Alliance Theatre

institute

Study Guide
Roob and Noob

Created by Andrea Washington, Teaching Artist
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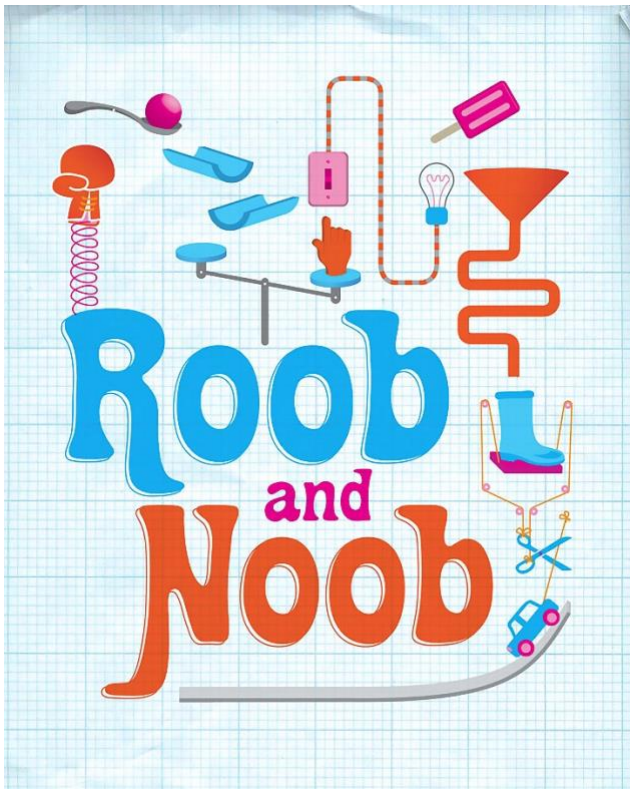

Originally Created & Directed by Andy Gaukel
Remount Directed by Olivia Aston Bosworth

February 10-18, 2024
Rich Theatre

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From the 2014 production of *Roob and Noob*
Photo Credit: Greg Mooney

Standards

Elementary School: Grades Pre-K-2

Georgia Early Learning and Development Standards

Communication, Language & Literacy

- CLL5.4c: Discusses books or stories read aloud and can identify characters and setting in a story.
- CLL5.4d: Makes real-world connections between stories and real-life experiences.

Cognitive Development: Science

- CD-SC4: – The child will demonstrate knowledge related to physical science.

Approaches to Play & Learning

- APL2.4a: Demonstrates eagerness to learn about and discuss new topics, ideas, and tasks.

Georgia Standards of Excellence

English Language Arts

- ELAGSEKRL1: With prompting and support, ask and answer questions about key details in a text.
- ELAGSE1RL9: Compare and contrast the adventures and experiences of characters in stories.
- ELAGSE2RL3: Describe how characters in a story respond to major events and challenges.

Science

- SKP2a: Obtain, evaluate, and communicate information to compare and describe different types of motion. Plan and carry out an investigation to determine the relationship between an object's physical attributes and its resulting motion when a force is applied.
- S2P2: Obtain, evaluate, and communicate information to explain the effect of a force (a push or a pull) in the movement of an object (changes in speed and direction).
    - A. Plan and carry out an investigation to demonstrate how pushing and pulling on an object affects the motion of the object.
    - B. Design a device to change the speed or direction of an object.
    - C. Record and analyze data to decide if a design solution works as intended to change the speed or direction of an object with a force (a push or a pull).

Computer Science

- CSS.IDC.K-2.4: Use the Design Process (use, modify, create) with a variety of tools to identify and solve problems by creating new, modified, or imaginative solutions.
- CSS.CT.K-2.5: Develop and employ Computational Thinking strategies (break-down, find patterns, and create algorithms) to identify and solve problems.

Theatre

- TARE.1 – Engage actively and appropriately as an audience member.
- TARE.2 – Critique various aspects of theatre and other media using appropriate supporting evidence.
- TACN.1 – Explore how theatre connects to life experience, careers, and other content.
- TACN.2 – Examine the role of theatre in a societal, cultural, and historical context.

Synopsis

Meet Roob & Noob: two overly curious scientists who love nothing more than discovering something new. Join them on an interactive adventure, as they build machines from simple objects and explore the wonder and sensations of each of the four seasons. Inspired by Rube Goldberg's magical machines, this unique theatrical performance combines science and the arts, proving that sometimes the most profound discoveries are achieved by simply playing.

Character Analysis

Roob – A scientist who explores curiosity through planning and procedures. Roob has created a blueprint for the world's most spectacular machine. This scientist is ready to share this new discovery with the world.

Noob – A scientist who explores curiosity through play, discovery, and silliness. Noob works along with Roob, but often gets distracted when a new idea sparks their imagination.

Floob – A member of the research team. Floob gets inspiration from the sounds all around them. A *zing*, *boom*, *swish*, or *whoosh* instantly set Floob in action. Sometimes a great idea is only a timbre away.

Scoob - A member of the research team. Scoob enjoys working as a part of a team and is always ready to address a new scientific challenge.

Setting Study

Roob and Noob takes place in a lecture hall. A lecture hall, also known as a lecture theater, is a large room used for sharing information. Could you imagine sitting in a classroom that seats over one hundred students? In the play, Roob and Noob are preparing to deliver a scientific presentation to a group of experts. They have come to present the greatest invention ever made: A machine that waters a plant. The audience eagerly awaits. The question remains: will it work?

An example of a lecture hall

Theme

A **theme** is an important idea that is woven throughout a story or a literary work. A theme often links the main idea into actions that can be seen throughout the play. As you watch *Roob and Noob*, see if you can find the following themes throughout the play.

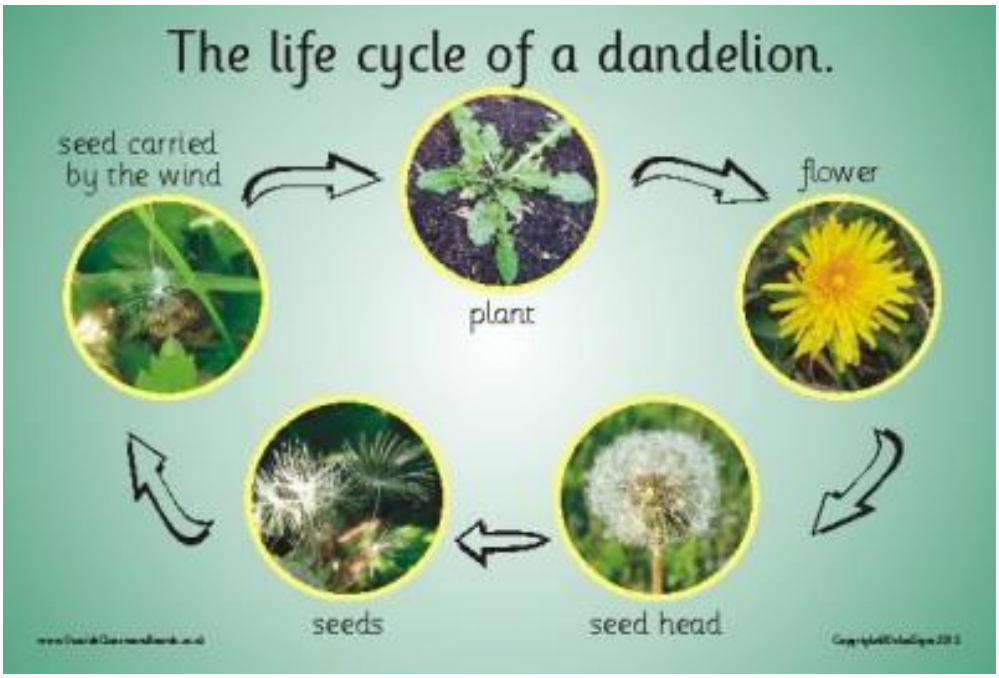
- Collaboration / Teamwork – Everyone has a different talent. When you collaborate with others, a mixture of talents come together. By listening to and learning from others, problems are solved and goals can be reached.
  Roob and Noob discover that their invention works best when the team works cooperatively together.

- Perseverance / Persistence – Having the patience to stick to a plan isn't always easy. Despite setbacks and delays, the characters do not give up and continuously strive to reach their goal.

- Imagination – "Thinking outside of the box" and unlocking creative potential often leads to new discoveries. As scientists, Roob and Noob infuse a bit of imagination to uncover new ways to solve problems.

From the 2014 production of *Roob and Noob*
Photo Credit: Greg Mooney

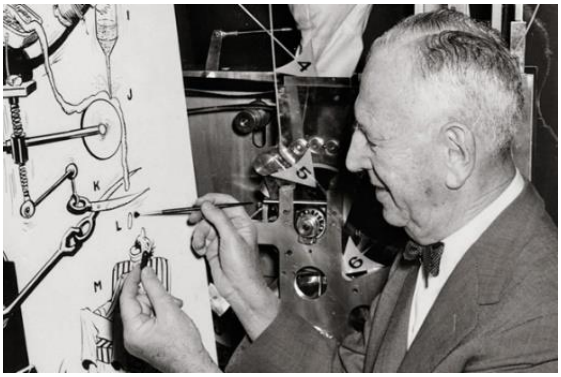
- Cycle – A cycle is a circle of events that repeats in a regular pattern. Throughout the play, Roob and Noob experience various sensations that happen through a cycle of seasons: autumn, winter, spring, and summer. But if you pay close attention, you will notice a different type of cycle. Did you know that plants and animals have their own cycles as well?
    - A dandelion flower goes through a cycle all its own. The plant begins its life cycle as a tiny seed. In the soil, the seed sprouts. Next come the roots, stem, and leaves. With water and sunlight, the plant produces a flower. Next come the pappus that help to carry the seeds by the wind. And with that, the life cycle of a dandelion starts again!



Check out a few books that share similar themes to *Roob & Noob*.

- *When Pencil Met Eraser* by Karen Kilpatrick (Collaboration / Teamwork)
- *The Most Magnificent Thing* by Ashley Spires (Perseverance / Persistence)
- *What If…* by Samantha Berger (Imagination)
- *Tap the Magic Tree* by Christie Matheson (Cycles)
- *A Stroll Through the Seasons* by Kay Barnham (Cycles)
- *Little Dandelion Seeds the World* by Julia Richardson (Cycles)

Who was Rube Goldberg?



Rube Goldberg was born on July 4, 1883 in San Francisco, California. He worked as an **engineer** for the water and sewers department. The twisting and winding of plumbing sparked something in him. Rube began to dream big!

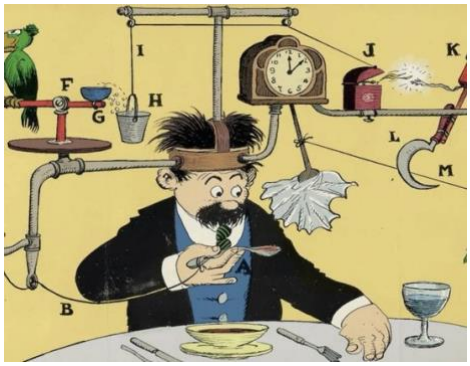
Engineer:
A person who plans, designs, and builds something new. An engineer wants to know how and why things work.

Cartoonist:
An artist who draws cartoons that make a point, tell a joke, or tell a story.

He moved to New York city and worked as a newspaper **cartoonist**.

Within many of his illustrations, Rube used his **imagination** to create complex machines that were built to perform simple tasks. People all over the United States bought newspapers just to see Rube's drawings.

Imagination:
To use your mind to make believe that something can be anything.



Rube Goldberg's
"Self-Operating Napkin,"
Collier's, Sept. 26, 1931

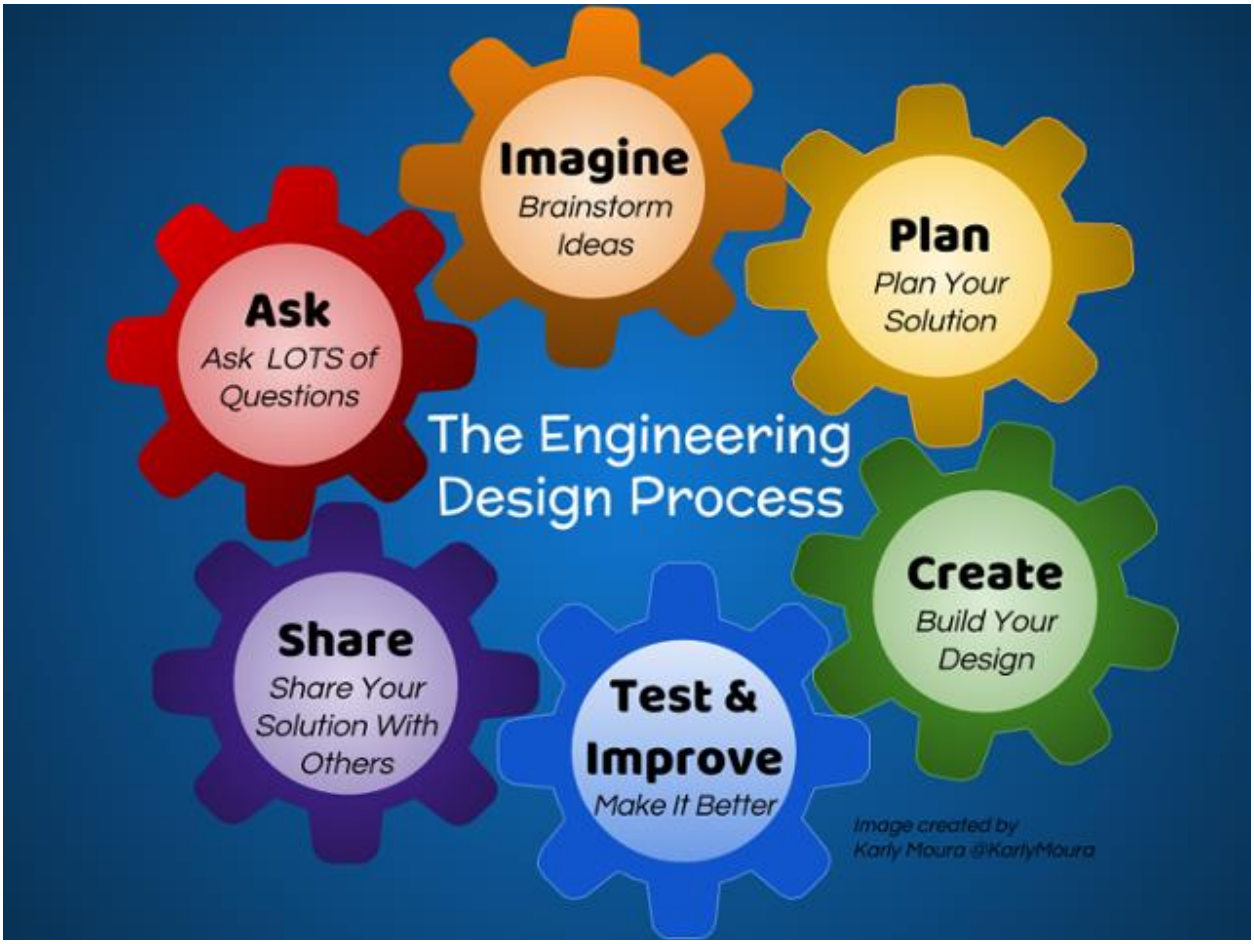
Today, students all over the world enter contests to create their own "Rube Goldberg Machine." They work together and use the engineering design process to build a new **invention**.

Invention:
Something new that someone has made.

Have you ever played the board game *Mouse Trap* or watched a *Tom and Jerry* cartoon? Then, you probably have seen an invention that was inspired by one of Rube Goldberg's creations.

Engineering Design Process

How do the characters in Roob and Noob use the Engineering Design Process?



The director of *Roob and Noob*, Olivia Aston Bosworth, took this photo during the rehearsal process. With the actors, she was trying to build the machine that you see on stage. They were in the **Imagine** stage of the Engineering Design Process!

Four Seasons

The seasons are a part of a cycle. Each year we experience autumn, winter, spring, and summer. Just when you think the cycle is about to end, it starts over again! This pattern never stops but goes on and on.

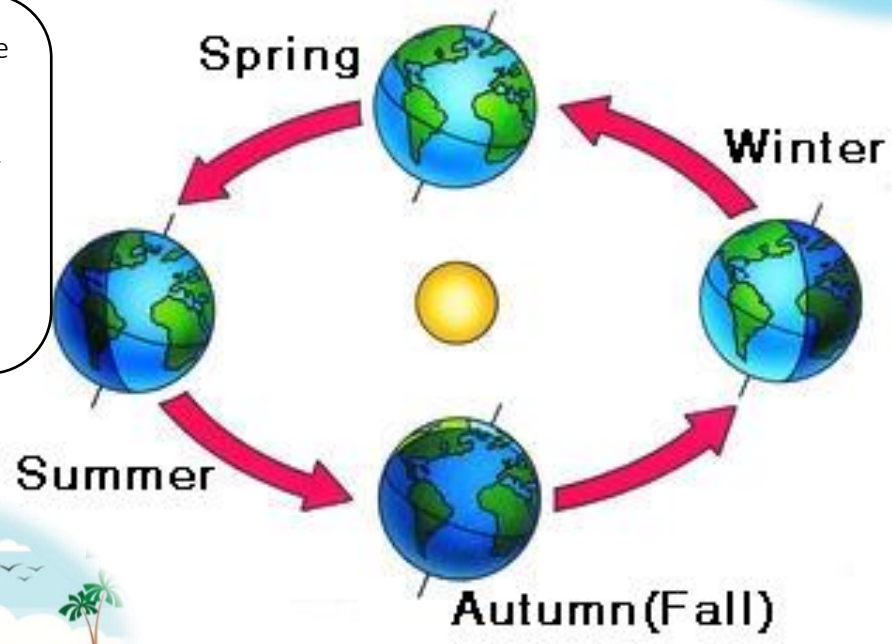
We have seasons because the earth is moving around the sun. The closer a place on earth is to the sun, the warmer it will become. The farther away from the sun, the colder it will become.

Roob and Noob have very distinct reactions to each season. What clues let you know that the season has changed? Draw and write about your favorite season in your STEAM journal.

Let's learn more about the seasons!

In spring, pollinators like birds and insects help disperse seeds and pollen. As a result, new plants begin to grow. Roob and Noob also have a reaction to the pollen. - *"Achoo!"*

In winter, the weather is colder. While some animals hide and sleep (hibernate), Roob freezes like a popsicle because of the cold weather.

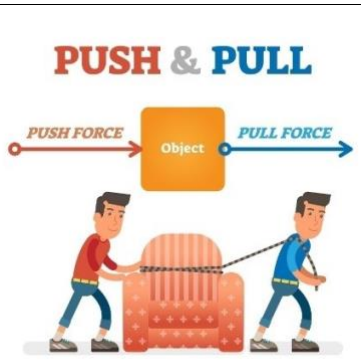
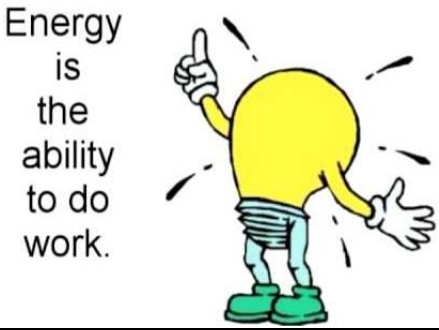
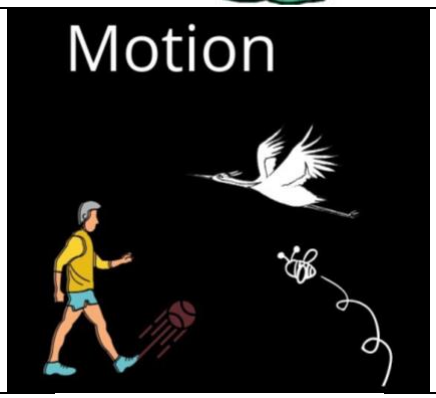
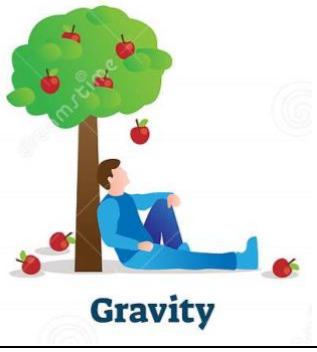


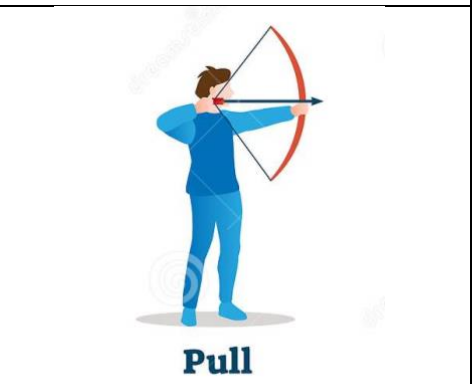
In summer, fruit grows on trees. Young animals become bigger and stronger. Roob and Noob also find ways to have fun in the sun!

In autumn, leaves change colors and fall from the trees. Noob rakes the leaves into a great big pile. Do you think Noob will jump in?

Force and Motion

Roob and Noob use Forces and Motion when building their machine. Which examples did you see in the play?

Vocabulary	Definition	Photo
Force	The push or pull on an object; changes the way an object moves	
Energy	The ability to do something; you need energy to make an object move	
Motion	The act of changing place or position; when an object moves from one place to another	
Gravity	A force that pulls things towards the center of Earth	

Push	To move something away from you	
Pull	To move something towards yourself	
Friction	An object pushing on another object, slowing it	

Interview with Director

Similar to Roob and Noob, the production team collaborated to put many elements of the show together. The director, Olivia Aston Bosworth, shared what she enjoyed about working on this production.

Describe *Roob & Noob* in three words.

Olivia: Curiosity, innovative, play!

What vision do you have for this world of the play? How do the characters fit into this world?

Olivia: Kids are experts in curiosity. They are constantly asking questions, challenging facts, and pressing for answers about the world around them. These are traits of the greatest thinkers. In the world of *Roob and Noob*, our audience is a collection of the best and brightest scientists. Roob and Noob have been working tirelessly to create something truly impressive to shock and awe the brilliant minds assembled. They create an automatic watering machine to water your flowers with the flip of a switch. But when things go embarrassingly wrong, our team has to work quickly to deliver their invention before the audience gives up and walks out. This offers our world a sense of urgency whenever the characters get carried away with the fun of play and discovery!

During the rehearsal process, was there a particular scene or season that you enjoyed exploring?

Olivia: I love exploring the energies of these characters. Roob and Noob take their work very seriously, but in totally different ways. For Roob, played by Jimez Alexander, he makes discoveries through order and protocol. He is totally by the book, and those black and white rules can sometimes get in his way. Noob, played by Rachel Wansker, discovers solutions through play! She is the president of the "What if...?" club and can get carried away. Floob, played by Imani Quinones, comes in as both logical and whimsical playing composed and improvised music. She serves as the rails to keep our train moving forward. The greatest discoveries in this play are made when Logic and Whimsy wrestle with each other resulting in something totally joyful and unexpected. Rachel, Jimez, and Imani are extraordinary improvisers and it is an absolute treat to watch them explore their characters.

Rube Goldberg machines are known for performing a simple task in an elaborate and complex way. If you could invent a machine to help you with an everyday task, what would you build and how would it work?

Olivia: Oh, how I wish there was a Rube Goldberg machine that helped my son Charlie (4 years old) brush his teeth every morning! All that boy wants to do in the bathroom is make silly faces in the mirror for 30 minutes and gets wildly distracted.

STEAM and Technical Theatre

Learn from Autumn Stephens, the Alliance's BIPOC TVY Stage Management Fellow, about the technical elements of a Theatre for the Very Young show. How can technical theater concepts like sound design, props, and stage management connect to classroom curriculum and support STEAM goals?

STEAM and Technical Theater Video

From the 2014 production of *Roob and Noob*
Photo Credit: Greg Mooney

Pre-Show Discussion Questions

1. What do you know about Rube Goldberg machines?
2. What are the steps of the Engineering Design Process?
3. What do you do when an experiment or project is not working the way you thought it would?
4. What do you like best about working as a team on a project?

Post-Show Discussion Questions

Engage in a discussion as a class or use these questions as journal prompts.

1. How did the characters react when their machine did not work the way they thought it would?
2. How did the four seasons affect the characters and their machine?
3. What examples of forces and motion did you see in the play (push, pull, friction, etc.)?
4. What steps of the Engineering Design Process were used in building the machine?
5. How did the technical elements of the play (costumes, lighting, sound, etc.) help tell the story?

Post-Show Extension Activities

<u>Build Your Own Rube Goldberg Machine</u>
In your STEAM journal, design your own Rube Goldberg machine using the Engineering Design Process.

- Ask – What will your machine do? Will it solve a problem? Help someone accomplish a task? Why does your machine need to be built?
- Imagine – What will your machine be made of/what supplies do you need? How much space will you need to build? Where will you put your machine? How many people do you need for the machine to work?
- Plan – What will your machine solve/what task will it accomplish?
- Create – Build your design. Draw a model of your machine, listing measurements and supplies needed.
- Test and Improve – If you have the materials, build and test your machine and make adjustments, as needed.
- Share – Share your solution with others!

Dandelion Flower Puppet

Developed by: Andrea Washington


Supplies:

- Construction paper
- 3 flexible drinking straws
- Paper cup
- Hole puncher
- Markers/ Crayons/ Pencil
- Scissors/ Tape

Directions:

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- Draw a large circle on the construction paper.
  - Draw seeds and the dandelion *pappus*.

Pappus:
The fuzzy-looking parachute structure attached to the end of a dandelion seed. The pappus and wind help the dandelion seeds to disperse.

- Draw a small circle on the construction paper.
  - Add eyes and facial features
- Draw two leaves on green construction paper.
- Cut out circle(s) and leaves.

Decorate the outside of the paper cup with crayons or markers.

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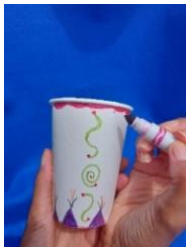

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- Glue small circle onto large circle.
- Tape large circle onto straw #1 (stem). (flexible end facing down)
  Cut flexible end off of straw #1

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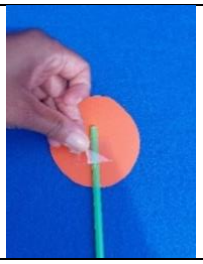


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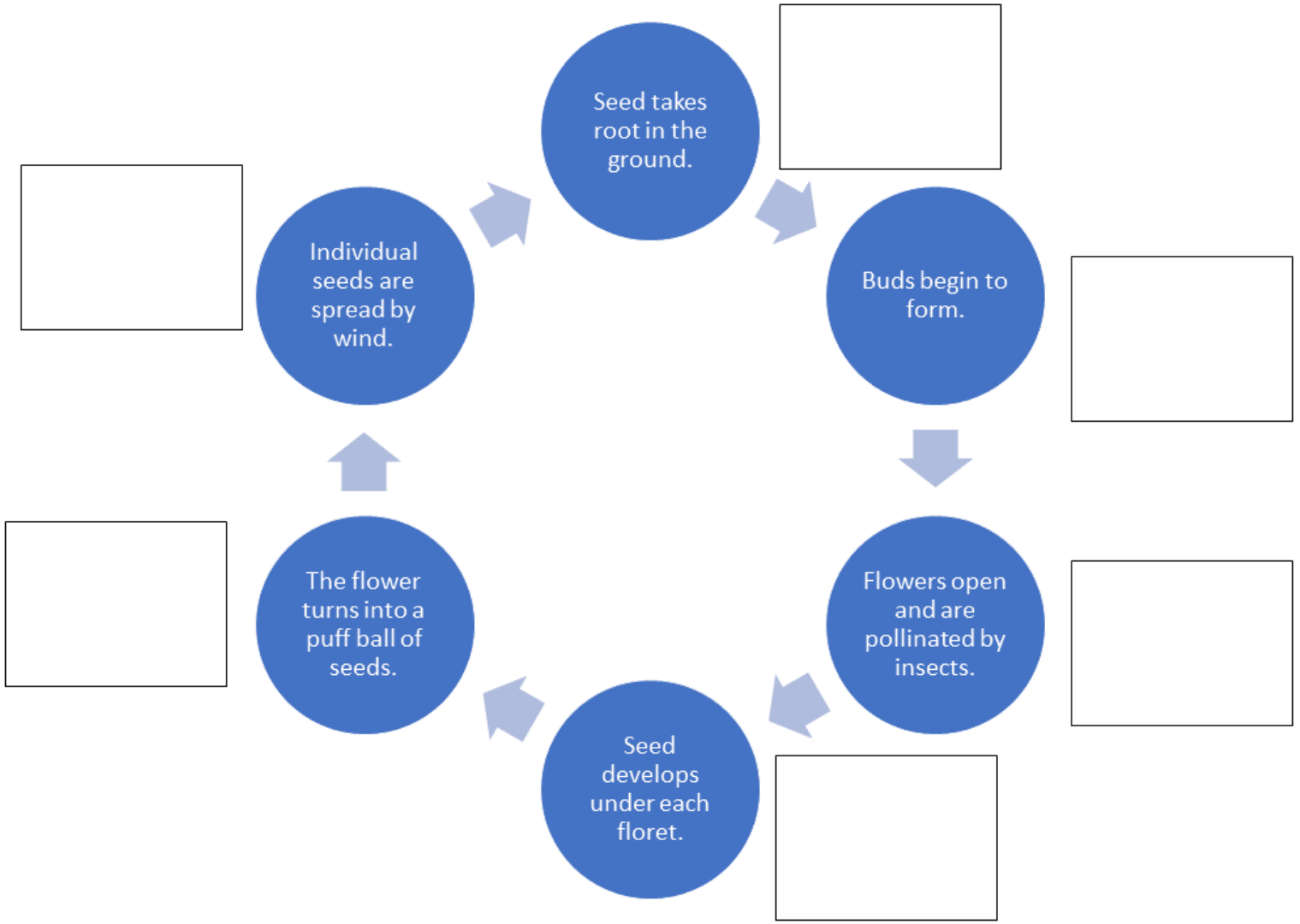
• Align straws #2 & #3 (flexible ends facing up) on either side of straw #1 (stem).
  ○ Bend straws #2 & #3 away from straw #1 (stem)
  ○ Tape straws #1, #2, and #3 together.
	

• Use pencil to puncture hole at the bottom of the paper cup. You may want to ask a grown-up for help, as this can be tricky. • Use hole puncher to create two holes toward the top of the cup. These holes should be on opposite sides.	 
• Insert straw #1 into bottom cup hole. Insert straw #2 and #3 into side holes of cup. • Glue leaf cut-outs onto straw #2 and #3 • Have fun creating a name and voice for your dandelion flower puppet!	 

Life Cycle of a Dandelion

In the play, the dandelion puppet changes as it completes its life cycle.
Draw pictures of each stage of the dandelion's life cycle.



Foley Sound Effects

When a story comes to life on a stage, we are not only seeing the story, but we are also hearing the story. In *Roob and Noob*, Foley sound effects are performed live for a theatre audience. Named after Jack Foley, a sound effects artist, Foley sounds happen in sync with the action happening on the stage. These sounds can be created vocally, with props and even with musical instruments. These sounds can add to the mood of a scene and gives us clues as to what is about the unfold.

What's that you hear?

Sound Scavenger Hunt

Explore your home, school, or neighborhood to see if you can find these sounds!

Once you hear a sound, draw, and write about what made the noise.

Chirp	Ring	Thump
Crack	Beep	Squeak
Snap	Fizz	Crunch

Human Machine

Grab your family and friends to play a game that requires each player to use their imagination, create sound effects and to work together and collaborate. *On your mark, get set, go!*

As a group, think of a machine. Your goal is to use your imagination and create this machine together using only your body and voice. One person begins by creating a simple sound and motion that can be repeated comfortably. This will be the first piece of the machine.

When a second person comes up with an idea, they can add to the machine with their own sound and motion. Find a way for the second person to connect to the first, just like the gears of a machine.

Each new addition to the machine should relate to what the previous person is doing. When everyone has joined in, it can be fun to play around with speeding the machine up and slowing it down. Freeze the action and think of a name for your new machine.

Sources:

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- Life Cycle of a Dandelion: https://www.outsideclassroomboards.co.uk/product.php/the_life_cycle_of_a_dandelion_photographic/?k=%3A%3A%3A5955144%3A
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- Four Seasons images:
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    - Summer: https://www.vecteezy.com/vector-art/117397-summer-beach-vector-illustration
    - Autumn: https://in.pinterest.com/pin/566679565617012708/
    - Winter: https://pixabay.com/illustrations/search/winter/
- Forces of Motion: Photo Sources: eTutorWorld, EasyScienceforKids, Dreamstime
- Flower puppet: https://www.youtube.com/watch?v=-JwHx_TvqYA&list=WL&index=74&t=1s
- Human Machine image: https://images.app.goo.gl/Y8V5qnBctxNrXPxt6