



Make Sense of Nature

Program Purpose:

The purpose of program is to heighten awareness and curiosity of nature while using senses other than sight to explore.

Length of Program: 1 hour

Age: Grades 1st-5th

Maximum Number of Participants:

20

Objectives:

After completion of all activities, students will be able to:

- Identify an object from nature after exploring it with senses other than sight.
- Demonstrate an increased sensitivity of hearing, smell and touch.
- Express increased verbal communication skills.

Preparation:Day before:

- Obtain an apple, pear and potato

Before the class arrives:

- Locate lesson bin from storage room.
- Make sure all kits are fully stocked for activities planned.
- Fill cups for taste test.

Basic Outline:

- I. Introduction
- II. Talk about Touch
- III. Unknown Identification
- IV. Blind Counting
- V. Talk about Taste
- VI. Taste Test
- VII. Experience a Natural Spot
- VIII. Conclusion

Materials:

20 Blindfolds

Natural objects bags

Pine Cone

2 Turtle Shells

Fungi

Skull

5 Bones

Teeth

Pine branch w/o needles

Square of fur

2 Beaver chewed logs

Feather

3 Rocks

2 pieces of Tree bark

Antler

Tree Knot

Muscle Shell

Horseshoe Crab shell

Tail

Hollow Stick

Smell containers: Vinegar, Onion Powder, Cinnamon, Coconut, Garlic, Orange, Cherry, Black licorice

Pencils

Sheets of Paper

Q-tips

Bathroom cups

Salt

Sugar

Vinegar

Tonic Water

Salt less saltines crackers

Tooth picks

Pear – Obtain before each class

Apple – Obtain before each class

Potato – Obtain before each class

Alternative activities

Jelly Bellies Taste Testing

Sense Scavenger Hunt

Introduction:

Introduce yourself and the title of the class. During this class you are going to use senses other than sight to explore the nature around you. How would you describe what a sense is? *Any of the faculties by which stimuli from outside or inside the body are received and felt, as the faculties of hearing, sight, smell, touch, taste, and equilibrium.* We have five senses (list them) but tend to depend mostly on sight. If you take a particular sense away (think of someone who is blind or deaf) the other senses become heightened. Senses are possible because of nerve endings found in the eye, ear, skin, tongue and nose that send messages to the brain. Humans have these senses to ensure our safety and survival.

Talk about Touch:

Our sense of touch gives us information about what is around and outside our body. The epidermis/top layer of the skin contains many nerve endings all over your body that send messages to your brain. What are some messages you've received from your sense of touch; list touch/feeling words – strange, familiar, wet, dry, hot,

cold, rough, smooth, hard, and soft. When someone or something touches you, you can feel that it is touching you, and you can also feel that you are touching it back. You can also feel how hard something is touching you. We use special nerve endings to feel pressure. But if you press too hard it can cause bruising. What do we learn about our world by touch?

Unknown Identification:

Touch: With numbered pillowcases

Ask the students to form a circle by sitting on the floor (chairs if a small group). Tell them they are going to work on heightening their sense of touch and smell. Pass out numbered sheets and pencils. As the touch bags and smell containers are passed around, they will fill in what they think is in the bag. Everyone will start with something to identify, but it may not be number 1, so each person will be starting filling in guesses at a different number but it will proceed in order from there. Tell them they can only use any sense other than sight to try and figure out what the object or smell is. Once all the items have gone around the entire circle, collect them. Hold up item number one and take hypotheses as to what it is, the object or smell, and the reasons to their hypothesis. Field a couple guesses before giving them the answer. Have the students mark which ones they guessed correctly.

Touch: With blindfolds

Ask the students to form a circle by sitting on the floor (chairs if a small group). Tell them they are going to work on heightening their sense of touch and smell. They will be handed an object, which they get to know well enough so as to pick it out of a pile later on. Hand out blindfolds and help get them situated. Tell them you will be asking them some questions to help them get to know their object. Ask them to answer in their head and keep comments to themselves. Nothing they receive is alive or can hurt them. Hand each student an object. Place the extra objects in the middle. Now ask some questions to initiate identification.

- How big is the object compared to your hand?
- How heavy is it compared to a feather?
- Is it warm or cool on your cheek?
- What's its texture? Smooth, rough, sharp, gritty, bumpy
- What does it smell like?
- Could you hide in it if you were an ant? What if you were a mouse?
- Is it hollow or solid? Hard or soft?

After they have had a chance to get to know their object, start a rotation. When you say pass they will pass their current object to the left, thus receiving a new object. They will have a short amount of time to get to know this new object then they will pass it on. This will continue until everyone has touched everything or you choose to stop. Now collect all the items and place them in the

middle. The students can remove their blindfolds. Before a student can retrieve their item they need to explain what they sensed about the object. Re-ask some of the get to know you questions if necessary. Let them go feel some objects if necessary to jog their memory. Did their object turn out to be what they thought it was? Go around the circle until everyone has their original object back.

Smell

Hand out pieces of paper and pencils. Have the students number their paper. Numbered scent containers will be passed around, once they've had a chance to smell a container they should write down their guess next to the number associated with it. When all the containers have been passed around, collect them. Start with number one and ask for some hypotheses. After receive a couple reveal the answer, have the students check which ones they got correct.

Blind Count:

In furthering the exploration of touch we'll test the sensitivity of our hands. Pair up the students and hand out blindfolds. Explain that while one student is blindfolded their partner will be placing beans into their hand, in varying quantities, $1 + 1 + 2 = 4$. The object is to count the number of beans in their hand only by touch. Be careful not to make noise that would give away the number of beans. Though give them some kind of indication that the problem is over and they should give you the sum; touching their shoulder, saying OK. Go through a couple problems then switch positions. There should be a limit of how many they can place in the hand at a time.

Talk about Taste:

Another important sense is taste; it prevents consumption of inappropriate food sources. The tongue is a muscle covered with many small bundles called taste buds that have many nerve endings. Different parts of the tongue have taste buds that perform different jobs. Show tongue diagram. Now if the tongue by itself can only detect four distinct tastes, how do you get all the different tastes of food? Taste is connected to the sense of smell. When the two are combined, the result is its flavor. If you can't smell the food, can you tell what you're eating? Think of when you've had a cold, how did your food taste? Have a volunteer, blindfold them and have them plug their nose. With a toothpick touch a piece of a pear, apple or potato on their tongue, can they distinguish between them? Don't let them close their mouth while testing. Do a second test (different volunteer) this time allowing them to close their mouth before answering. Was there any difference in their ability to distinguish? If so what can it be contributed to? Saliva; it mixes with the food and spreads the flavor all over the tongue.

Taste Test:

Now everyone will get a chance to test their taste buds. Pair up the students and hand out a blindfold, a tongue diagram work sheet, a pencil, 32 q-tips, and four numbered cups with liquid to each pair. While one partner is blindfolded the other partner will test the four liquids on the four taste areas (16 tests) and record where reactions/tastes accrue. Encourage the blindfolded student not to close their mouth during a test. Have them indicate what taste area they have sense in by holding up figures; 1 – Sweet, 2 – Sour, 3 – Salty, 4 – Bitter. Switch and repeat.

Experience a Natural Spot:

Now explain that they will be going outside and testing their heightened senses. Hand out the Sense Sit sheets and pencils. Each student will find their own spot, away from others, and record, any way they want (draw, list) what they sense. Have them try using one sense at a time, so it's heightened. When they come back together have them share what they have sensed. As other students share if they have that same sense on their sheet have them cross it off. This will end up showing us the uniqueness of certain senses. Go through as a group to classify all the collected senses as biotic (living) or abiotic (nonliving). How many different items did the class find? How many of them belong to the plant kingdom? How many of them belong to the animal kingdom?

Conclusion:

Discuss what the students learned about their senses. If they could live with only one sense which one would they choose to keep? Why? How was their experience in the woods today different from past experiences? What did they appreciate more about nature by using all of their senses?

Scent Container Key

1. Cocoa
2. Cinnamon
3. Onion Powder
4. Garlic Salt
5. Orange Drink
6. Vanilla
7. Black Licorice
8. Cherry
9. Coconut

Pillow case Key

1. Large Turtle Shell - Snapper
2. Beaver chew tip
3. Deer Tail
4. Sandstone
5. Hollow Stick
6. Pine Cone
7. Small Vertebrae
8. Muscle Shell
9. 3 point Antler
10. 2 Feathers
11. Rock (black)
12. Birch Bark
13. half Deer Jaw Bone
14. Tree Knot
15. Skull
16. Shelf Fungus/Mushroom
17. Small Turtle Shell - Musk
18. Fur Square
19. Large Vertebrae
20. Pine Cone
21. 2 Needless Pine branches
22. Arm Bone
23. Multi Beaver Chew
24. Nothing! 😊
25. Conglomerate Rock
26. Full Deer Jaw Bone
27. Horseshoe Crab Shell
28. Bark rectangle
29. Tooth