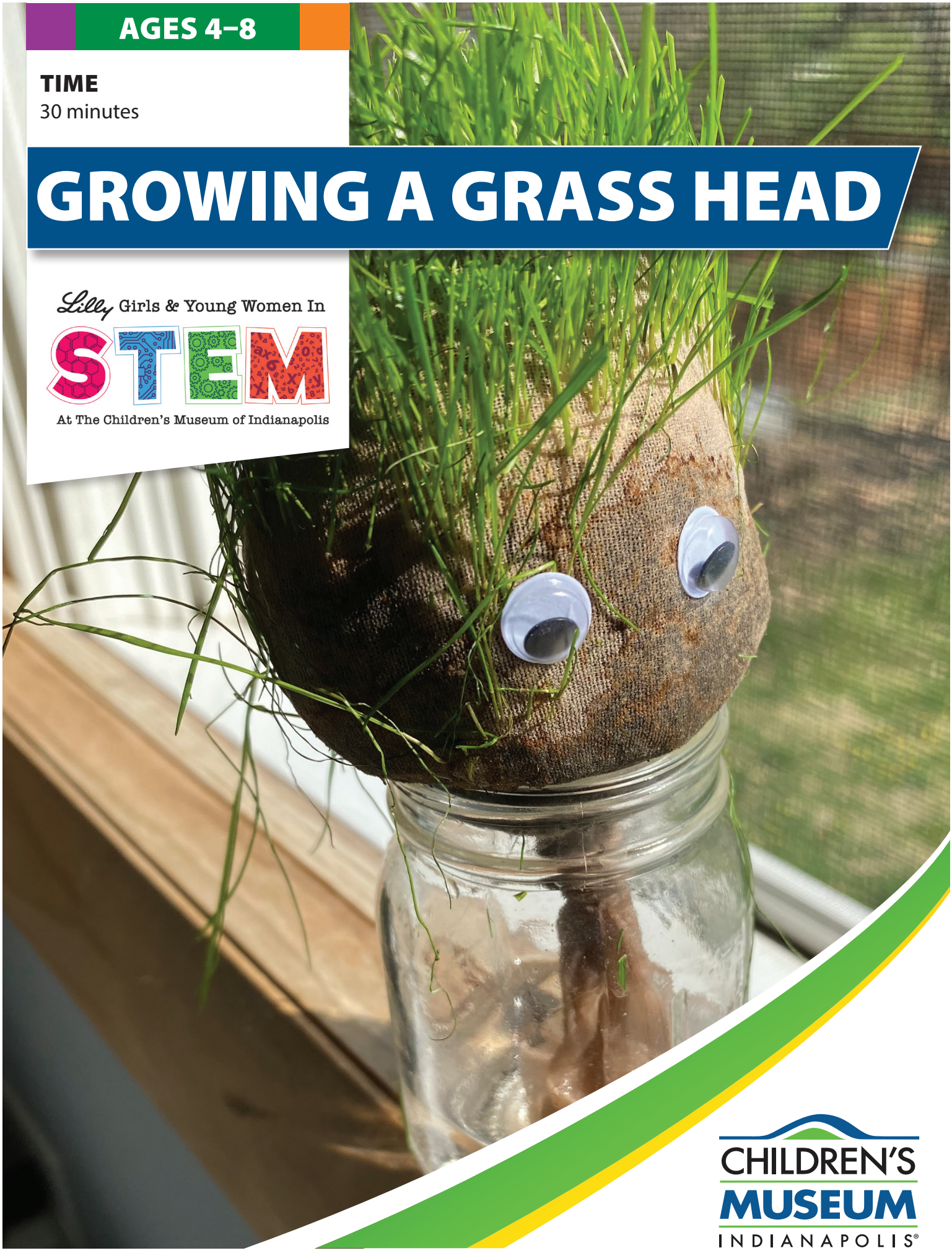
AGES 4–8

TIME
30 minutes

GROWING A GRASS HEAD

Lilly Girls & Young Women In STEM
At The Children's Museum of Indianapolis



CHILDREN'S MUSEUM INDIANAPOLIS®

GROWING A GRASS HEAD

Investigating STEM as a family is a great way to build a child's confidence and interest in STEM topics. This short investigation is designed to be completed with an adult. A videos is available on the museum's website to help with the investigation.

EXPLORATION QUESTIONS

- What do seeds need to grow?
- What is germination and why is it important when growing a plant?
- What do plants require in order to grow?

MATERIALS (for each grass head)

- A pair of nylon tights
- Large cup or mug
- ½–1 cup potting soil
- 2–3 teaspoons of grass seed
- 1/2 cup water
- Small jar
- Googly eyes, markers, or foam stickers (optional)

WHAT'S THE SCIENCE?

Germination is the process by which an organism grows from a seed. In order to germinate, a seed needs water, oxygen, and proper temperature. Seeds start to germinate by developing root systems to seek water out from the soil. Then, shoots develop and grow in the direction of the sun above ground. After shoots reach the ground, a stem and leaves form which enables the plant to collect sunlight. Plants use sunlight, along with water and carbon dioxide to make food through a process called **photosynthesis**. The green pigment in plants, called chlorophyll, helps plants with this process.

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Growing a Grass Head

INSTRUCTIONS

1. Cut the foot off of an old pair of tights. Keep six to eight inches of the tights.

2. Stretch the foot over a cup with the closed-toe portion tucked down into the cup.

3. Add two teaspoons of grass seeds into the bottom of the toe and then add one-half cup of soil into the tights. Remember, the more soil you add, the bigger the head will be. Make sure to press the soil down to pack it into the toe. NOTE: The head should be large than the circumference of the cup so that it can sit atop without falling into the water.

4. Tie off the foot full of soil and seed into a knot and dip the bottom of the grass head into water to wet the soil and seeds.

5. Place the grass head over the jar of water, with the leg section dipping into the water. This will allow the tights to soak up water. Place the jar holding the grass head on a sunny ledge or window.

6. Students can also decorate their grass head with fun decorations such as foam stickers, googly eyes, or markers.

7. Over several days, students can watch the grass seeds germinate and grow shoots of grass.

FAMILY SCIENCE TIPS

How Does Your Garden Grow?

Encourage children to make daily observations of their plant head. Talk about that changes they have observed, and predict what the grass head might look like in a few days.

Ask children to think about what is happening inside the head of their grass head? Which is growing faster, the grass or the roots? Why is it important the plants have water and sunlight?

The grass heads will continue to grow, as long as there is water in the jar and it's placed in a sunny location. You may need to give it a haircut!

Digging Deeper

Family reading time is a fun way to dig into science. Check out these titles from your local library or bookstore.

- ***Plant the Tiny Seed*** by Christie Matheson
- ***Planting a Rainbow*** by Lois Ehlert
- ***A Seed is Sleepy*** by Dianna Ashton
- ***Botanicum*** by Kathy Willis
- ***From Seed to Plant*** by Gail Gibbons

INTERESTED IN MORE FAMILY SCIENCE INVESTIGATIONS?

- Visit The Children's Museum website for more at home science investigations
- Explore the museum's SciecnceWorks and Beyond Spaceship Earth exhibits to learn more about plants.
- Visit the STEMLab, located in ScienceWorks, for a fun, family science experience.

VOCABULARY

- **germination**
- **photosynthesis**

DON'T SCRAP THE SCRAPS

Children may be surprised to know that there are many different ways to grow a plant, including kitchen scraps! Here are a few ways students can start their own plants from the discarded parts of the fruits and vegetables that are used in their favorite meals.

Tomatoes

Start with a thick horizontal section of a tomato slice. The slice should include seeds from the tomato. Place the tomato slice in the middle of a medium-sized pot of soil that is two-thirds of the way full. Cover the slice with two inches of soil and keep soil moist. Place in a warm spot.

Romaine Lettuce

Cut a lettuce leaf two inches above the bottom. Place the bottom of the lettuce in one-half to one inch of water in a cup. Transfer to soil after five to seven days and continue to keep moist.

Bell Peppers

Large bell peppers have seeds still inside them once they are fully grown. When the pepper is hollowed-out, take the seeds and place them on a paper towel. Fill a pot two-thirds full with potting soil. Sprinkle the seeds atop the soil and cover with another two to three inches of soil. Place in a warm spot and keep the soil moist.