

Toxic Jello Lab Diffusion

Presented at the New Jersey Science Convention - 2001

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From Prentice-Hall: Cells - The Building Blocks of Life

Make gelatin "cells" using unflavored gelatin and phenolphthalein

2 packets unflavored gelatin

2C hot water

2C cold water

10 ml phenolphthalein

clean empty 1 qt. milk container (I use a narrow shallow pan I have around)

Dissolve gelatin in hot water-stir 2 minutes

add cold water

add phenolphthalein

stir

pour into qt. container

chill overnight

Slice into as many squares as you have groups. I find making cubes of different sizes

helps students "see" the concept more clearly.

ACTIVITY

Materials:

50 ml household ammonia

wide-mouth jar or beaker

cheesecloth

rubber band

Spatula/tongue depressor

Procedure:

-pour ammonia into jar

-place cheesecloth over jar, secure with rubber band

-place gelatin "cell" on the cheesecloth

-observe. Cell turns pink when touched by ammonia

EXTENSION: carefully cut cell in two. Cut a slice off the cut end. Students will see a rim of pink where ammonia has penetrated. Longer you leave it there, deeper it goes. Smaller "cells" have a greater proportion of their inside pink.