

Teacher/School: Gretchen and Noel Turner

Unit Title: Hydro Phonic Gardening

Grade Level: Joint lesson 3rd grade science and 2nd and 3rd grade gifted.

Subject/Topics:

What MSP content from last summer's training is incorporated in this plan? Space Agriculture

Time Needed Several: Weeks of ongoing instruction time will be needed to complete lesson.

Learning Objectives: What will students learn?

Students will discover innovative agricultural methods. Planning and planting seeds and seedlings to obtain optimum growth. Students will learn about NASA's methods for planting and growing in limited space areas. Life cycles and needs of plants will also be addressed.

Sunshine State Standards:

SC.A.2.2.1.3.1.A, SC.D.2.2.1.3.1.A, SC.H.1.2.1.3.1.A, SC.H.1.2.2.3.1.A, SC.H.1.2.2.3.2.A, SC.H.1.2.3.3.1.A, SC.H.1.2.5.3.1.A, SC.H.2.2.1.3.1.A, SC.H.2.2.1.3.2.A, SC.H.3.2.2.3.1.A, SC.H.3.2.2.3.2.A, SC.H.3.2.3.3.1.A, SC.H.3.2.4.3.1.A, SC.F.1.2.3.3.2.A, SC.G.1.2.2.3.1.A, SC.G.1.2.2.3.2.A, SC.G.1.2.5.3.1.A, SC.G.2.2.1.3.1.A, SC.B.1.2.3.3.1.A, SC.B.2.2.1.3.1.A

Materials/Supplies:

Soil, seeds, seedlings, Vertigo systems, Vertigo table garden, journals

Prerequisite Skills:

Reading and writing.

Other skills will be addressed by public speaker knowledgeable in Agriculture and Vertigo systems.

Instructional Procedures: What will the teacher be doing? What will the students be doing?

Mr. Brown (a community member with Agricultural and Vertigo systems knowledge) will come and complete a 30 minute presentation.

Students will read text material on specific plant needs.

Gifted students will also research crop rotation and specific nutritional requirements of plants.

Groups will meet to complete plant selections and order placement in Vertigo systems. Students will make general hypothesis about plant growth and patterns, to be recorded in journals. Seeds and seedlings will be measured and weighed, results recorded. Students will determine necessary amounts of water and fertilizer to be distributed.

As students meet, new hypothesis will be recorded along with observations. Students will evaluate plant growth weekly to determine if water levels and fertilizer need to be adjusted.

Differentiated Instruction:

ESE - accommodations and modifications as prescribed in IEP.

ESOL - pictures may be drawn accurately in place of narrative; students may be allowed to write in their native language. Student narrative to be input into translation software, and then graded.

Gifted - see instructional procedures.

Assessment:

Student journals will be evaluated for understanding to include:

- a) process of journaling
- b) hypothesis
- c) plant life cycles
- d) conclusions.
- e) All weights and measures will be checked for accuracy.

Gifted education students will also publish an informational pamphlet on the Vertigro system.

All students will be required to self-assess. See attached self assessment sheet. Student assessment will be compared with teacher evaluation and a grade assigned.

Any aspects of assignment where full understanding was not achieved will be re-taught as a separate skill; i.e. weights and measures, plant cycles, journaling.

Self Evaluation

Fill out form honestly. You are the judge of your performance.

1) I participated to the best of my abilities:

Yes No

2) I used my time wisely:

Yes No

3) What were your learning goals?

4) How could you improve next time?

5) What did you do well?

6) What grade do you assign for yourself?

A B C D F

