Island School's Conservation Horticulture Project

Concept, Skills, and Identification Inventory

OBJECTIVES

The students

- Use their capacity to teach in evaluating their knowledge of concepts and skills
- Rate their understanding of selected concepts
- Rate their capacity to use selected skills
- Attempt to identify pictured plants as native or non-native

BACKGROUND

This is a self-evaluation done by students. The primary objective is to promote an awareness of their own knowledge, as they perceive it. It is designed to engage the students in becoming aware of what concepts they have some understanding of and what skills they have gained some mastery over.

Assessment of both concepts and skills uses three levels of discrimination

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CONCEPTS	SKILLS	IDENTIFICATION
• I do not understand the concept	• I cannot carry out the skill	• The plant is non-native
• I understand the concept	• I can carry out the skill	• The plant is native
• I can teach	• I can teach	• I am not familiar with

someone else the concept	someone else the skill	the plant

The inventory takes about 30 minutes. It may be given in one or two sessions. The answers (No, Yes, Teach) are to be circled for the concepts and skills. Native or Non-native is to be circled for the identification section.

THE TEACHER – SCIENTIST ASSESSMENT

Teacher-scientist partners use the inventory to determine the student's development in Hawaii's Conservation Horticulture Project. Based on student responses, the partners determine if students have some knowledge of concepts and skills presented. Where there is a difference between student response and teacher-scientist assessment, for example, a *yes* where it is felt there should be a *no*, students can be checked to see if their perception is accurate by having them teach the concept or demonstrate the skill to the partners during private discussions.

There will be a post project concept and skills inventory after all units have been completed. This will be used to assess student's progress since the beginning of the project.

PROCEDURE

1. Discuss the purpose of the Concept and Skill Inventory with the students

2. Go over examples of what is meant by each response level of the inventory. Read the concept and skills where necessary and have the students circle their level of understanding and mastery

3. Discuss with individuals any difference in teacher and student perception of mastery and understanding

4. Bring the completed inventory to your next session

5. Share inventories with the students' parents

Activity adapted from DASH Concept and Skill Inventory (by Fancis M. Pottenger and Donald B. Young, Curriculum Research and Development Group, University of Hawaii)

SUGGESTED SCRIPT
FOR ADMINISTRATION
OF 4th CONCEPT AND SKILLS INVENTORY

Concepts

1. Do you know what living means? . . . NO, I do not know what living means, YES, I know what living means, or, I can TEACH the meaning of living to a friend who does not know what living means.

   Please circle no, yes or teach to answer these questions

1	Do you know what **living** means?
2	Do you know what **diversity** means?
3	Do you know what **conservation** means?
4	Do you know what a **flower** is?
5	Do you know what a **leaf** is?
6	Do you know what a **root** is?
7	Do you know what a **seed** is?
8	Do you know what **sunlight** is?
9	Do you know what **energy** means?
10	Do you know what **grow** means?
11	Do you know some things **plants need** to live?
12	Do you know what **soil** Is?
13	Do you know what a **greenhouse** is?
14	Do you know what **environment** means?
15	Do you know what **guessing** is?
16	Do you know what **not-living** means?
17	Do you know what a **weed** is?
18	Do you know what **extinct** means?
19	Do you know what **small** means?

20	Do you know what **population** means?
21	Do you know what **rare** means?
22	Do you know what a **threat** is?
23	Do you know what **native** means?
24	Do you know what **endemic** means?
25	Do you know what **science** is?
26	Do you know what **germinate** means?
27	Do you know what a **stem** is?
28	Do you know what **introduced** is?
29	Do you know what a **fruit** is?
30	Do you know what **pubescence** is?
31	Do you know what a **pioneer species** is?
32	Do you know what **habitat** is?
33	Do you know what a **map** is?
34	Do you know what ***kuleana*** is?
35	Do you know what **change** means?
36	Do you know what **airlayering** is?
37	Do you know what a **cutting** is?

Skills

1. Do you know how to observe? … NO, I do not know how to observe, YES, I do know how to observe, or, I can teach a friend how to observe who does not know what observing is.

Please circle No, Yes or teach to answer these questions

1	Do you know how to **observe** something?
2	Do you know how to **describe** something?
3	Do you know how to **cooperate**?
4	Do you know how to **count** things?
5	Do you know how to **compare** things?

6	Do you know how to use a **ruler**?
7	Do you know how to use **scissors** ?
8	Do you know how to **dig** a hole?
9	Do you know how to **water** plants?
10	Do you know how to **sow** seeds?
11	Do you know how to **cultivate** a plant?
12	Do you know how to **plant** a tree, shrub or flower?
13	Do you know how to **uproot** or pull a weed from the ground?
14	Do you know how to **mix** soil?
15	Do you know how to **record** data?
16	Do you know how to **graph** data?
17	Do you know how to use a **compass**?

Identification

1. Can you identify this plant? … NO, I do not recognize this plant, YES, and it is NATIVE, or, YES, and it is NON-NATIVE. Feel free to tell the students the name if they cannot make the plant out from the picture.

Please circle No, Native or Non-native to answer these questions

1	Can you identify this plant? (plumeria)
2	Can you identify this plant? (koa)
3	Can you identify this plant? (ohi`a)
4	Can you identify this plant? (bougainvellia)
5	Can you identify this plant? (naupaka)
6	Can you identify this plant? (banana poka)

7	Can you identify this plant? (kahili ginger)
8	Can you identify this plant? (ilima)

Name_____ Date_____

Concepts

Concept	Understanding		
1. **living**	No	Yes	Teach
2. **diversity**	No	Yes	Teach
3. **conservation**	No	Yes	Teach
4. **flower**	No	Yes	Teach
5. **leaf**	No	Yes	Teach
6. **root**	No	Yes	Teach
7. **seed**	No	Yes	Teach
8. **sunlight**	No	Yes	Teach
9. **energy**	No	Yes	Teach
10. **grow**	No	Yes	Teach
11. **plants need**	No	Yes	Teach
12. **soil**	No	Yes	Teach
13. **greenhouse**	No	Yes	Teach
14. **environment**	No	Yes	Teach
15. **guessing**	No	Yes	Teach
16. **not-living**	No	Yes	Teach
17. **weed**	No	Yes	Teach
18. **extinct**	No	Yes	Teach
19. **small**	No	Yes	Teach
20. **population**	No	Yes	Teach

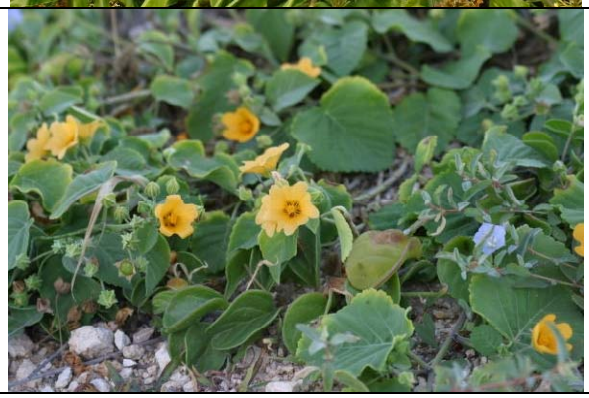
21. **rare**	Yes	No	Teach
22. **threat**	Yes	No	Teach
23. **native**	Yes	No	Teach
24. **endemic**	Yes	No	Teach
25. **science**	Yes	No	Teach
26. **germinate**	Yes	No	Teach
27. **stem**	Yes	No	Teach
28. **introduced**	Yes	No	Teach
29. **fruit**	Yes	No	Teach
30. **pubescence**	Yes	No	Teach
31. **pioneer species**	Yes	No	Teach
32. **habitat**	Yes	No	Teach
33. **map**	Yes	No	Teach
34. **kuleana**	Yes	No	Teach
35. **change**	Yes	No	Teach
36. **airlayering**	Yes	No	Teach
37. **cutting**	Yes	No	Teach

Skills

Skill		Understanding	
1. **observe**	No	Yes	Teach
2. **describe**	No	Yes	Teach
3. **cooperate**	No	Yes	Teach
4. **count**	No	Yes	Teach
5. **compare**	No	Yes	Teach
6. **ruler**	No	Yes	Teach
7. **scissors**	No	Yes	Teach
8. **dig**	No	Yes	Teach
9. **water**	No	Yes	Teach
10. **sow**	No	Yes	Teach
11. **cultivate**	No	Yes	Teach
12. **plant a tree, shrub or flower**	No	Yes	Teach
13. **uproot**	No	Yes	Teach
14. **mix soil**	No	Yes	Teach
15. **record**	No	Yes	Teach
16. **graph**	No	Yes	Teach
17. **compass**	No	Yes	Teach

Identification

	No	Native	NON-Native
	No	Native	NON-Native
	No	Native	NON-Native
	No	Native	NON-Native

	No	Native	NON-Native
	No	Native	NON-Native
	No	Native	NON-Native
	No	Native	NON-Native