LESSON 2 A STRUCTURE OF A 2D BOX

PURPOSE: To have the children;

- COMPARE 3D BOX and NOTICING MAT
- Find the CORNERS on the Noticing Mat
- Find INSIDE and OUTSIDE of Noticing Mat

MATERIALS: Noticing Mat

Wool - runs from corner to corner on Noticing Mat

Chart paper with full page of printing [top to bottom]

Large picture or poster or painting and/or "I Spy" book

Little Jack Horner printed on Bristol board or blackboard

[leaving a large space between words / lines]

2 familiar boxes [one tall, one wide] and a paper [8 $\frac{1}{2}$ x 11]

STRATEGIES: KNOWN TO UNKNOWN, NOTICING AND LANGUAGE

MATH LINK: Some children do not reproduce numbers accurately when given a model.

Some children have difficulty initiating sentences and responding using sentences.

LITERACY LINK: Some children do not reproduce letters accurately when given a model.

Some children have difficulty initiating sentences and responding using sentences.

EXPECTATION:

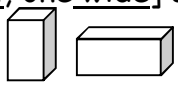
SS&G: Use language accurately to describe basic spatial relationships.

LESSON 2 A **STRUCTURE OF A 2D BOX**

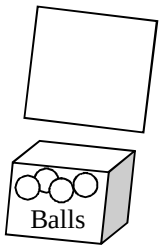
KNOWN TO UNKNOWN, NOTICING AND LANGUAGE: CORNERS

Place the 5 x 6 foot Noticing Mat on the floor with children looking up from the bottom edge.

Have 2 familiar boxes [one tall, one wide] and a paper [8 ½ x 11] ready to use.



[TURN the paper to match the shape of the box.]



I want you to look at this box and paper.

What is the same? [shape of front, both have corners, and edges]

How many corners does the paper have? [4]

Let's count them. [1, 2, 3, 4]

The paper has 4 corners.

How many edges does the paper have? [4]

Let's count them. [1, 2, 3, 4]

The paper has 4 edges.

Now look at the box.
[TILT TOP of box toward children.]

Look at the **top** of the box.

How many corners does the top have? [4]

The box has 4 corners at the top.

LESSON 2 A STRUCTURE OF A 2D BOX

KNOWN TO UNKNOWN, NOTICING & LANGUAGE: CORNERS, EDGES

How many edges are there on the top of the box? [4]

Let's count them. [1, 2, 3, 4]

We have 4 edges at the top.

[TILT bottom of box toward children.]

How many corners are there on the bottom of the box? [4]

Let's count them. [1, 2, 3, 4]

We have 4 corners at the bottom.

How many edges are there at the bottom? [4]

Let's count them. [1, 2, 3, 4]

We have 4 edges at the bottom.

Put on your Noticing Glasses and look carefully at the box.

I'm going to make our box look more like our paper.

[TURN YOUR BACK to children as you fold the flaps in and flatten box.]

[TURN to face the children and hold up flattened box.]

Does our box look more like our paper now?
[HOLD UP the paper and flattened box.]

How many corners do we have altogether? [4]

I'd like someone to count them. [CHOOSE someone.]

LESSON 2 A STRUCTURE OF A 2D BOX

KNOWN TO UNKNOWN, NOTICING & LANGUAGE: CORNERS, EDGES

How many corners do you see at the top now? [2]

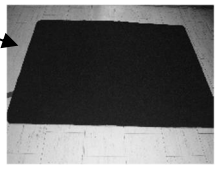
How many corners do you see at the bottom now? [2]

How many edges do we have altogether? [4]

I'd like someone to count them. [CHOOSE someone.]

[HOLD UP the Noticing Mat.]
What is this?

This is a Noticing Mat.



[HOLD up the flattened box and the point to the Noticing Mat.]

The Noticing Mat reminds me of our paper and flattened box.

Tell me everything that you notice when you look at this mat.

[PRAISE each child as a response is given in order to encourage participation.

Children tend to give descriptive language about the size, texture, colour and shape particularly if they haven't done the unit on 3D structure of a box.

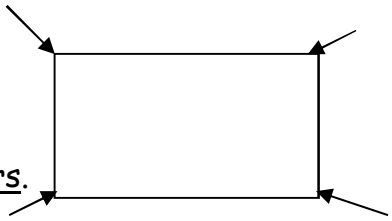
POINT to the **corners**.]

What can you tell me about these? [points, bends, corners etc.]

LESSON 2 A **STRUCTURE OF A 2D BOX**

NOTICING AND LANGUAGE: CORNERS

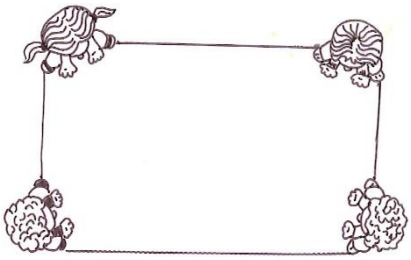
What do we call these? [corners.]



I need children to stand in all the corners.

How many children will I need? [4] [CHOOSE 4 children.]

Bend down and touch the corners.



I want different children to come to the corners.

How many children will we need? [4] [CHOOSE 4 children.]

Bend your knees and touch the corners.

[REPEAT with other groups of 4 children.]

[HOLD UP 4 objects that can be placed on the corners.]

[CHILDREN PLACE these on the corners, saying, "**This is a corner**."]

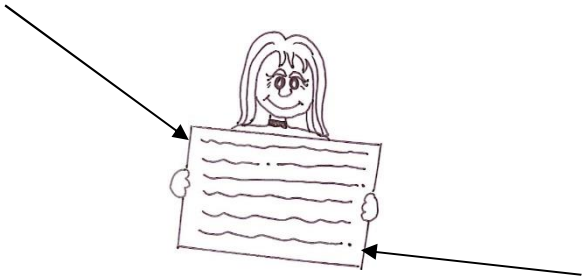
LESSON 2 A **STRUCTURE OF A 2D BOX**

NOTICING AND LANGUAGE: CORNERS

LITERACY LINK:

Children need to know where to start reading and writing.
Show a chart paper with a FULL page of print.

If you were reading this page, where would you start reading? [top left]
We **start** reading here, [POINT] so we can call this the **Starting Corner**.

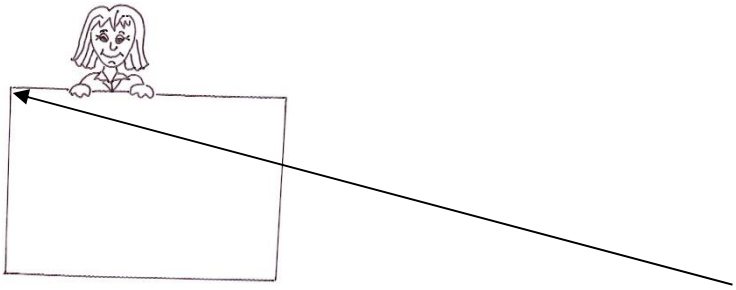


Where would you stop reading this page? [bottom right]

We **stop** reading here, [POINT] so we can call this the **Stopping Corner**.

We are going to pretend that our Noticing Mat is a page of a book.

[CHILDREN HOLD Top Edge of the mat up so mat hangs straight down].



If this mat were a page in a book, where would you start reading?

[top left corner]

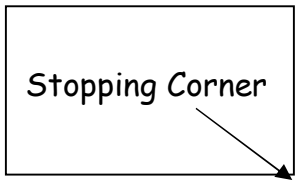
We **start** reading here, [POINT] so we can call this the **Starting Corner**.

LESSON 2 A **STRUCTURE OF A 2D BOX**

NOTICING AND LANGUAGE: CORNERS

If we had words that filled the mat, like the page of the book, where would we stop reading? [bottom right corner]

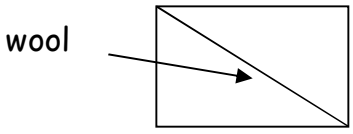
We **stop** reading here, [POINT] so we can call this the **Stopping Corner**.



[LAY mat back down on the floor.]

This is the **Starting Corner** [POINT] and this is the **Stopping Corner**. [POINT]

[LAY a piece of wool diagonally from the Starting Corner to the Stopping Corner.]



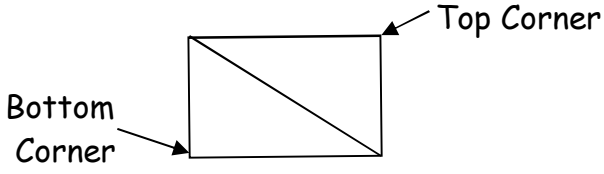
[POINT to the Top Corner.]

Here is another corner at the top, so we can call it the Top Corner.

[POINT to the Bottom Corner.]

Here is another corner at the bottom, so we can call it the Bottom Corner.

We call the other two **corners**, the **Top** and **Bottom** Corners.



Say the names as I point to them. Again. Again.

LESSON 2 A STRUCTURE OF A 2D BOX

NOTICING AND LANGUAGE, AUTOMATICITY

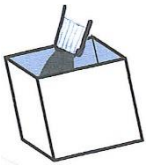
Have the children **quickly** take turns doing the following:

- Stand in the Starting Corner, then **clap and say "Starting Corner**."
- Children may use different voices and actions as they move from Starting to Stopping Corner
- When they reach the Stopping Corner, they **clap and say "Stopping Corner**" before stepping off the mat.

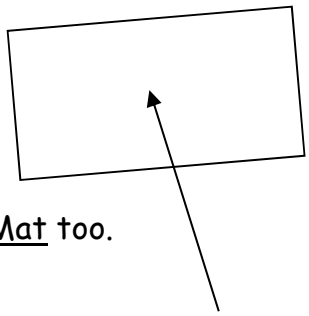
KNOWN TO UNKNOWN: INSIDE, OUTSIDE

Show a box [not flattened] and the Noticing Mat.

I can put my hand **inside** the box, like this. [PUT hand inside the box.]



Our Noticing Mat is shaped like a box.



We can be inside our box shape on the Noticing Mat too.

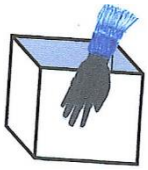
Where would we stand if we were inside the box made by our Noticing Mat? [CHOOSE child.]

When we stand on the Noticing Mat, we are inside the box shape.

LESSON 2 A **STRUCTURE OF A 2D BOX**

KNOWN TO UNKNOWN: INSIDE, OUTSIDE

[PUT hand outside the box.]



I can have my hand outside the box, like this.

We can be inside our box shape on the Noticing Mat too.

Where would we stand if we were outside the box made by our Noticing Mat? [CHOOSE child.]

When we are off the Noticing Mat we are outside the box.

I want some of you to come to the bottom of our Noticing Mat.

[DEMONSTRATE the following:]

I want you to move where I tell you when I say inside, outside, on or off.

[CHOOSE 4 children.]

Ready? inside, off, on, outside, on, inside, outside, off, [**around**]

[PRETEND it is a **pool**. Children jump in and out, then go around the pool.

APPLICATION:

- Look around the **room** for other flat Starting and Stopping Corners.
- In the **gym**, or on the **playground**, look for other boxes and walk from the Starting Corner to the Stopping Corner.
- Have the children move inside and outside boxes in the gym or on playground.

LESSON 2 A STRUCTURE OF A 2D BOX

LITERACY LINK

Children need to know that we usually start reading in the top left corner. [Starting Corner]

- Show a large picture, poster, and/or painting and/or an I Spy book.
- Have the children describe what they see in the Starting Corner first, then the Stopping Corner.
- Have children see if they can close their eyes and still see the picture.
- Have the children **point** to the Starting and Stopping Corners as you read a Nursery Rhyme or share a big book.

NURSERY RHYME [CORNER]

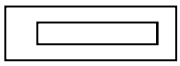
Children learn to read by seeing the same words frequently in a meaningful context.

On a large piece of Bristol board or on the board print the nursery rhyme: Little Jack Horner leaving large spaces between words and lines.

Choose a girl or boy to play Jack as children say the rhyme.

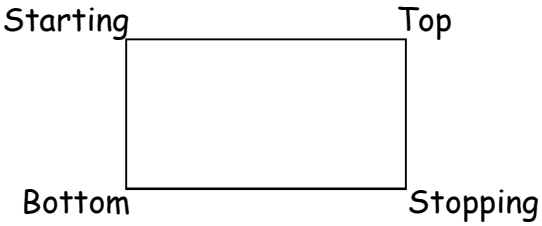
- When Jack is in the corner, talk about which corner Jack has chosen.
- After the word **said**, the child on the mat says:

  "**What a good [boy] [girl] am I.**"
- Repeat the above with different children.
- Use the word frames to locate words in the rhyme on Bristol board.



BIG BOOK

Make a diagram showing the box and naming the corners.



LESSON 2 B STRUCTURE OF A 2D BOX

PURPOSE: To have the children;

- Find the TOP and STARTING CORNERS when the NOTICING MAT is turned in the VERTICAL and HORIZONTAL positions
- Find the EDGES of the Noticing Mat

MATERIALS: 2 Pieces wool running from corner to corner [diagonally] on Noticing Mat 

Pictures [may be drawn] of things with edges [balcony, deck, cliff, step, roof, knife etc.]

2 Boxes [one wide, one tall]

2 Books about same shape but tops in different places

2 Papers [8 $\frac{1}{2}$ x 11 inches]

Small black marker for printing and drawing on papers

STRATEGIES: NOTICING AND LANGUAGE

MATH LINK: Some children do not reproduce numbers accurately when given a model.

LITERACY LINK: Some children do not reproduce letters accurately when given a model.

EXPECTATION:

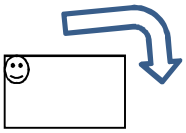
SS&G: Use language accurately to describe basic spatial relationships.

LESSON 2 B **STRUCTURE OF A 2D BOX**

REVIEW: Lay the Noticing Mat on the floor, and review the names of the corners of the mat by asking for the names as you **join** the corners **with wool**. [REMOVE wool.]

LITERACY LINK: KNOWN TO UNKNOWN: STARTING CORNER

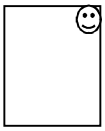
Look at the Starting and Stopping Corners on our mat.
[MARK it with tape or an object.]



Where is the Starting Corner, at the top or bottom?

Watch as I TURN the Noticing Mat.

[TURN the mat to a vertical position on the floor.]
[Linda Jackson's idea]

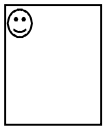


What do you notice?
[Object or tape not in Starting Corner, in Top Corner]

If this were a page with printing where would you start reading?

We always start reading from the Starting Corner. [POINT.]

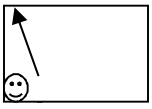
What do we need to do now, to show the Starting Corner?
[CHOOSE someone to move it.]



We ALWAYS start reading from **this** corner.

This is the place where the Starting Corner must be.

[TURN the mat back to other position.]

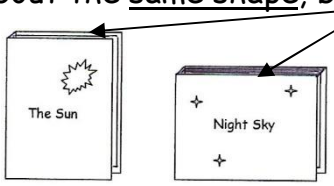


Where is the Starting Corner now? [CHOOSE someone to move object.]

LESSON 2 B **STRUCTURE OF A 2D BOX**

LITERACY LINK: KNOWN TO UNKNOWN: STARTING CORNER

Bring out 2 books about the same shape, but tops are in different places.



Look at these books.

When I put one book on top of the other, they are about the same shape, but the printing and pictures are not in the same places.

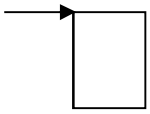
We know where the top is by looking at the pictures and printing on the book.

[TAKE two [8 ½ x 11] papers.]

When we draw a picture or print on a paper, we decide which way we want the paper turned, before we start.

[TURN a paper to the vertical position.]

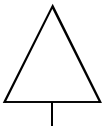
I will turn my paper turned this way, so my Starting Corner will be this corner at the top.



[PRINT a sentence, then draw a picture below the print.] e.g.,

I want to turn my paper a different way this time.

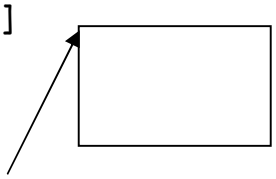
Here is a tree.



LESSON 2 B **STRUCTURE OF A 2D BOX**

LITERACY LINK: KNOWN TO UNKNOWN: STARTING CORNER

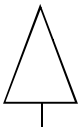
[TURN a paper to the horizontal position.]



I want my paper turned this way, so my Starting Corner will be this corner at the top.

[PRINT a sentence, then, draw a picture.]

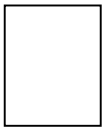
Here is a tree.



I started at the top on both papers.

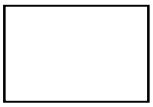
Let's look at our Noticing Mat again.

If the mat is turned the way it is now, where is the top?



Where is the Starting Corner?

[TURN the mat to the horizontal position.]



If I turn it the other way, where is the top?

Where is the Starting Corner?

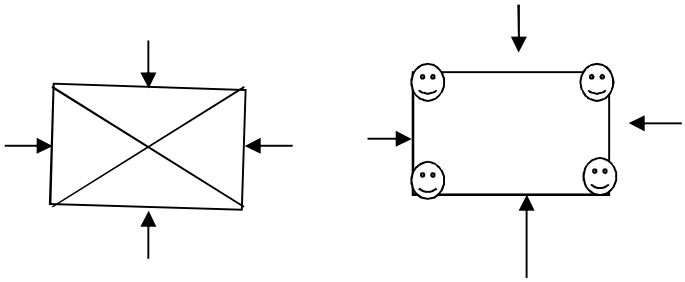
LESSON 2 B STRUCTURE OF A 2D BOX

NOTICING AND LANGUAGE: EDGES

[PLACE WOOL FROM Starting and Stopping Corners, then, Top and Bottom Corners or put an object on each corner to make edges easier to see.]

What do we call the parts <u>between</u> the <u>corners</u>?

[POINT to 4 <u>edges</u>.]



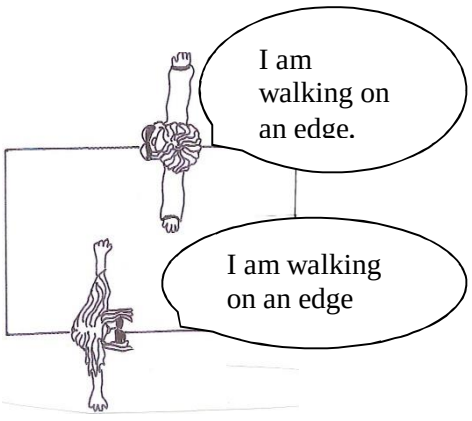
We call them **<u>edges</u>**.

Where else can we find edges?
[You <u>may</u> have <u>pictures</u> of; <u>box</u>, <u>balcony</u>, <u>deck</u>, <u>cliff</u>, <u>step</u>, <u>roof</u>, <u>knife</u> etc.]

<u>When</u> we are <u>standing</u> <u>on</u> the **edge** we must be <u>careful</u> not to step off.

<u>I</u> am going to ask <u>some</u> of you to <u>show</u> us <u>how you would walk</u> if you wanted to <u>stay on the edge</u> without falling off.

[CHILDREN (at least 4) walk <u>as if balancing on a tight rope.</u>]



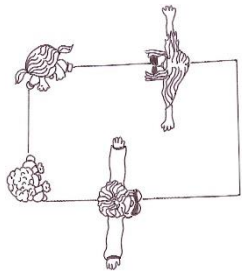
We are going to <u>take turns moving **around**</u> the **edges** of the **<u>mat</u>**.

LESSON 2 B STRUCTURE OF A 2D BOX

NOTICING AND LANGUAGE: EDGES

When you are on the **edges**, I want you to put your arms out to keep your balance, to show that you are on the edge. [DEMONSTRATE.]

When you come to a **corner**, I want you to stop and touch the corner of the mat. [DEMONSTRATE.]



[HAVE **groups of 4** walk quickly around the outside of the mat, balancing on edges and touching corners.]

[CHILDREN **move in different ways** on edges.; dance, jump, wiggle etc.]

LITERACY LINK:

BIG BOOK: Draw a box and label the edges.