



MAKING SEED BALLS



Illinois Extension
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

OBJECTIVES

- LEARN THE PARTS OF A SEED AND WHY PLANTS PRODUCE THEM.
- LEARN WHAT THEY NEED TO GERMINATE.

MATERIALS

ASSORTMENT OF SEEDS
(SUNFLOWER, ZINNIAS, AND COSMOS)
SEED BALL MATRIX
PIECE OF CARDSTOCK
COPY PAPER
PENCIL

FACTS

GUIDING QUESTIONS

1. WHAT DOES A PLANT PUT INTO A SEED?
2. WHAT IS NEEDED FOR SEEDS TO GROW?

CONCEPTS

- PLANTS PRODUCE SEEDS IN ORDER TO MAKE NEW PLANTS.
- SEEDS HAVE THREE MAIN PARTS.
- A SEED CONTAINS THE EMBRYO (BABY PLANT), ENDOSPERM (FOOD), AND THE SEED COAT (PROTECTION).

- PLANTS STARTED MAKING SEEDS ABOUT 1 MILLION YEARS AGO.
- SEEDS CAN REMAIN DORMANT ("SLEEPING") FOR YEARS AND YEARS UNTIL THE CONDITIONS ARE RIGHT FOR GERMINATION (GROWING).
- PLANTS NEED WATER IN ORDER TO GERMINATE.
- THROUGH A PROCESS CALLED IMBIBITION, WATER ENTERS THE SEED.
 - THE WATER WAKES UP ENZYMES IN THE EMBRYO AND IT BEGINS TO GROW.
 - THE ROOTS GROW NEXT.
 - AND THEN THE SHOOTS GROW UP AND GROW LEAVES.



INTEREST APPROACH-ENGAGEMENT

ASK:

- HOW DO PLANTS MAKE OTHER PLANTS?
- CAN YOU THINK OF ANY SEEDS THAT WE EAT?
A: SUNFLOWER SEEDS, WILD RICE, TREE NUTS
- WHAT DO YOU NEED TO GROW? DO PLANTS NEED THE SAME THINGS OR ARE THEY DIFFERENT?



ACTIVITY 1: MAKE SEED BALLS

- IN A BOWL MIX SEED MATRIX WITH ASSORTED SEED MIX.
- TAKE HALF OF THE MIXTURE AND PRESS IT TOGETHER, ROLLING IT IN YOUR HANDS TO FORM A BALL.
- REPEAT WITH THE REST OF THE MIXTURE.
- LET THE SEED BALLS DRY OVERNIGHT.

ACTIVITY 2: PLANTING SEED BALLS

- CHOOSE A PLACE IN YOUR YARD THAT RECEIVES A LOT OF SUNLIGHT DURING THE DAY.
- YOU CAN ALSO CHOOSE A CONTAINER TO PLANT YOUR SEED BALLS. ANY CONTAINER WILL WORK AS LONG AS IT HAS DRAINAGE HOLES.
- MAKE SURE SEED BALLS MAKE GOOD CONTACT WITH THE SOIL.
- SIT BACK AND WAIT. IN 4-10 DAYS YOU SHOULD SEE SOME GROWTH.
- KEEP TRACK OF YOUR SEED'S PROGRESS IN THE GARDEN JOURNAL.

ACTIVITY 3: MAKE A GARDEN JOURNAL

- TAKE A PIECE OF CARDSTOCK AND FOLD IT "HAMBURGER" STYLE OR WIDTH-WISE.
- FOLD SEVERAL PIECES OF COPY PAPER THE SAME WAY.
- PUT THE CARDSTOCK ON THE OUTSIDE OF THE COPY PAPER TO ACT AS A COVER.
- KEEP TRACK OF YOUR PLANTS PROGRESS BY DRAWING PICTURES OF WHAT YOU SEE AND WRITING DOWN DESCRIPTIONS AND MEASUREMENTS.

COMMON SEEDS THAT WORK WELL IN SEED BALLS:

SUNFLOWERS: GERMINATE IN 6-10 DAYS, FULL SUN. HEIGHT: UP TO 6 FEET DEPENDING ON VARIETY. BLOOMS IN 85-95 DAYS.

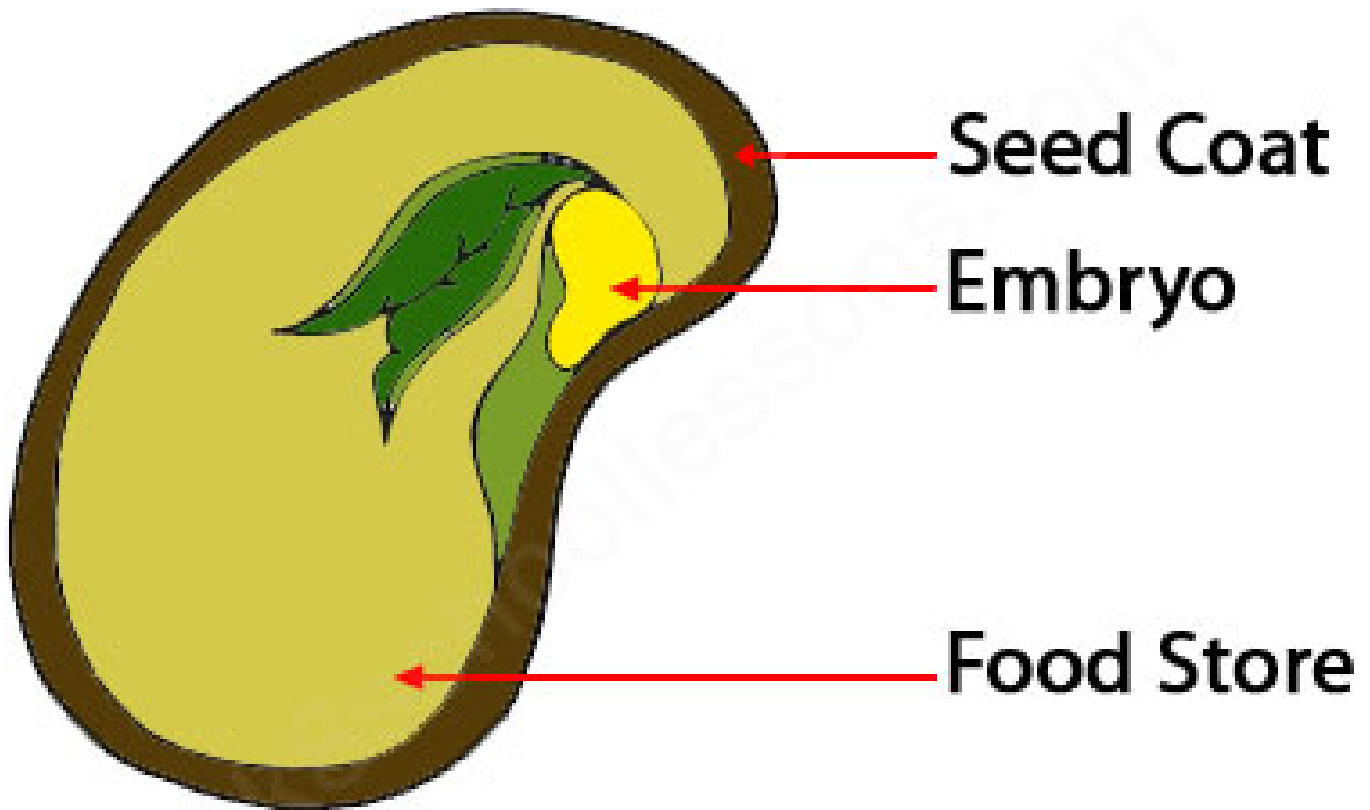
ZINNIAS: GERMINATE IN 4-7 DAYS, FULL SUN. HEIGHT: 6 INCHES TO 4 FEET DEPENDING ON VARIETY. BLOOMS IN ABOUT 60 DAYS.

COSMOS: GERMINATES IN 5-10 DAYS, FULL SUN. HEIGHT: 1-5 FEET. BLOOMS IN ABOUT 90 DAYS.

GARDENING TIPS:

- PLANTS NEED WATER. WATER WHEN THE SOIL DRIES OUT.
 - HOW TO KNOW WHEN THE PLANT NEEDS WATER? PUT YOUR FINGER IN THE SOIL UP TO THE FIRST KNUCKLE. IF IT FEELS DRY, WATER.
- CONTAINERS DRY OUT QUICKER THAN YOUR YARD. CHECK SOIL DAILY, ESPECIALLY DURING HOT WEATHER.
- DEADHEAD. PICK OFF THE SPENT BLOSSOMS FOR MORE FLOWER PRODUCTION.
- SOME TALLER PLANTS MAY NEED TO BE STAKED TO HELP SUPPORT THE WEIGHT OF THE BLOOMS.
 - TO MAKE A QUICK SUPPORT, USE A BRANCH FROM YOUR YARD AND TIE THE PLANT GENTLY TO IT USING PANTYHOSE OR A FABRIC STRIP.

LESSON PLAN CREATED BY WENDY FERGUSON, PROGRAM COORDINATOR



Homemade Seed Ball Recipe

- 2 parts potting soil
- 5 parts pottery clay mix from your local art store
- 1-2 parts water
- 1-2 parts seeds of your choice
- Large tub to mix ingredients
- Large box to dry and store seed balls

Directions:

Mix the soil, clay, and 1 part water thoroughly. There should be no lumps. Slowly add more water until the mixture is the consistency of the toy store molding clay that comes in a can. Add seeds. Keep kneading the dough until the seeds are well mixed in. Add more water if necessary. Take small bits of the clay mixture and roll into ball about one inch in diameter. The balls should hold together easily. If they're crumbly, add more water. Dry seed balls for 24-48 hours in a shady place before sowing or storing. They store best in a cardboard box. Do not use plastic bags. The last step in how to make flower seed balls is sowing them. Yes, you can place them carefully over the area to be planted or you can gently toss them one at a time, which is a lot more fun.