

The Marigold Project



Dear Parents & Teachers:

This is a project for elementary and home-schooled students. It is a year-long project if completed, beginning in the spring, and continuing through to the following spring. As such it may require some coordination between teachers and grade levels. Summer break obviously interrupts the project, but it also allows students to take on a responsibility - either for sharing in the care of a school garden or caring for their own plant at home.

The goal for this project is to have students participate in and observe, in real time, a life cycle, and record their thoughts on these observations.

Marigolds were chosen for the project because they are a very easy to grow annual, and are more likely than other flowers to survive a summer with some (but not total) neglect. The success rate in saving seeds is also relatively high. I have had good success with french marigolds, such as Queen Sophia (the inspiration for the book, Marigold) but look for any compact variety.

Other plants can also work, including some vegetables like tomatoes, squash and beans (note that some hybrids might set a seed that reverts to one of the genetic parent plants, so choose carefully).

The Marigold Project was designed as an activity to go with my picture book, MARIGOLD. Following the turning of seasons and the life cycle of a marigold, Marigold is, in some regard, a fun fantasy but it is grounded in sound observation of the garden as part of the natural world.

I hope you and the young people in your life, enjoy Marigold and marigolds!

Cheers!

A handwritten signature in black ink, appearing to read 'Kate Darnell'. The signature is stylized and fluid, with a long horizontal line extending to the right.

Kate Darnell



Spring Marigold Project

A companion activity for MARIGOLD by K.L.Darnell

This project can take one growing season or a whole year. If you like this project, you can start in the spring, watch things grow in the summer, collect seeds in the fall, and year later you will be back where you started - EXCEPT you and everyone else will be a year older!

This is what you need:

- Marigold seeds
- Small plastic cups with holes in the bottom (This is a good way to reuse clean yogurt or drink cups).
- A tray to catch water under the cups.
- Potting soil or dirt
- Water
- A sunny window
- A patch of ground or big pot of soil
- Small envelopes

This is what you will do:

- Grow Marigold plants from seeds
- Plant them in a garden or pot
- Watch how they grow and change
- Collect the seeds that are made by the plants that grow.
- Plant the seeds that you collect
- Get ready to do it all again.

Get Started

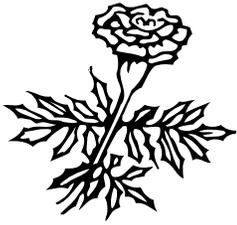
Start about a month before you can plant flowers outside. This means your plants should be ready for the garden when it is warm enough that a frost will not kill them.

1. Fill each cup with soil so that there is an inch of empty space at the top.
2. Plant 3 seeds in each pot.
3. Cover with 1/4 inch of soil
4. Put pots on a tray and water gently.
5. Put tray in a sunny window. If you see a new plant stretching to the light Turn the pots around.
6. Keep soil wet (not soggy). Check soil with your finger every day to see if it is dry. If it is, add water.

A lot of garden work is waiting, but you can watch each day for changes. Also think about where these plants will grow outside. Your school may have a garden where flowers can grow over the summer. Maybe you have a garden or flower box at home.

Marigolds can grow almost any place if they get water and sunlight. They also look very good in pots if you live in a place with no yard but some outdoor space.

You can buy a flower pot, or you can recycle an ice cream carton or coffee can. You can plant in anything that can hold soil, but make sure there is a hole in the bottom.



Summer Marigold Project

A companion activity for MARIGOLD by K.L.Darnell

If you planted your seeds earlier in the spring and warm weather has arrived, you are ready for the next part of this project. If you did not get an early start, you can do that now outdoors.

This is what you need:

- A patch of ground in the sun shine or a pot of soil. (Recycled plastic containers with holes cut in the bottom make good flower pots. They can be painted and decorated if you want them fancy.)
- Small Shovel or an old spoon
- A jug to hold water or a hose

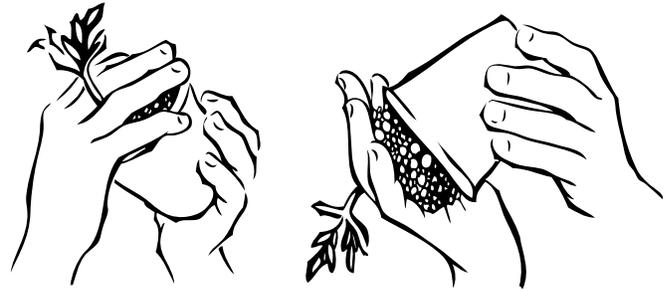
Get Started

Check your County Extension Service to know the last *predicted* frost date where you live. When it is warm enough to plant outside, you need to get the soil ready for your Marigolds.

Be sure to ask an adult if it is OK before you dig!

1. Pull out any weeds or grass that grows where you will plant. Try to get all the roots out. Some plants can grow from a piece of root instead of a seed.
2. Dig up the dirt so it crumbles in your hand with no big lumps. You want to make it easy for new roots to grow and for water to soak into the soil.
3. Water your new plants in their cups. Soil that is a little wet will hold together better when you take it from the cup.

4. Cut off all but 1 or 2 plants in each cup.
5. Dig holes a bit bigger than your cups and about 8"- 12" apart.



6. Put a hand on top of your cup with 2 fingers on either side of your plant – Leave some room between your fingers and the stem. Don't pinch it!
7. Tip the pot upside down and tap or squeeze the sides so that the soil and plant falls into your hand (if the dirt falls away from the roots, do not worry - just be gentle with the plant).
8. Turn your hand over and gently place the soil and plant roots into the hole.
9. Fill the hole around your plant with more dirt and press it down.
10. Water every day until the plant gets used to its new home. Marigolds are strong plants and easy to grow, but if there is no rain (or if your plants are under a roof) you need to water them. Plants in clay pots need more water.
11. Pulling weeds and grass from around plants gives them room to grow, and lets you to see them better.



Fall Marigold Project

A companion activity for MARIGOLD by K.L.Darnell

All summer, as you watch your marigold, you will notice changes. A bud will form and open into a flower. Soon the flower will dry up and look dead. This will happen over and over again.

If you want your plants to look fresh and neat, you can pinch off the dead flowers.

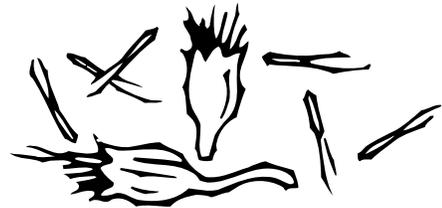
But if you let these flowers stay on the plant they will make seeds. Some plants have seeds in pods that can break open dropping the seeds everywhere, but marigolds hold on to their seeds pretty well.

Even if you have kept your plant neat all summer, as fall comes closer, start letting some of the old flowers stay to make seeds.

Before there is a really cold night with frost, pick off the old flower heads. They will be full of seeds.

Get Started with Seed Saving

1. Collect your seeds on a dry sunny day when there has been no rain. Do it late in the day so there is no dew making the plants wet. Wet seeds do not keep well.
2. Use a small paper bag to put seeds in.
3. Choose flowers that are dry and brown or have lost most of their petals. Break off the dead flowers. Pinch the flower heads between your fingers to pull or shake out the seeds.



4. Look. You will see that they look a lot like the seeds you planted last spring.
5. All the seeds do not have to be saved at one time. You can take in seeds as you see flowers have died and you notice that seeds have formed.
6. Put seeds on a tray or dry paper towel to dry out for a few days.
7. To save your seeds for the next spring, put them in a paper envelope and put them away in a cool dry place.
8. Mark your envelope with the kind of seeds you have saved and the date.

Be Your Own Seed Company

If you save a lot of seeds, you might try making your own seed packets.

Mark them with the kind of plant that will grow and your own drawings of the flowers. These can be nice gifts for your friends & family.





Winter Marigold Project

A companion activity for MARIGOLD by K.L.Darnell

Winter is the garden's resting time But that does not mean the gardener stops everything as soon as it gets cold.

Fall & winter are good times to:

Clean up your garden. This can help you get ready for a new garden in the spring or just make the place neat.

Marigold's and many other flowers and vegetable plants are *annuals*. This means that they finish their life in one year, so they will not come back with new leaves and flowers next year.

After the frost kills your plants, pull them out of the ground - roots and all.

If you have a compost pile or other place where you put yard waste put your old plants there.

Clean out your flower pots.

Feed your garden. Plants use "food" from the soil to grow just like we need food to live and grow. The things in the soil that plants need will get used up. You will want to think about how to "feed" your soil if you want plants to grow well next year.

You can mix some *compost* into the soil. Compost is just dead plant stuff like grass, leaves and vegetable peels. The gardener piles it up and lets it *decompose* into good soil. Organic gardeners use compost instead of fertilizer from a factory or store.

If you know someone who has a horse, cow or goat ask them if you can have some of the manure to mix into your soil. This will help your plants. (Do not use droppings from your cat or dog - it's not the same.)

If you kept a garden journal, read it. Think about the things you did in the garden.

- What worked?
- What did not go very well?
- Make notes about what you will try to do next year.

Go to the library to learn more about gardening and taking care of the soil.

Get ready to start all over again in Spring!

When you are sick of the cold:

Look for what is still growing where you live. What is still green?

Near the end of winter, look for buds on trees and bushes where new leaves might soon begin grow.

Look for plants that are starting to grow again. Some flowers start growing in late winter or very early spring. Some even begin to grow in the snow!

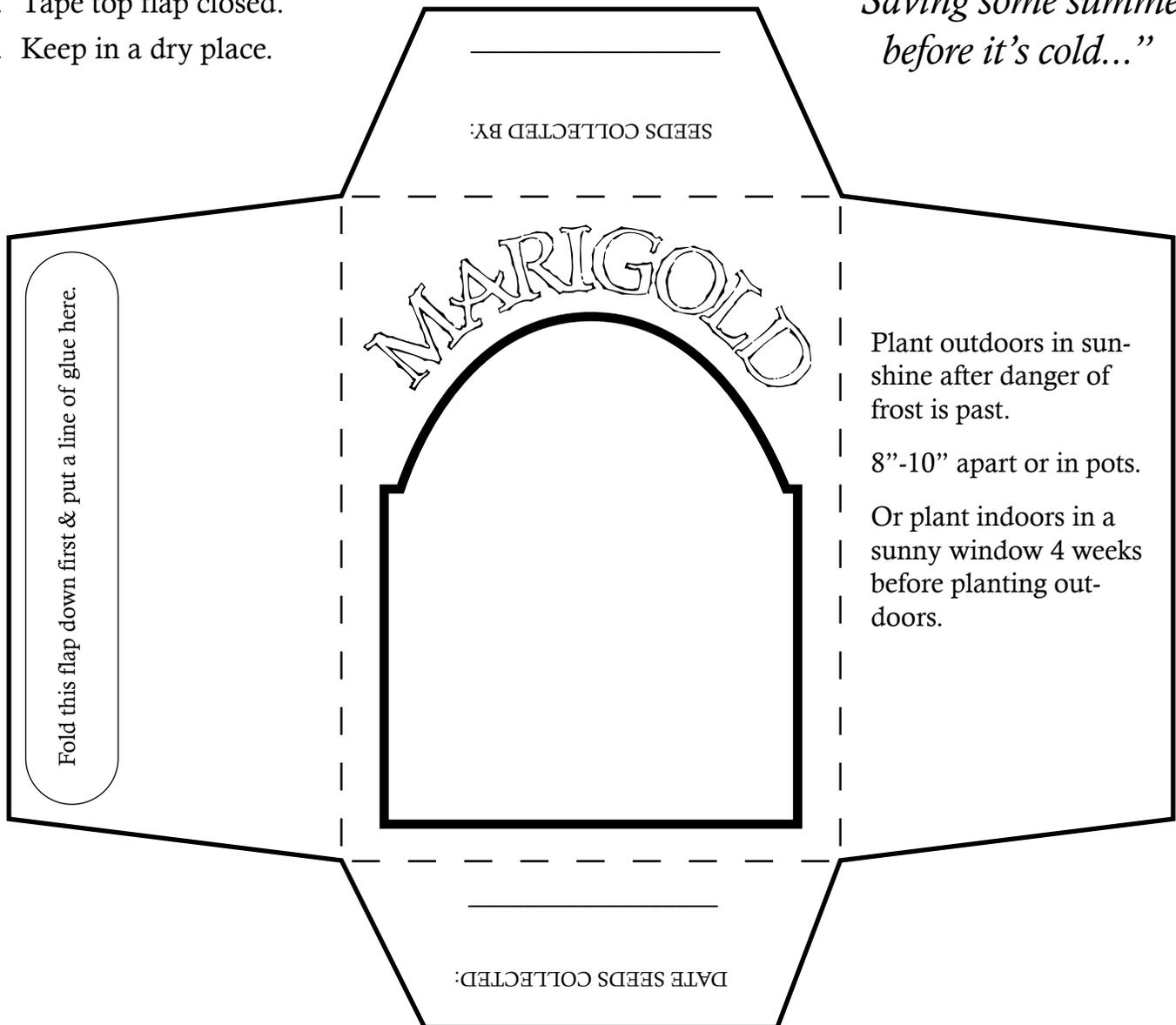
The Marigold Project

A Packet for the seeds you collect



1. Cut the heavy solid lines around the edge. Fold on dotted lines.
2. Draw & color a picture of a marigold in the frame. Add your name.
3. Use glue stick to glue side flaps & then the bottom. Do NOT glue top yet!
4. Let glue and picture dry overnight before putting seeds in your packet.
5. Put some of your seeds inside.
6. Tape top flap closed.
7. Keep in a dry place.

*“Saving some summer
before it’s cold...”*



Plant outdoors in sun-
shine after danger of
frost is past.

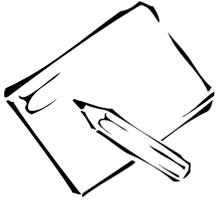
8”-10” apart or in pots.

Or plant indoors in a
sunny window 4 weeks
before planting out-
doors.

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Kate Darnell is the author & illustrator of MARIGOLD • Available from the [Book Baby Bookshop](http://BookBabyBookshop)

Other related activity sheets are available at kldarnell.com



A Marigold Journal

A companion activity for MARIGOLD by K.L.Darnell

A journal is a place to record what you observe and what you think.

Scientists take notes about what they do so they can remember and understand what they are studying.

Gardeners often keep a journal so they remember what they planted and where they planted it, They might make notes about weather or what grew well (or didn't).

Writers might write poems in their journal.

Artists use a journal to draw pictures (this is called a sketchbook).

If you are participating in your own Marigold Project, you might want to keep a journal about what you do, see and think.

This is all that you need:

- A small notebook or some sheets of paper in a folder.
- A pencil or pen.

Get started...

Use words and pictures to record what you notice as time passes.

Do it every day. Try to put something in your journal every day, if you can. If that is too much, work on your journal once a week on the same day.

Include a date on each note and on every picture.

Here are some ideas for observations you might record in your journal.

- Date that seeds are planted
- How often you add water.
- If you forget to water your seeds, what happens?
- Date first plants show above the soil
- How does the plant look? Use words and also draw a picture.
- What changes do you see?
- Do all plants look the same and grow the same? Why do you think this is?
- When do you see the first flower?
- When do you gather seeds?

The Poetry of it all

Your journal does not need to be all about facts. Write about what you see and feel.

Feelings can be from inside - Are you happy about seeing a first green leaf? Or sad to find your plant wilted?

You can also write about feelings on the outside, like how dirt feels on your fingers.

Imagine anything your seeds or plants bring to your mind. Play with the ideas!