

Fairytale Plants

First Grade ELA Curriculum

Objective: Students will brainstorm why so many fairy tales are based around or include plants in story plots. They will have previously been introduced to three famous fairytales: Jack and the Beanstalk (beans), The Princess and the Pea (peas) and Rapunzel (rampion: a lettuce/edible green) and be able to explain the significance of the plant to the story's plot. Using the greenhouse or classroom, they will sow seeds, track growth, harvest and eat these sample plants to better explore these concepts.

Materials:

lettuce, pea, bean seeds – any edible varieties on hand
seed starting soil
cups for classroom or seedling trays for greenhouse
labels (popsicle sticks, etc) or masking tape
sharpie pen

Procedure: 40 min class

Intro: 5-10 min whole class (start in classroom before visiting greenhouse.)

Overview of lesson – fairytales. Today we're going to sow seeds of some of the plants mentioned in fairytales. Students give examples of stories they've read with seeds/plants in them.

6th grade greenhouse in MS building – what is a greenhouse? Why would we grow plants there? Why not outside in the garden now? Why not in the classroom?

Small Groups: students break into 4 groups around tables (~6 kids in each)

15 min

Story brainstorming – which plant is involved in which story – what role does it play? Could the story be the same without that particular plant? Could the story still work using a different plant? If yes, which plant would you substitute?

Bean – what else might be a vine that grows super tall for climbing? (gourd, tomato, flowers like morning glories or cardinal vines, etc)

Pea – what else might be small and hard and round to be felt through a cushion? (most seeds, big seeds, beans, walnut, spiky seed! Recall seeds looked at in fall)

Lettuce – what other plant might a person (you!) crave/really want to eat? What is your favorite vegetable to eat? (optional: Give each student some raw lettuce to taste.)

expansion activities:

Give each student a hard pea seed to sit on! Can they feel it?! now let them sit on a pillow over it – can they still feel it? How could the princess have still felt it through all those mattresses? Did she have super powers?

15 min

What do most seeds need **to germinate** (or sprout/begin to grow)? Air (oxygen), water, right temperature warm or cold (some seeds need light or dark). These are needed to break open the seed coat. Then once it germinates the plant will need **nutrients** (from soil), water, sunlight (energy) to grow.

*Make sure potting soil is pre-moistened.

Students learn to plant the seed as deep as 3x height – stack pea and bean seeds on top of each other to measure. Mark your pencil. Make hole. Cover with dirt. Pack down.

Super tiny seed (lettuce) is best sprinkled on surface then covered lightly/sprinkled with soil. You can even use a sieve to make the soil very light (no heavy clumps!) so tiny seedlings can push up through it.

Water using a mist so you don't wash seeds away.

Make predictions:

How long will each seed take to germinate? Which will germinate first? Read seed packets. How long till each plant matures (is ready to be eaten)?

*Make sure to label all containers with name of plant and group/student name.

Follow-up:

Periodically wheel greenhouse trays into first grade classroom to measure growth – to harvest/make a salad in end – pea shoots, spinach, lettuce!

In class students can measure how tall their bean plants grow (might need a stick for support or tape string to window pane as 'trellis'). Students discuss how plants 'climb' – peas grab with tendrils, beans wrap or twine around sth, and other plants suction/stick to walls/tree trunks (like English ivy).

Resources:

<https://extension.illinois.edu/gpe/case3/c3facts3.html>

6th Grade: Info for you!

First graders have been learning how to be **scientists** this year. Please help them think and behave like scientists today! You know: making observations, predictions, connections, and asking lots of questions....

****Make sure soil is moist before sowing seeds. Add water/mix if needed.**

--Sow **lettuce or spinach** seeds in big tray – scatter lettuce on surface

--Sow **peas** in smaller trays

--Sow **beans** (3 seeds per cup). Kids names on cups!

**** Rule of thumb: plant seeds 3x their size deep – so 3 seeds stacked on top of one another deep (like planting bulbs), depending on tray depth. Tiny seeds (lettuce) surface sown - light layer of soil sprinkled on top.**

****Please label the trays with your group color to identify later!**

YOU are the teachers today so think back to being in first grade...

- How do we plant seeds? How do we know how deep to plant them?
- What do most seeds need to germinate? What is germination?
- Once a seed germinates then what does it need to grow?
- Why sow seeds in a greenhouse? Give kids a tour of greenhouse...

First graders have also been learning about **fairy tales**! Think back to some of your favorite fairy tales – did any of them include plants/seeds?

- **Jack and the BEANstalk** – What would you want to find at the top of a magic beanstalk? Would you climb it like Jack did or just chop it down fast? How tall do you think the beans we're planting will grow?
- **Princess and the PEA** – Seriously, how could the princess possibly feel a pea seed through that many layers of mattresses?! What if it were a lettuce seed instead – would she have felt that too? Did she have super powers? What about a walnut or avocado seed – could you maybe feel that through a mattress?
- **Rapunzel (LETTUCE/SPINACH)** – Rapunzel's mother craved lettuce so much she made her husband steal it from a witch's garden: bad idea! Have you ever craved a food that much? Which vegetables are your favorite to eat?

****Tell first graders about your aquaponics project: which seeds do they think will grow faster? Those in soil or in the liquid nutrient solution?**

THANK YOU for welcoming first grade to your class!!

DATA SHEET

DATE _____

GROUP _____

1st grader Names: _____

6th grader Names: _____

Type of Soil used: _____

Names of seed varieties planted:

pea _____

lettuce: _____ OR spinach _____

bean _____

Which seed is biggest?

Which seed is smallest?

| PREDICTIONS | ACTUAL RESULTS |
|--|---------------------------------|
| How many days before seeds sprout? | Seeds sprouted on.... |
| Lettuce: | |
| Spinach: | |
| Bean: | |
| Pea: | |
| How many days before we can harvest/make a salad?! | Actual date we eat the salad... |

**If time permits help your first graders come up with a NEW vegetable fairy tale and jot

down what they tell you on back of this sheet!