Robot Theater: Where Shakespeare Comes to Life

Planning Document

Analysis and Planning

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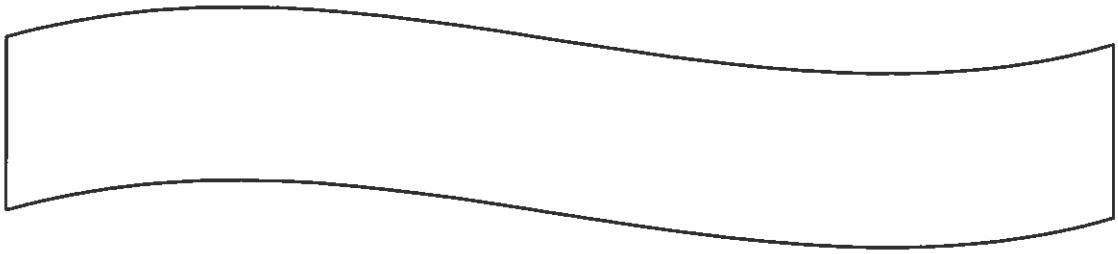

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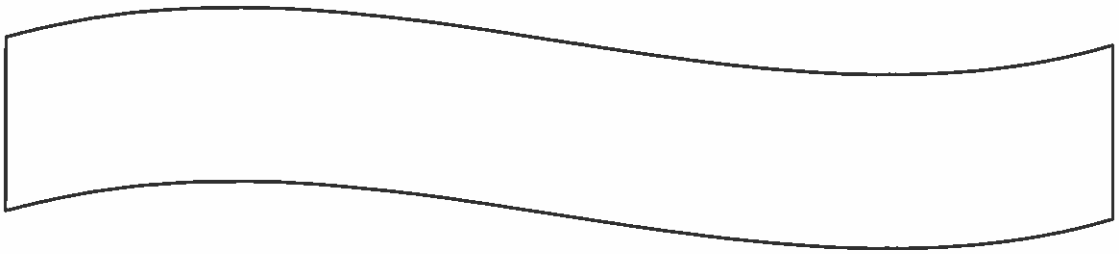

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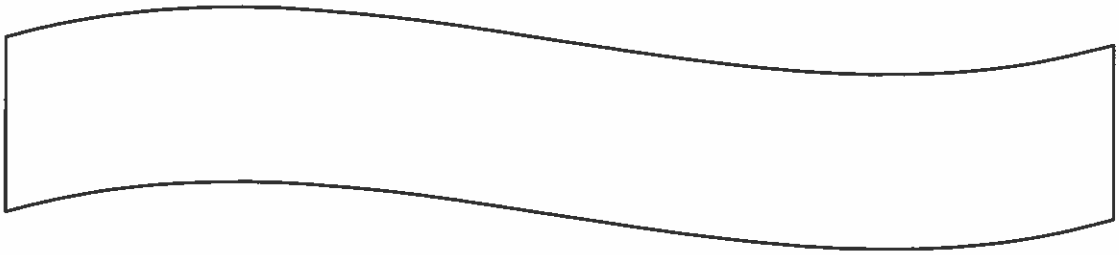

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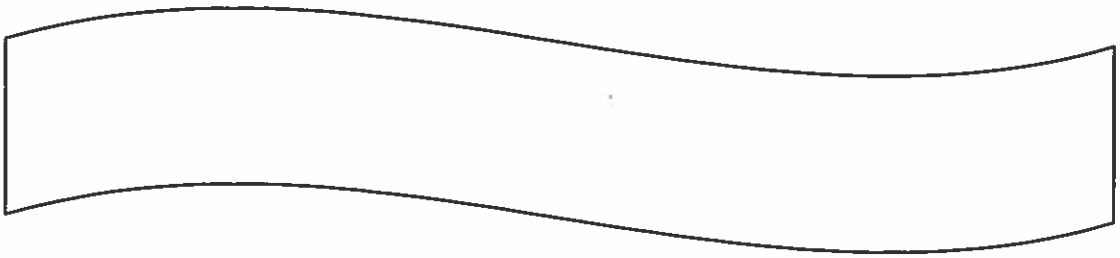

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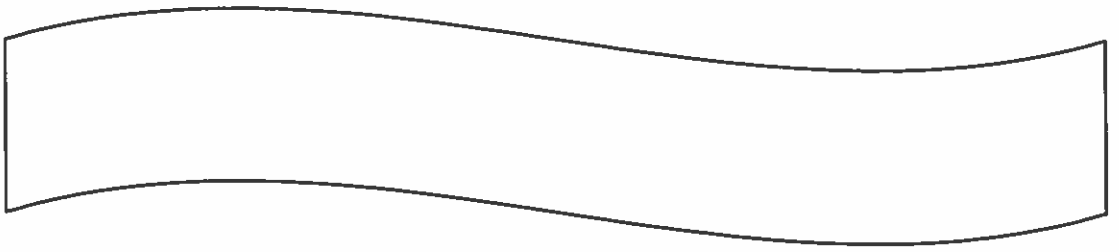

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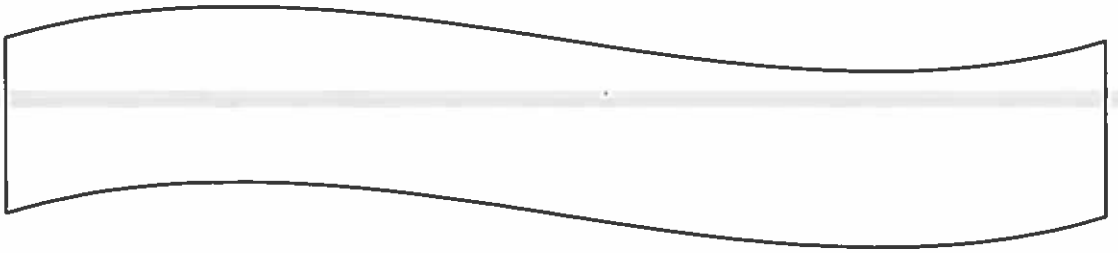

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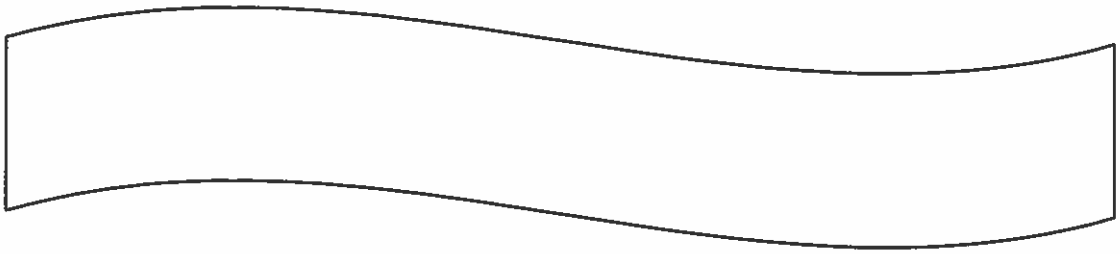

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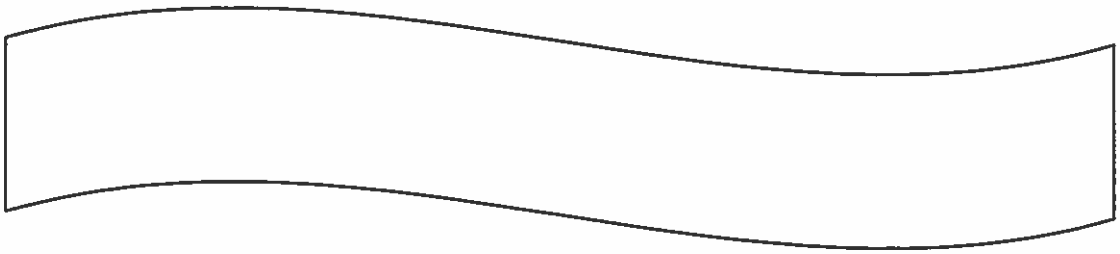

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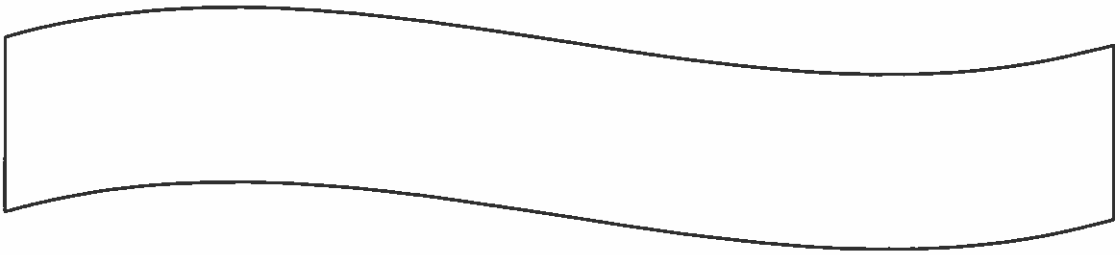

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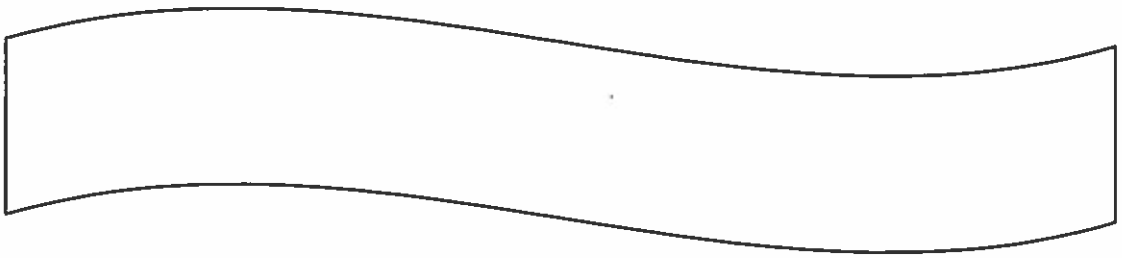

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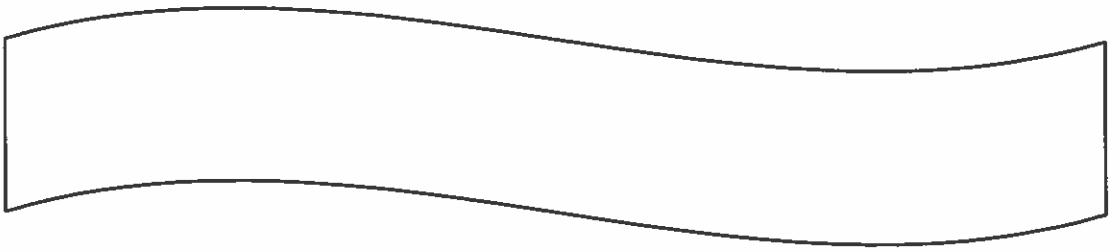

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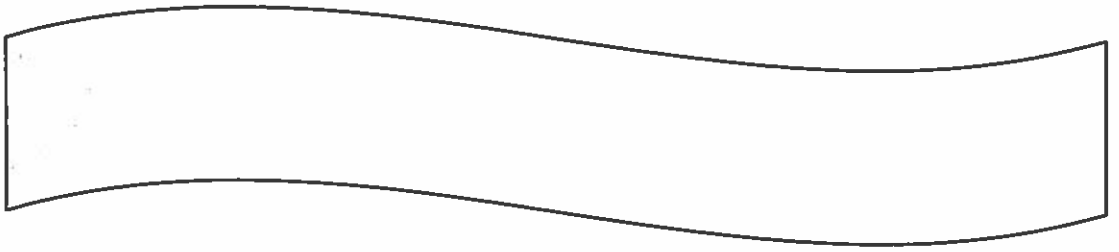

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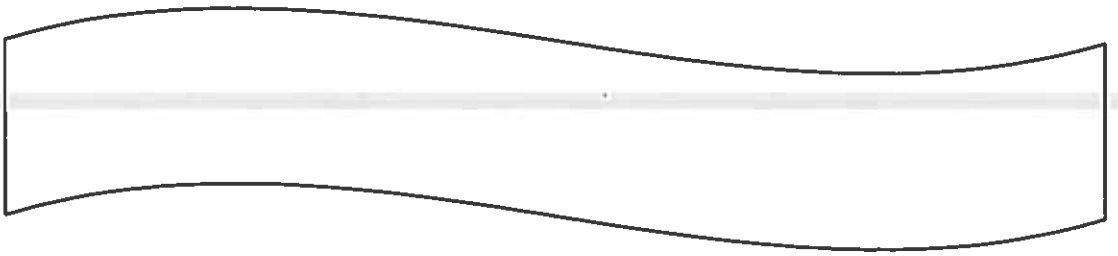

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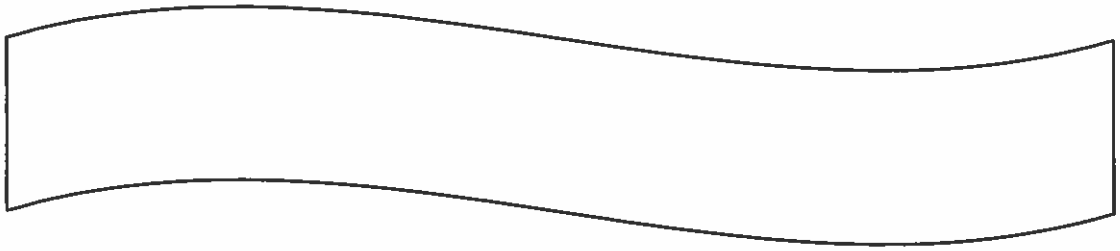

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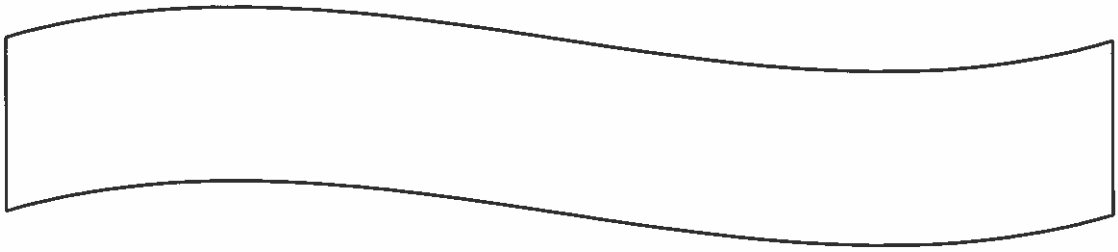

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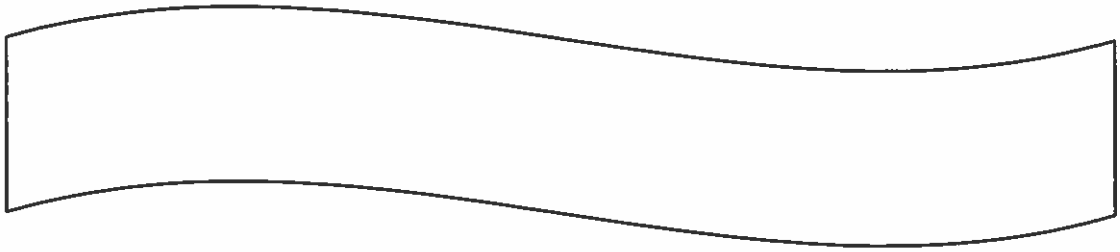

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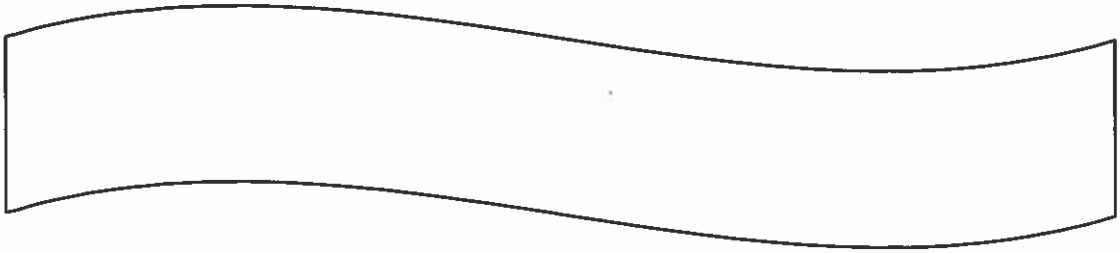

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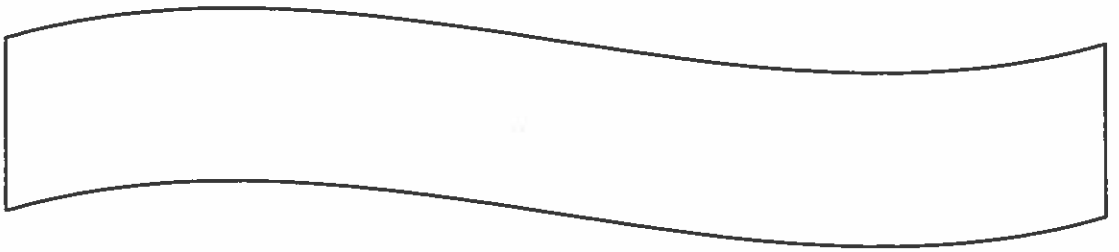

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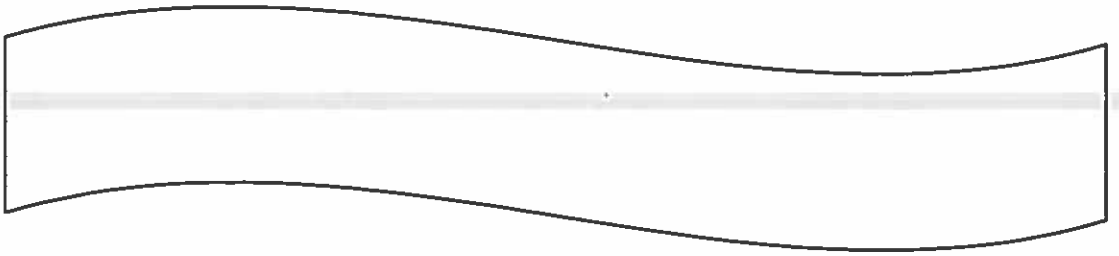

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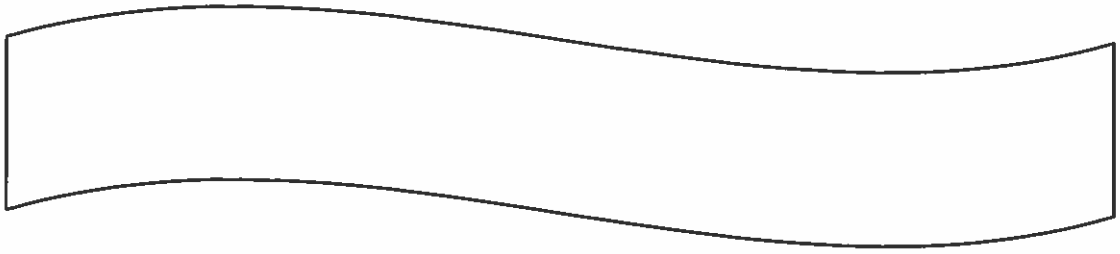

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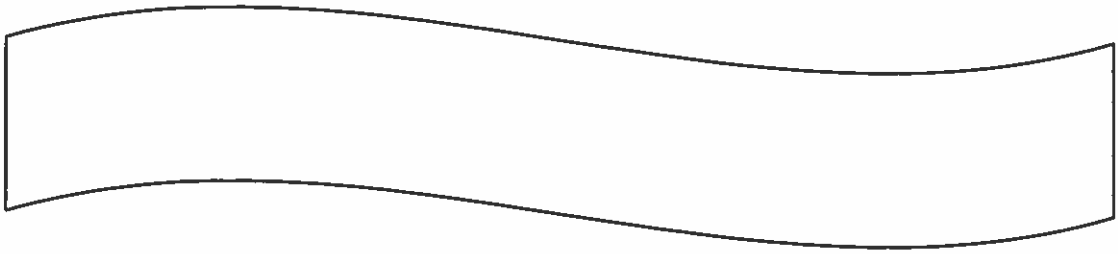

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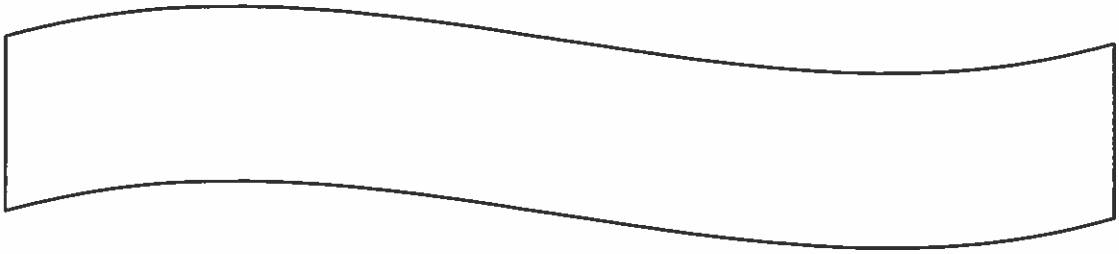

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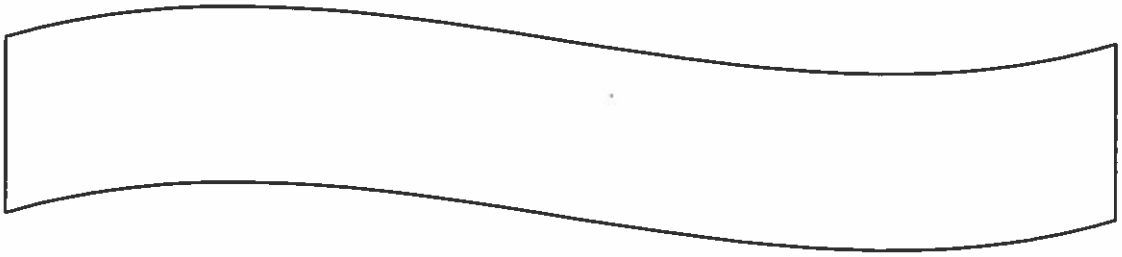

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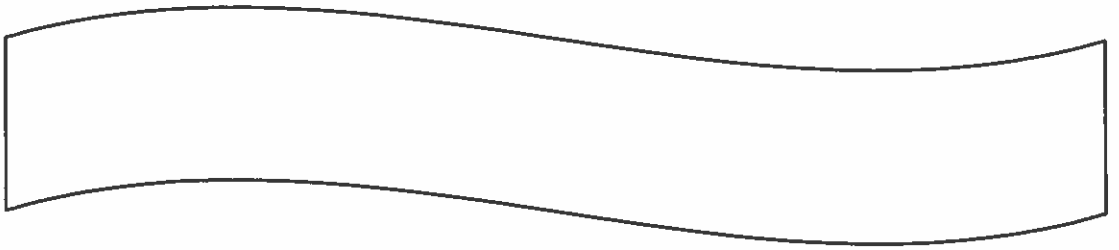

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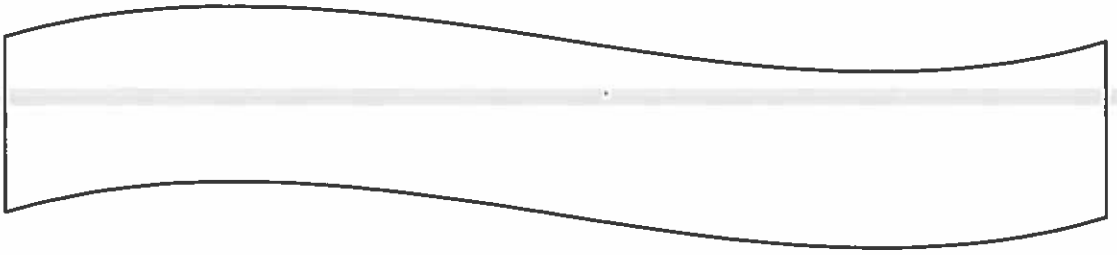

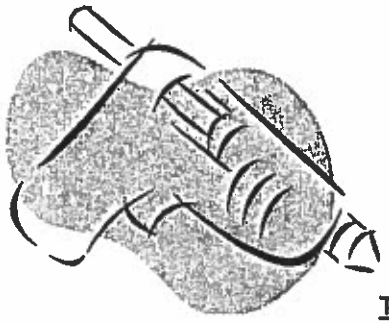

THINGS TO BUILD OR CRAFT

What _____ Who _____

What _____ Who _____

What _____ Who _____

What _____ Who _____

Date: _____

STEP 1: DEFINE THE PROBLEM OR GOAL

What do you want your robot to look like?

What do you want your robot to be able to do?

Do you have any other goals for your robot?

Date: _____

STEP 2: IDENTIFY CRITERIA AND CONSTRAINTS

What are your criteria for success? How will you decide if the robot meets your goals?

What constraints limit your design?

Assignment Requirements:

Materials:

Time:

Other:

Date: _____

Develop

Design Number _____

STEP 4: DEVELOP DESIGN–ROBOT PLAN

What will your robot look like? What materials will you need?

Date: _____

Develop

Design Number _____

STEP 4: DEVELOP DESIGN–PROGRAM STORYBOARD

Expression #_____

Expression #_____

Expression #_____

Expression #_____

Expression #_____

Expression #_____

Arts & Bots Sensor Worksheet

Your robot can "choose" between two actions depending on an environmental value using a sensor.

Step 1 Choose Sensor

Sensor Type	Less Action	More Action
Light Sensor	Dark	Bright
Temperature Sensor	Cold	Warm
Distance Sensor	Near	Far
Sound Sensor	Quiet	Loud
Potentiometer	Counterclockwise	Clockwise

Step 2 Describe Actions

When _____ (LESS ACTION),	When _____ (MORE ACTION),
I want my robot to....	I want my robot to ...

Step 3 Measure the Values

Using the CREATE Lab Visual Programmer, measure the values of the sensor that you want to trigger each action. Mark the values on the bar below with an "**L**" for the ***less action*** and "**M**" for the ***more action***.

_____ LESS ACTION  _____ MORE ACTION

Step 4 Choose the Threshold

On the bar above, mark a threshold or "decision value" *halfway* between the "**L**" and "**M**" marks using a "**Λ**".

Step 5 Program and Test

In the CREATE Lab Visual Programmer Sequence Builder, use the sensor structure to set the threshold for the two actions. Put the Expressions for the ***less action*** into the right side track and for the ***more action*** into the left side track.

Run your program and test to see if your robot does what you planned.

Audacity Instructions

The student in charge of creating the voice files should get a separate computer.

You should login to the computer as yourself.

Go to "All Program" and find "Audacity"

Open audacity.

The red button will allow you to record.

Go to a quiet place by yourself.

Record yourself reading the first chunk of poetry. (Everyone will chunk their poem differently.)

Use the square to stop.

Use the arrow to listen to yourself.

If it is error free, then go to the "File" menu and select "Export".

Name the file something that you will remember what part of the poem it is.

Make sure that the file type is "WAV" and save the file to the desktop.

On the 2nd pop-up screen, just select "ok".

You will transfer your files to a flash drive when you are done recording.

If the bell is soon to ring and you are not done and do not have a flash drive, make sure that you place the file in the "H drive". You will lose all files on the desktop when the machine shuts down.

The picture below shows Audacity with a recently recorded file.