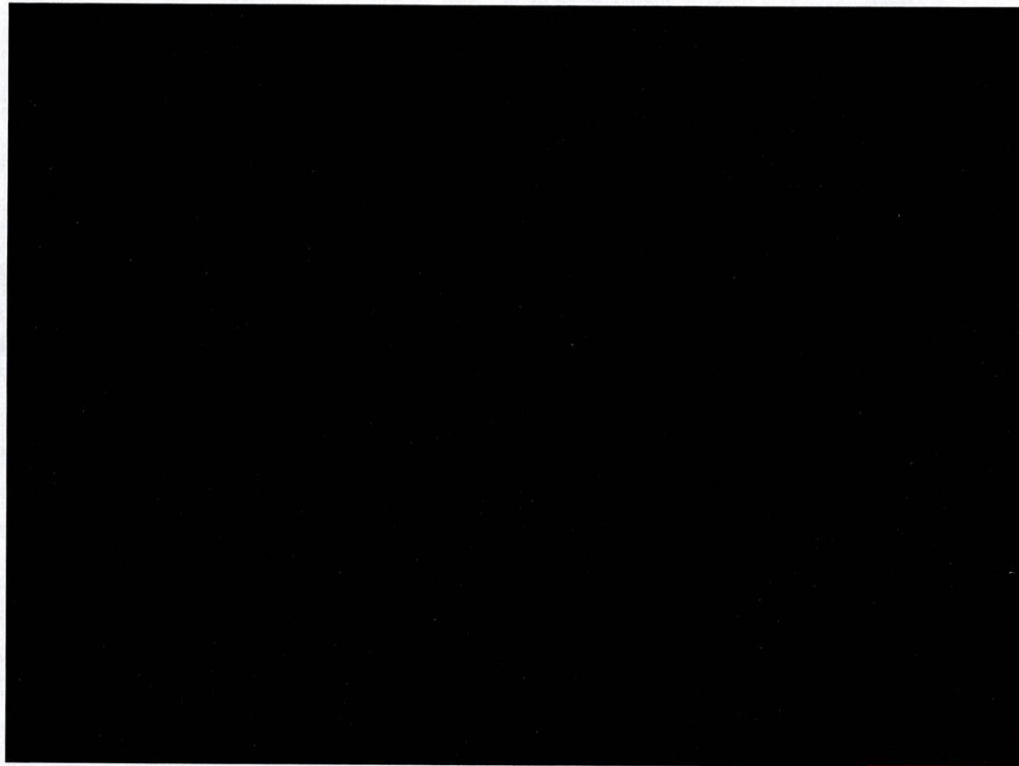


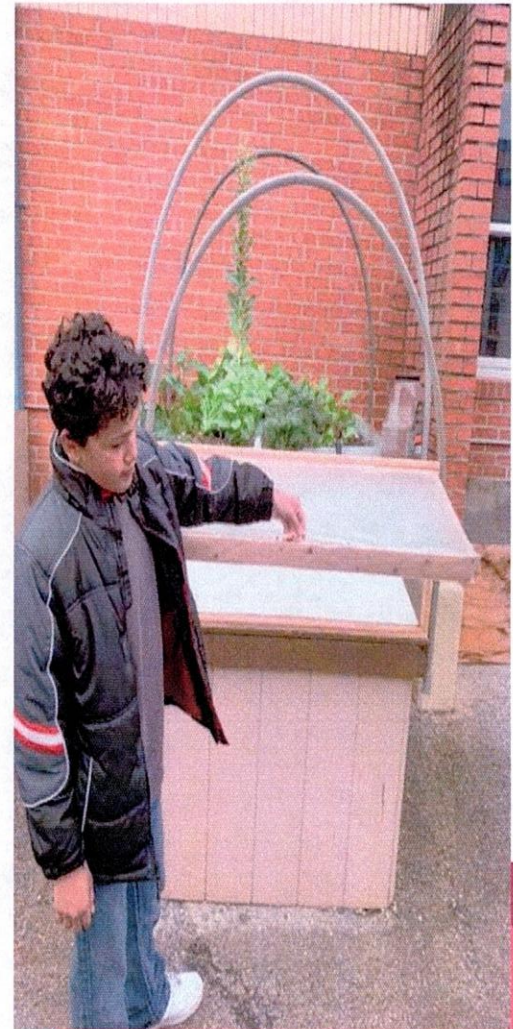
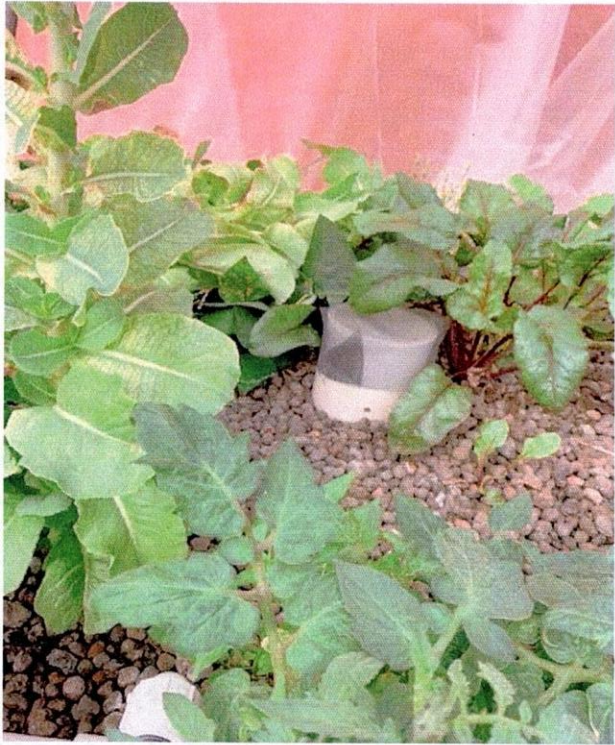
Inside Aquaponics Unit

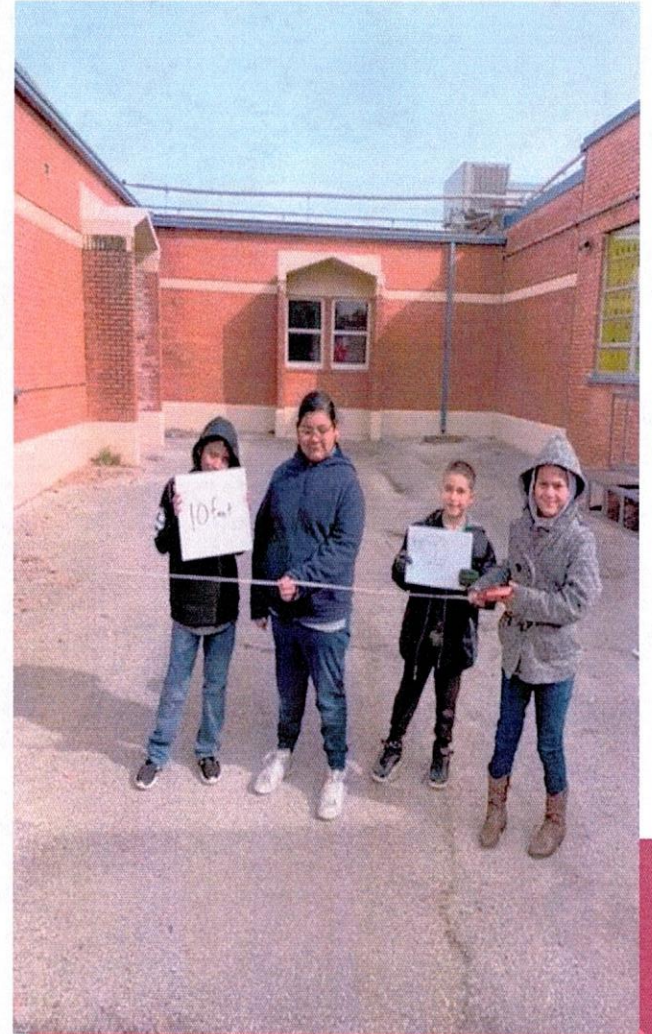
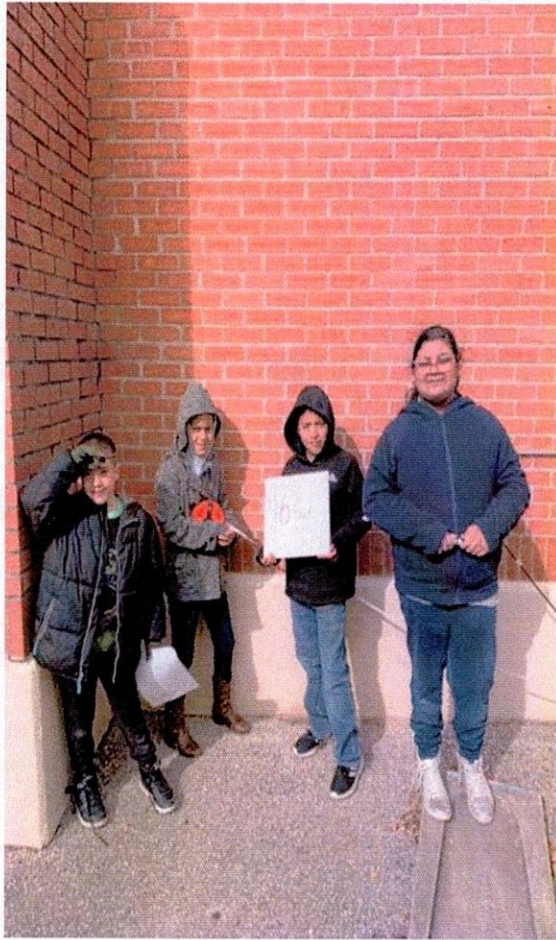
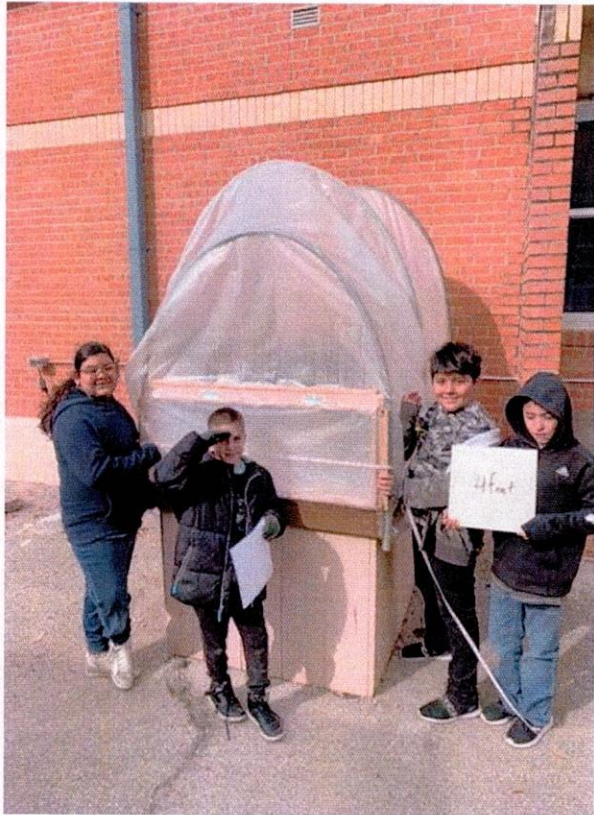




Outside Aquaponics Unit



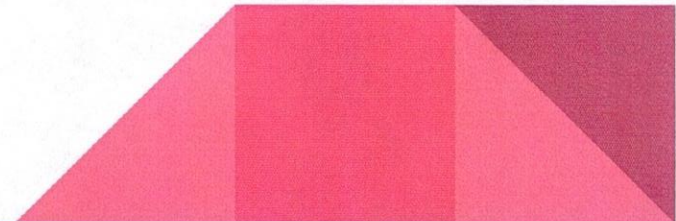




Palram HGK131 Snap & Grow Hobby Greenhouse w/Starter Kit, 8' x 20' x 9' Silver \$2,299



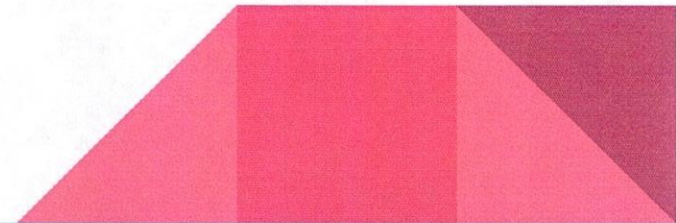
- Crystal clear virtually unbreakable polycarbonate roof and walls panels provide 100% UV protection and over 90% light transmission directly onto plants
- Reinforced, doublewall & rust resistance Aluminum frame
- 164 sq Feet growing space and 8. 5' Of head room
- Plenty of room for students to take care of the plants and feed the fish
- Large enough for a class to conduct observations and data collection



Palram HGK130 Snap & Grow Hobby Greenhouse w/Starter Kit, 8' x 16' x 9' \$1,899



- Crystal clear virtually unbreakable polycarbonate roof and walls panels provide 100% UV protection and over 90% light transmission directly onto plants
- Reinforced, doublewall & rust resistance Aluminum frame
- 132 sq Feet growing space and 8. 5' Of head room (32 square feet less)
- Reduced space for an entire class



Harbor Frieght Tools 10 ft. x 12 ft. Greenhouse with 4 Vents \$629.99 (use 20% coupon and save \$126)

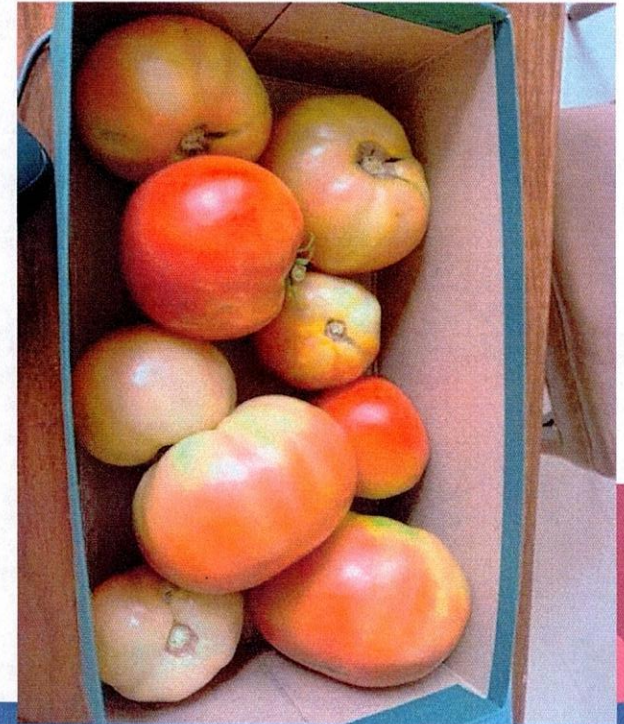
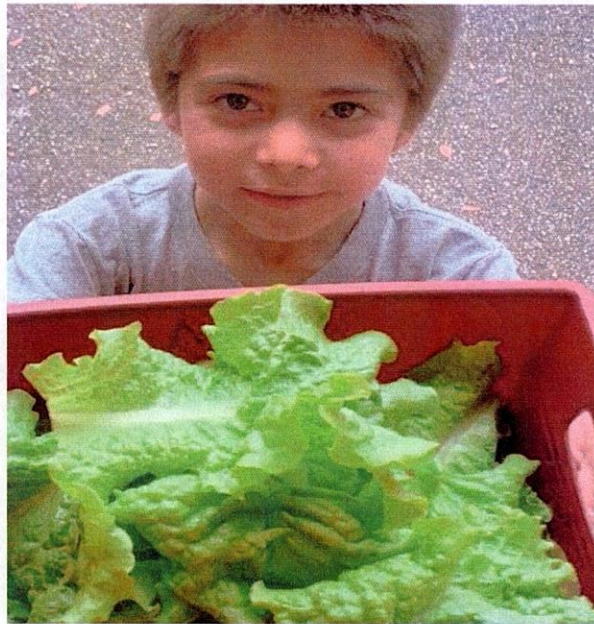


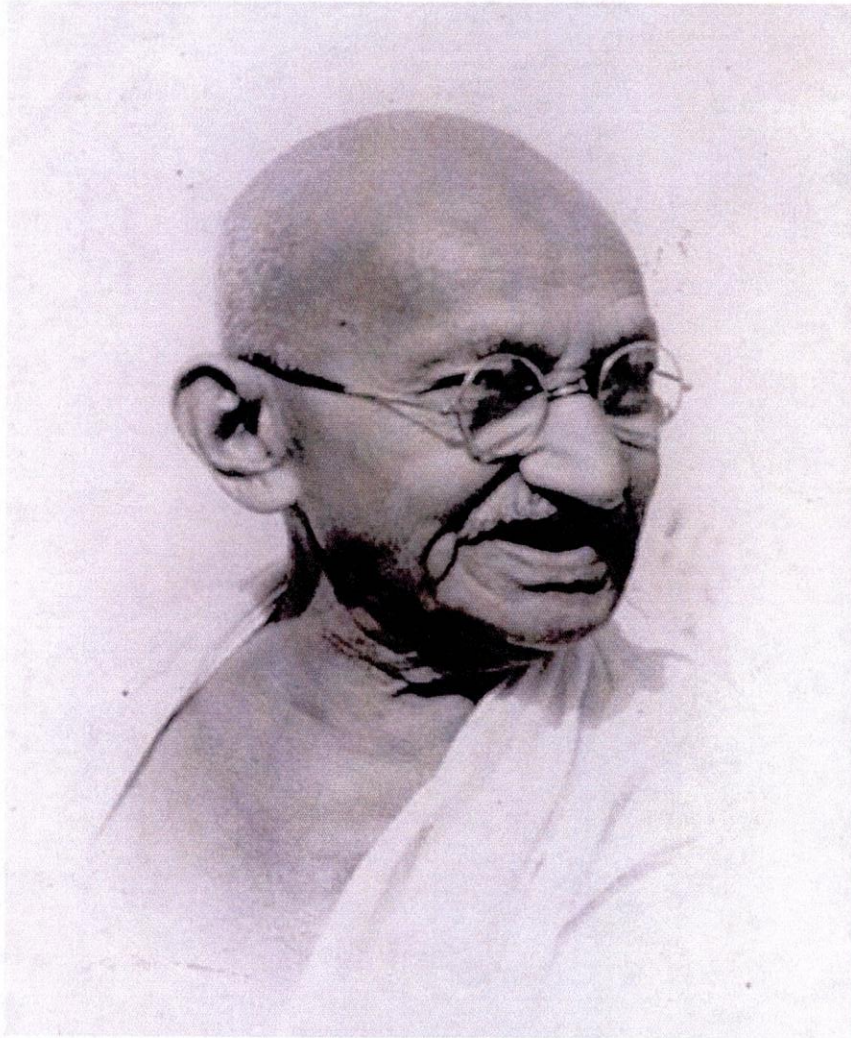
- Metal foundation base for extra stability
- Durable, all-weather aluminum frame
- UV-coated polycarbonate panels for sunlight diffusion
- Four roof vents for climate control and air circulation
- Good start to engage students and teach science using real life experiences



These are a some of the possibilities....

But with a greenhouse there are endless possibilities!





**“You must be
the change
you wish to
see in the
world.”**