

Golden House



Background
Decomposition is the breaking down or decaying of organic material. It is accomplished by organisms of decay such as bacteria and fungi. Carving the pumpkin, thereby exposing its insides to the agents of decay, will expedite the process.

Management
1. A wooded, or natural area, near school will provide an optimal environment for this activity.
2. If keeping the pumpkins outside is not possible, they can be kept on a window ledge inside the classroom.
3. This activity can be done without any association to Halloween. To do so, have the students cut open one pumpkin, remove the seeds, and the pulp. The pulp can then be cooked and used in pumpkin bread or other recipes. Using activities such as *Pumpkin With Class* (AIMS Newsletter, Volume VI, Number 3) will result in a cut up pumpkin, and an experience in place value and seeds.

4. If clipboards are not available, students can use a book as a hard writing surface when doing the field observations. Clothespins or rubberbands can be used to hold the paper onto the book.

Procedure
Part 1: Literature
1. Read Edna Miller's *Mouskin's Golden House* to students, drawing special attention to the illustrations of the jack-o'-lantern as it decomposes. After discussing the story, ask the students what they think will happen to the class's carved pumpkin as it sits outside or on the window ledge. Make a list of their predictions.

Part 2: Activity
1. As a class, take the carved pumpkin and the whole pumpkin to the selected spot. After both pumpkins have been positioned side by side, take time to share as many observations as possible. A photograph might be taken at this time. Using the observation sheet, have the students sketch both pumpkins. When the students return to class they can color their sketches and write a sentence about each.

Topic
Decomposition: pumpkins

Key Question

How will a carved and uncarved pumpkin change over time?

Focus

Students will observe and keep a record of what happens to a pumpkin that has been carved.

Guiding Documents

Project 2061 Benchmarks

- Change is something that happens to many things.
- Some changes are so slow or so fast they are hard to see.
- People can often learn about things around them by just observing those things carefully, but sometimes they can learn more by doing something to the things and noting what happens.

NRC Standard

- Plants and animals have life cycles that include being born, developing into adults, reproducing, and eventually dying. The details of the life cycle are different for different organisms.

Science

Life science decomposition

Integrated Processes

Observing
Communicating
Collecting and recording data
Comparing and contrasting
Predicting

Materials

For the class:

Mouskin's Golden House by Edna Miller

2 pumpkins
1 carving knife
camera, optional

For each student:

clipboard, optional (see *Management*)

Life cycle

- Return to the pumpkin site several times. During each visit, make as many observations as possible and record the changes on new copies of the observation sheet. If appropriate, continue to use photographs as a means to record the decomposition process. Ask the students to think of three words that describe the whole pumpkin and three words that describe the carved pumpkin. When they return to the room, invite the class to share the describing words and record these words on the board. Urge students to use these words in their description of the pumpkins.
- Continue to observe the changes and record as frequently as you wish.
- When bringing the activity to a close, have the students go back and read their observations and look at their sketches. Tell them to make a summary statement of the changes (or lack of changes) in both pumpkins.
- Give each student a chance to read their summary statement to the class and then discuss how their statements were alike and different.

Discussion

Part 1: Literature

- Why did the mouse choose the jack-o'-lantern for a house?
- What is happening to the jack-o'-lantern?
- What do you think will happen to the jack-o'-lantern after the end of the story?
- Would the same changes take place in an uncarved pumpkin? How would changes be the same? ... different?

Part 2: Activity

- What kinds of changes do you notice during the first visit? ... second visit? ... third visit?
- Which part of the pumpkin changed first? Why?
- What is causing these changes?
- How long do you think it will take for the carved pumpkin to decompose completely? ... the whole pumpkin?

- What happens to the parts of the decomposed pumpkin?
- What do you think sped up the decomposition of the pumpkin?
- Describe other things that you have seen change like the carved pumpkin.

Extensions

- Bring several apples to school. Cut one into sections and leave the other intact. Observe the changes.
- Leave an intact pumpkin in the classroom. Observe changes.
- If photographs were taken, pin them up on a bulletin board. Invite students to sequence them through the decomposition process. Have them write captions for the photographs.

Literature

King Elizabeth. *The Pumpkin Patch*. Dutton's Children's Books. New York. 1990.

Miller, Edna. *Mouskin's Golden House*. Simon and Schuster. New York. 1964.

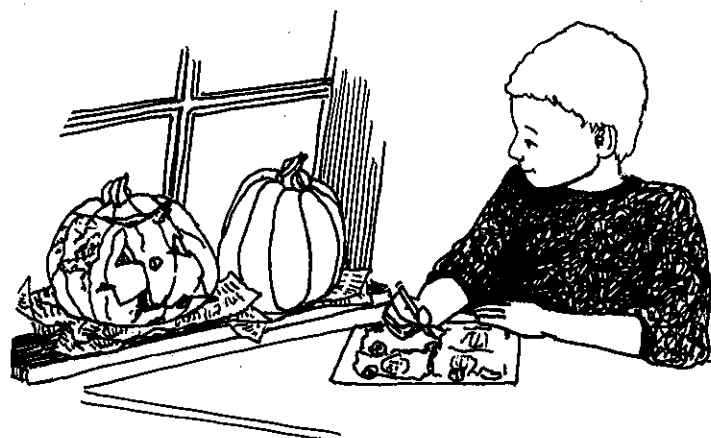
Ring, Elizabeth. *What Rot! Nature's Mighty Recycler*. The Millbrook Press. Brookfield, CT. 1996.

Rockwell, Anne. *Apples and Pumpkins*. Macmillan Publishing Co. New York. 1989.

Titherington, Jeanne. *Pumpkin, Pumpkin*. Scholastic, Inc. New York. 1986.

Home Link

Suggest to students that they find a place in their yard for their own carved pumpkin and observe changes.

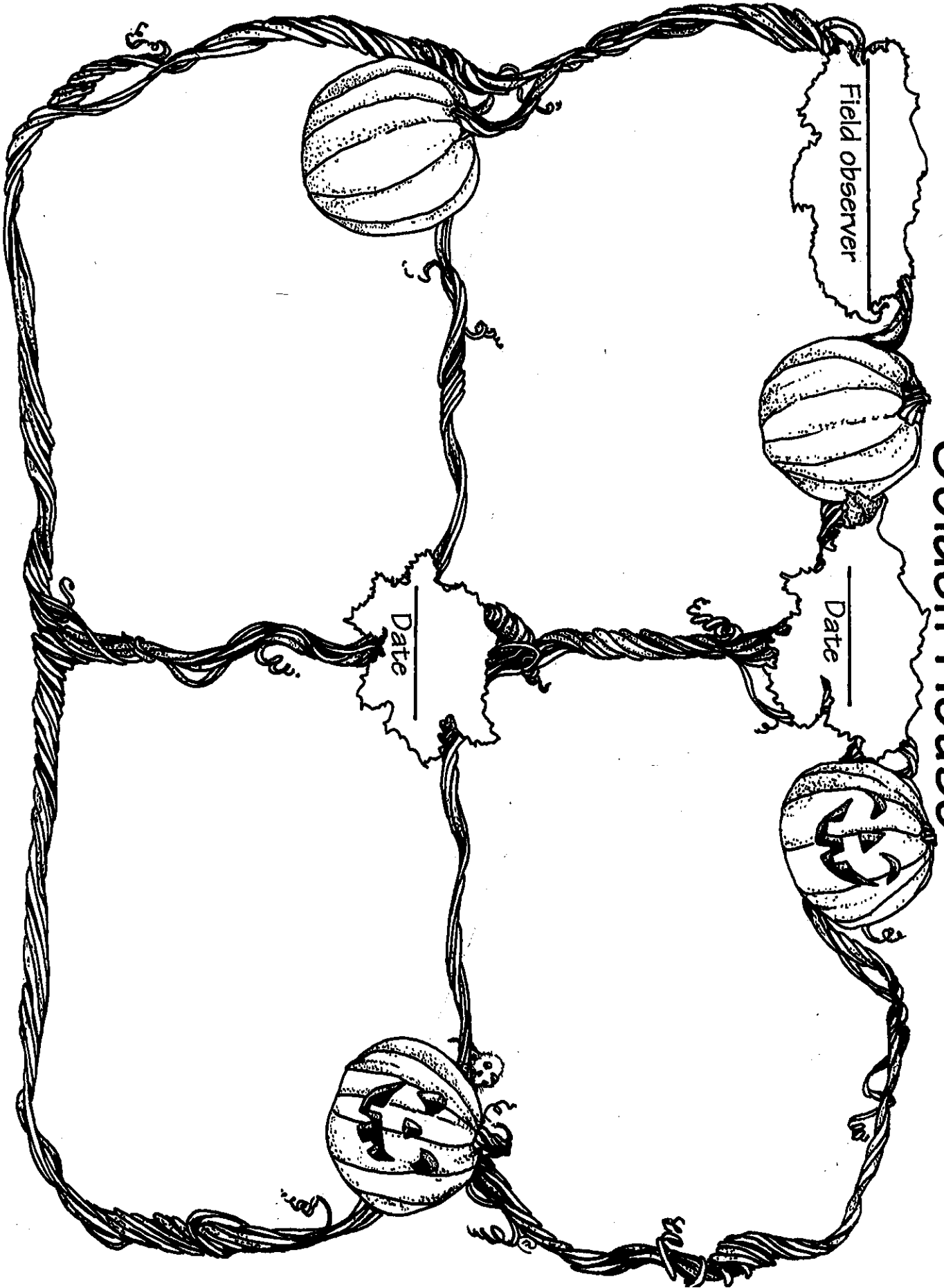


Golden House

Field observer _____

Date _____

Date _____





Then maybe I will cook it,
 I'll cook it and eat it,
 I could make it into cookies
 or a big pumpkin pie,
 Or paint it, or carve it,
 A big Jack O'Lantern;
 There's lots to do with
 pumpkins,
 I think I will try.

I'm finding out about it,
 this pumpkin, my pumpkin,
 I'm finding out about it, so I'll know it well.
 I'm massing and measuring,
 I'm counting its seeds,
 I'm learning all about it;
 there's so much to tell.

here I have a pump-kin, the best one of all.

patch where it grew on a vine. Oh,

pump-kin, a big or-ange ball. It came from a

pump-kin; a pump-kin; Oh, here I have a

Oh, here I have a pump-kin, a

 Five staves of musical notation in 3/4 time. The notes are simple, mostly quarter and eighth notes. Chords F and C7 are indicated below the staves.

Tune: Did You Ever See A Lassie?

Words by Suzy Gazlay

Pumpkin Song

