

SCIENCE

THE SEARCH

Discovering the Principles
that Govern God's Creation

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BOOK 1 PROPERTIES

THE CORNERSTONE CURRICULUM PROJECT

OBSERVATION NOTEBOOK

Describing Objects

9/9/94 Activity 2

red

round

small

shinny

2 holes

.

.

.

no holes on top

cylinder

oval

plastic

brass

SAMPLE

9/16/94 Activity 3

rock

rough

jagged

heavy

brown

shinny specks

leaf

dark green

3 parts

arrow shaped

ACTIVITY 1

OBJECTS IN OUR HOME

MATERIALS

various household objects (preferably objects from different rooms)

OVERVIEW

EXPLORING THE CONCEPT: PROPERTIES OF OBJECTS

LESSON PLAN

WHAT I AM TO DO

WHAT I AM TO SAY

1. Set the objects on the table for your children to observe..

2. Pick up one of the objects.

"This object is a ... what can you tell me about it?"

"How else can you describe it?"

Let your children tell you as many things as they can about the object. Do not rush their observations.

3. Pick up another of the objects.

"This object is a Look at it closely. Tell me five things about it."

"Look at it again. How would you describe it to someone who has never seen one?"

Continue this same type of discussion with the remaining objects.

4. After you have completed observing the household objects, play "I SPY". Look for an object in the room that everyone can easily see, but do not tell anyone the objects. For example, a "wall clock." Give a descriptive word for it. Your children look around the room trying to find it. Allow them only one guess per clue. Continue adding clues until the object is discovered.

"I SPY an object that is round."

"It is round and makes this sound: Tick-toc."

ACTIVITY 2

GRANDMA'S BUTTON BOX

MATERIALS

an assortment of buttons

OVERVIEW

EXPLORING THE CONCEPT: PROPERTIES OF OBJECTS

LESSON PLAN

WHAT I AM TO DO

WHAT I AM TO SAY

1. You might want to begin this activity by playing another game or two of "I SPY".

2. Give your children an assortment of buttons.

"Take out a couple of buttons from the button box."

"What can you tell me about the buttons?"

3. Write in the observation notebook:
'Describing objects'

"Let's begin making a list of all the words we use to describe the objects we observe."

"Pick out your favorite five buttons."

"As you observe each button, I will write the words you use to describe it in our Observation Notebook under the heading 'describing objects'."

"What other words could we use to describe these buttons?"

"Select five more buttons. Tell me about them."

Continue adding words to the list throughout this activity.

4. Have your children put all but two buttons away.

"How are these two buttons alike? ... How are they different?"

"Let's make two groups. Find several buttons that are like this one ... and several that are like this one."

ACTIVITY 5

OBJECT COLLECTIONS

MATERIALS

Collection of objects from several different rooms in your home

magnifier

several kinds of fruit

OVERVIEW

NAMING THE CONCEPT: PROPERTIES OF OBJECTS

LESSON PLANS

WHAT I AM TO DO

WHAT I AM TO SAY

1. Select objects to provide as wide a variety as seem reasonable.

2. Place each object on the table.

"What objects are on the table?"

"Pick one of the objects and examine it for two or three minutes. Be able to tell me as many things as you can about it."

As your children describe the objects add any new words to the list in the **OBSERVATION NOTEBOOK**.

"Now, tell me about the object you selected."

3. Repeat this with several objects.

4. Circle all the **color** words that are listed in 'DESCRIPTION OF OBJECTS'.

"What do these words tell us about the objects we have observed?"

5. Draw a box around all the **shape** words that are listed in 'DESCRIPTION OF OBJECTS'.

"What do these words tell us about the objects?"

6. Put a check mark beside all the **size** words.

"What do these words tell us about the objects?"

7. Put a dot next to all the **texture** words.

"What do these words tell us about the objects."

8. Draw your children's attention to any other groups of words:
E.g. Smell, sound, etc.

9 write **properties of objects** in the Observation Notebook above
'Description of objects.

"Color, shape, size, and texture words describe the **properties of objects.**"

10. Write color, shape, size, texture, etc. In the Observational Notebook.

11. Let your children select a piece of fruit, for example, an apple.

"Observe the apple and be able to tell me five properties of it."

12. Make the following chart in the **OBSERVATION NOTEBOOK:**

OBJECT	Add A Color	Add A shape	Add A size	Add A texture	Add A smell	Add A taste	Add A sound	Add An action
Apple	yellow	round	small	smooth	sweet	sweet	crunchy	chewy

"Look at the object chart I have written."

"Write the name of the object in the first column."
(For example, apple)

"Give me a color property for the apple. Write that property in the second column."

"Tell me a shape property. Write that property word in the 'shape' column."

"What size word could you use to describe the apple? Write that property word in the next column."

"Feel the apple and give me a texture word that describes it. Write it in the next column."

"Smell the apple and tell me another property. Write it in the next column."

"Take a bite of the apple and tell me what you hear? Write that word in the next column."

13. You may wish to introduce the use of a thesaurus at this point to refine the observations.

14. Help your children build a sentence...

"Use the property words from your description of the apple to write a complete sensory sentence about it." (For example, 'I bit a cold crunchy apple.')

ACTIVITY 7

SORTING LEAVES

MATERIALS

paper or plastic bag
magnifier

OVERVIEW

EXPANDING THE CONCEPT: PROPERTIES OF OBJECTS

LESSON PLAN

WHAT I AM TO DO

WHAT I AM TO SAY

1. Go to a place where your children can collect a variety of leaves.

"As we are picking up leaves, let's talk about their properties. Let's describe their colors ... their shapes ... their sizes ... the patterns."

2. Put all the leaves on a table.

3. Hold up two leaves. Encourage your children to record their observation using drawings and words.

"Describe the properties of these leaves."

"How are these two leaves alike? ... Different?"

"To better see the pattern of the leaf set a sheet of paper over the leaf and using the side of a crayon rub over the leaf."

"Do this with several leaves."

"Do all leaves have the same pattern?"

4. Let your children observe all the leaves.

"Look closely at each of the leaves and then separate them into groups."

"What property did you use to sort the leaves?"

"I want you to sort them on another property."

"How did you group them this time?"

Continue adding any new descriptive words to the list

5. Group the leaves in several different ways.

ACTIVITY 9

WHY PUT IT THERE?

MATERIALS

construction paper, 2 pieces
spoons, 2 wood, 2 metal, 6 plastic (3 different colors)
pencils of various lengths and colors
popsicle sticks
geometric shapes cut from red, yellow, blue, and green construction paper

OVERVIEW

EXPLORING THE CONCEPT: PROPERTIES OF OBJECTS

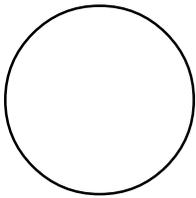
LESSON PLAN

WHAT I AM TO DO

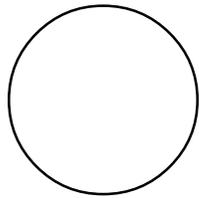
WHAT I AM TO SAY

1. Place the two pieces of construction paper on the table so that your children can see them.

2. One by one, place four objects on each piece of the construction paper. Make sure that one group has a particular property, and that the other group does not. Make available all the other objects.



for example,
Wooden Objects



Not Wooden Objects

"Look carefully at the objects that I am placing on the construction paper."

"I want you to choose an object that I did not use and place it into one of the two groups."

"Tell me why you put that object into that group."

3. If your child places an object into a group for the same reason that you separated them, tell him that he is correct. However, if he places it into the group for a different reason, then he must take it out and try again. You can make this as easy or as difficult as you want. Set up a new situation by selecting a different property and different objects for each group. Continue this activity as long as interest is high.

ACTIVITY 14

MACARONI

MATERIALS

macaroni collection, such as bows, elbows, noodles, spaghetti, wheels, spirals, and shells (some light and some dark in color)

OVERVIEW

EXPANDING THE CONCEPT: PROPERTIES OF OBJECTS

LESSON PLAN

WHAT I AM TO DO

WHAT I AM TO SAY

1. Set out the following three pieces of macaroni: 2 long spiral type, one thin and one thick; 1 shell type.

"Look at these pieces of macaroni."

"How are they alike? ... Different?"

"Classify these pieces."

"How did you decide to classify the macaroni?"

If your children did not classify them on two properties at a time (both long and spiral), then put the two long spiral type together and set the shell type by itself.

"How are these two pieces of macaroni alike?"

"They are both long and in a spiral shape."

"How about the other piece?"

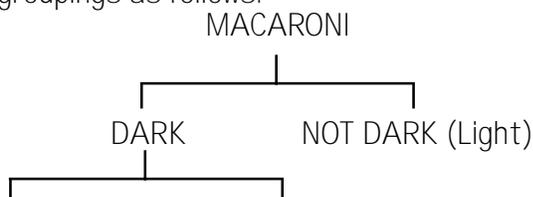
2. Give your children one of each kind Of macaroni...

"I would like you to classify these pieces of macaroni."

"How did you classify them?"

"How else could they be classified?"

3. As your children make the following classification they should record their groupings as follows:



"First, I want you to separate the macaroni into two groups on the basis of color - dark and not dark."

ACTIVITY 15

LET'S GET ORGANIZED

MATERIALS

dresser
 drawer
 laundry
 dishwasher

OVERVIEW

EXPANDING THE CONCEPT: PROPERTIES OF OBJECTS

LESSON PLAN

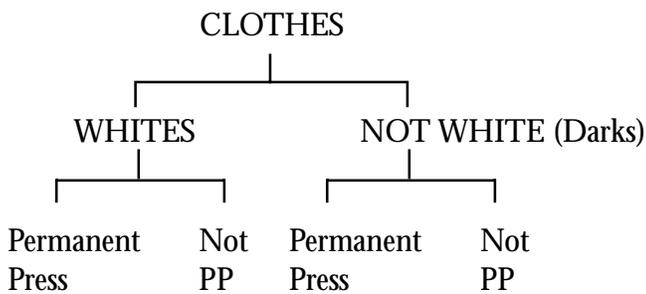
WHAT I AM TO DO

WHAT I AM TO SAY

1. Begin this activity with a clothes dresser.

"Let's look at the clothes in this drawer."
 "Describe the properties of several pieces."
 "How are they alike? ... Different?"
 "Compare the clothes from the different drawers."
 "How are the drawers classified?"
 "Why is it helpful to have the drawers classified in this way?"
 "As you put your clothes into the drawers be sure to watch how they are grouped."

2. The next time you begin sorting clothes to be washed have your children help.



Continue classifying the clothes until they are all sorted.

"Let's look at the clothes from the hamper."
 "Describe the properties of several pieces."
 "How are they alike? ... Different?"
 "How should we classify the clothes before they are washed?"
 "Let's begin by separating them into whites and not whites (or darks)?"
 "How many separate groups did we make?"
 "Describe the properties of each group."

"Now I am going to give you several more pieces of clothes. Put each piece into the proper group and tell me why you put into that group."

"How are the properties of this new piece like the properties of the group?"

3. Have your children look into several drawers. Begin with those that are nicely classified.

"Look closely at the items in this drawer."

"On what property would you say these items are classified?"

Now have your children look into a drawer that needs to be classified.

"Let's look at the objects in this drawer."

"How are the objects in this drawer classified?"

"Let's take all the items out and begin to sort them into groups."

"Are there any alike? ... Let's put them over here."

Continue sorting the items until the drawer is organized.

4. Use this activity for helping your children learn to put dishes into the dish washer. Start with the utensil keeper.

"Let's look at our food utensils that we used this morning for breakfast."

"How many different kinds are there?"

"How should we put them into the dishwasher?"

"Let's go ahead and put them into the dishwasher."

"Now let's look at the other items that need to be washed."

"How are they alike? ... Different?"

"Put them into the dish washer based upon their similarities and differences."

Look for many opportunities to help your child classify items based upon properties of objects.

ACTIVITY 16

HARDWARE CLASSIFICATION

MATERIALS

various assortment of hardware, wood screws, bolts, nails, nuts, washers (metal and rubber), brads, tacks, etc.

OVERVIEW

EXPANDING THE CONCEPT: PROPERTIES OF OBJECTS

LESSON PLAN

WHAT I AM TO DO

1. This activity may be too difficult for some children to totally complete. Take it as far as your family can go.

2. Make available the objects listed. Your children will be observing many different objects (only one of each kind). When you start to classify the objects, remember that there is more than one way to separate the objects. It is important for your children to tell you **why** they made the subgroupings in the way they did. Have fun!

WHAT I AM TO SAY

"Today we are going to observe the properties of many different objects."

"Take several of them and be able to tell me at least five properties about each."

"How are the objects alike? ... Different? What else can you tell me?"

"With the several objects that you have, group them for me."

"How are the objects in this group alike?"

"What about this group?"

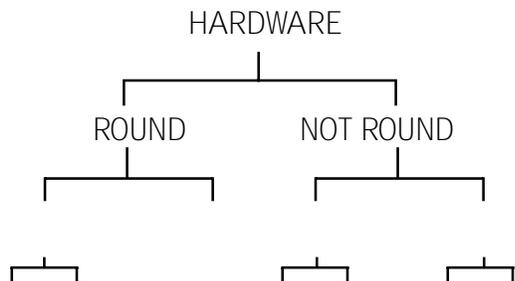
"How is this group different from this other group?"

"Now let's begin working with all the objects."

"First, look through the objects and see if you could separate them into two groups."

"How would you begin to classify them?"

If your children need some assistance getting started, begin to separate them into two groups :those that are round and those that are not round (long). Help your children draw out the classification chart in their notebooks.



Help your children to continue subgrouping the not-round objects until they cannot be subgrouped any more.

Now have your children focus on those objects that are round..

Continue this process until there are no longer any objects to subgroup.

Select one of the objects..

Pick up another object...

Continue until your children have had the opportunity to use the chart to describe the properties of several objects.

"How am I beginning to classifying them?"

"That's right! Those that are round and those that are long (not round). Draw that on your classification chart."

"Now let's focus on those that are not round."

"How could we separate them into two groups? What property would describe each group? Add this information to the chart."

"Now we are ready to classify those objects that are round."

"Separate them into two groups for me."

"Are you sure that you want to do that? Tell me why?"

"Add this to the classification chart."

"How many objects are in each group?"

"Now we must separate them into two groups."

"Use your chart to describe all the properties of this object."

"How is this object different from the other object?"